The foreign language effect on the credibility of fake news messages among Dutch news readers and the influence of emotional loading

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Abstract

News readers are more and more exposed to news messages in a second language due to today's (social) media environment. Additionally, the amount of fake news available online is increasing. Therefore, it is valuable to study whether the foreign language effect is present in this context. This study investigated whether the foreign language effect was present in evaluating the credibility of fake news. Also, the influence of emotion within this effect was studied. An experimental survey was conducted with a mixed between within design for the present study. Language (NL Dutch vs. FL English) and news message type (factual vs. fake) were used as between-subject factors and emotional loading (emotional vs. non-emotional) was the within-subjects factor. The data of 111 survey respondents was used to draw conclusions. The results indicated that the foreign language effect was non-existent in the context of fake news. However, emotion showed to influence the credibility of news messages in general. Emotional news messages were evaluated more credible compared to non-emotional news messages. This study contributed to both fake news literature as well as foreign language effect literature. Limitations and suggestions for future research are elaborated on in the last chapter of the study.

Keywords: Foreign Language Effect, FLE, fake news, misinformation, emotion, emotional context

Introduction

In today's globalised society, bilingualism is the norm rather than the exception. Hundreds of millions of people experience encounters in a foreign language on a regular basis. However, the foreign language is often not as developed as a native language and is learned at a later age in an educational environment (Keysar et al., 2012). Several researchers argue that this non-nativeness in a foreign language goes hand in hand with a so-called *foreign language effect*. The foreign language effect is the phenomenon that thinking in a non-native language influences the cognitive processes responsible for judgement and decision-making (McFarlane et al., 2020; Circi et al., 2021).

Keysar et al. (2012) is one of the first studies about the foreign language effect. Based on their experiments, they argue that in situations in which a foreign language is used, decision-making biases are reduced. Apparently, Korean native speakers were more likely to bet on a fair coin in a non-native context (English) than in the native context (Korean). This example presents a reduced tendency towards loss aversion due to the foreign language effect (Keysar et al., 2012). According to the authors, these effects appear because a foreign language involves greater emotional and cognitive distance compared to one's native language (Keysar et al., 2012).

So far, it seems that the impact of the foreign language effect is related to the domain in which the message exists. For instance, the foreign language effect applies in the domain of moral dilemmas but is not necessarily as effective in persuasive communication such as product advertisements (Gerritsen et al., 2010; Nederstigt & Hilberink-Schulpen, 2017).

The present study explores the foreign language effect in the domain of news messages, more specifically, the context of fake news credibility. As people are increasingly exposed to news messages in a second language due to the current media environment, combined with the increase of fake news (Allcott & Gentzkow, 2017), it is valuable to study whether the foreign language effect influences the credibility of this fraudulent information.

The foreign language effect in prior research

Literature on the foreign language effect (hereinafter referred to as FLE) show various outcomes per domain, context, and modulating factors. The FLE is not always present in all studied contexts. Whereas Costa et al. (2018) did not find evidence for the FLE in moral judgement on intentions and consequences, the meta-analysis of Circi et al. (2021) concluded based on seventeen studies that the FLE is present in moral decision making and risk-aversion

domains. Circi et al. (2021) found that differences in outcomes can be explained by language similarity, language proficiency and emotional loading of the message.

First of all, language similarity could be a relevant factor in determining the FLE. Language similarity or linguistic similarity is the degree to which word sets or language patterns of two given languages are similar. High linguistic similarity is mainly seen in languages from the same language family (Ringbom & Jarvis, 2009). For instance, the English, German and Dutch languages have their roots in the Germanic family, whereas the Italian, Spanish and French languages come from the Romance language family (Simon and Simon Team, 2022).

Studies found that the FLE is reduced, or even not present, when the native language and the foreign language are linguistically similar (Dylam & Champoux-Larsson, 2020; Miozzo et al., 2020). Dylman and Champoux-Larsson (2020) executed an experiment with Swedish-Norwegian and Norwegian-Swedish bilinguals and found no FLE within this language pair. In accordance with Circi et al. (2021), Dylman and Champoux-Larsson (2020) propose that linguistic similarity diminishes the FLE. Thus, based on these studies, it is suggested that language similarity is a potential influencer for whether the FLE is present or not within specific contexts. Nevertheless, Costa et al. (2018) found partial evidence of the FLE in an experiment with the German and English languages (which come from the same language family). In this experiment, the foreign language context reduced the impact of intentions on damage assessment. This study, therefore, proposes that language similarity does not necessarily excludes the FLE. Additionally, Brouwer (2020) found the FLE present in the Dutch-English context, which are also languages perceived as linguistically similar. Given the various results in research regarding language similarity and the FLE, this is an interesting combination to further investigate.

Another debatable factor in FLE research is foreign language proficiency. Early bilinguals and people with high foreign language competence might be expected to have an increased emotional impact of the foreign language, making it closer to that of the native language (Circi et al., 2021; Čavar & Tytus, 2017; Wong & Ng, 2018).

Nevertheless, Brouwer (2020) showed that the FLE arises also with bilinguals with high foreign language proficiency. Brouwer (2020), conducted an experiment in which the FLE was found among highly proficient FL speakers. In this experiment, rational decisions to moral dilemmas were studied. 154 Dutch speakers with English as their FL were instructed to read and listen to personal and impersonal moral dilemmas in their native language (Dutch) and their foreign language (English). The participants had to indicate whether the proposed action

was tolerable or not. The results showed that participants made more utilitarian decisions in the foreign language than in the native language on personal dilemmas specifically. This effect was modulated by the amount of emotion involved (Brouwer, 2020). The personal dilemmas presented in the experiment involved serious bodily harm and personal force. Green et al. (2001) and Brouwer (2020) point out that personal dilemmas exist with increased emotionality. In Brouwer's (2020) study, it seemed that the emotion connected to the personal dilemmas, impacted the presence of the FLE since the effect was not visible in the impersonal dilemmas.

Emotion is a contextual issue that is recurring within FLE studies. According to other experiments, foreign language attenuates the emotional response to words and phrases (Caldwell-Harris, 2015; Pavlenko, 2012; Dewaele, 2004). More specifically, taboo words and swearwords were rated less emotional in a foreign language than in a native language by bilinguals in the questionnaire-based studies by Dewaele (2004) and Pavlenko (2004).

This dampened emotionality is related to the fact that one's native language is acquired in an emotionally rich and naturalistic context, whereas a foreign language is learned often at a later age in a classroom context which is considered emotionally neutral (Ivaz et al., 2016; Caldwell-Harris, 2015; Keysar et al., 2012). Researchers suggest that because of this difference, the emotional reactivity is reduced in the foreign language context compared to the native language context. This reduced emotional reactivity in the foreign language context is often called emotional distance.

Another form of how emotion in stimulus could influence an effect (somewhat similar to the personal and impersonal dilemmas in the study of Brouwer (2020)) was demonstrated by Costa et al., (2014). Costa et al. (2014) tested whether the emotional loading of the situation led to an effect on the FLE, which it did. Emotional loading in this study was referred to as the emotionality elicited by a given problem and the extent to which the problem involves life and death decisions (Costa et al., 2014). In general, aside from the FLE, it is expected that in an emotional context one elicits emotional reactions, is more vulnerable to heuristic biases and has a reduced logical reasoning mechanism (Loewenstein et al., 2001; Naqvi et al., 2006; Quartz, 2009). In the study of Costa et al. (2014) it was tested whether this influenced FLE. Costa et al. (2014) found that the FLE was solely present in an emotional context (Asian disease problem) and not in a neutral context (financial crisis problem) within their study of seven hundred Spanish-English bilinguals.

Additionally, Brouwer (2020) found that emotion had a modulating effect on FLE. As the foreign language context elicits less emotional responses compared to a native language, participants made more utilitarian decisions in the foreign language context. Also, the meta-

analysis of Circi et al. (2021) suggested that emotionality in decision making and judgement is reduced within a foreign language context.

The aforementioned study by Brouwer (2020), in which the personal dilemma involved an emotional context, tested whether the presence of the FLE differed between personal and impersonal dilemmas. In the experiment the FLE was solely found within personal moral dilemmas (Brouwer, 2020).

Contrastingly, Geipel et al. (2015) found that the FLE did not occur in some of their personal dilemmas while it did occur in some impersonal dilemmas. They explained that the FLE occurs in dilemmas that disregard social or moral norms and otherwise remain absent (Geipel et al., 2015).

Differences in moral decision making are often explained through the dual-process theory. This theory was proposed by Kahneman (2003) and assumed that moral decision making is driven by a complex interaction between emotional and rational processes. As Brouwer (2020) states, "the emotional system is considered to be fast, automatic and affective, indicating unconscious, spontaneous reasoning which occurs mostly involuntarily and is linked to emotion. In contrast, the controlled system is more explicit, asks for deliberative, effortful reasoning, and is mostly detached from emotions. It operates slowly and uses abstract rational knowledge which often requires a certain amount of exercise" (p. 223).

Most studies on the FLE concluded that the system in which one processes information in decision making and moral judgments differs between the foreign and the native language context. In a foreign language context, the analytic mode of processing is used, while in the native language, people tend to use the emotional system (Costa et al., 2017; Hadjichristidis et al., 2019; Hayakawa et al., 2016). This analytic mode of processing could be beneficial in distinguishing fake news from factual news. It might mean that people should be better able to differentiate between true and false news in a foreign language than in a native language context.

Since the FLE is mainly studied in the context of moral dilemmas, this prediction shapes a relatively new perspective to shed more light on the FLE and its consequences. Namely, fake news. The recent increase of exposure to non-native news outlets through social media and the dangerous consequence of fake news makes this an interesting and current research issue.

Fake news

In today's information society, information is generated faster than one can process, and the amount of information available is increasing each year (Bessarab et al., 2021; Health IT, 2021). People have the desire to be informed on what is true and what is false, but the internet is not always as reliable as one might expect. Especially in recent years, the internet has become the perfect environment for everyone to upload, share and comment on any type of content— the ideal infrastructure for fake news. Whereas, in the more traditional media environment, thresholds and gatekeepers are present. More and more information is manipulated or simply false because of the lack of entry barriers in this new media environment (Waldrop, 2017).

Important players in the spread of fake news are social media platforms such as Facebook and Twitter. Because of the entirely different structure of social media platforms compared to traditional media platforms, users with no credibility or reputation can reach as many readers as news outlets such as the *New York Times* and *CNN* (Allcott & Gentzkow, 2017).

The Oxford English Dictionary (2021) defines fake news as "news that conveys or incorporates false, fabricated or deliberately misleading information, or that is characterised as or accused of doing so". Although this one definition covers most of what fake news is, other terms are also often used in research. In the literature, fake news, misinformation, and disinformation are being used interchangeably. However, for this study, a distinction is being made between the concepts of fake news, misinformation and disinformation.

Fake news is any content in all the media that resembles factual news but includes false information. Both misinformation and disinformation are considered types of fake news. However, there is a distinction between the two. Misinformation is false or misleading content as, for instance, information that goes against scientific consensus or contradicts simple, objective, verifiable facts. Importantly, in the case of misinformation, the source was not necessarily intentionally publishing false information. On the contrary, disinformation is false or misleading information spread deliberately to mislead people (Ecker et al., 2022; Pennycook & Rand, 2021). This present study considers fake news as the intentional spread of disinformation, as described by Ecker et al. (2022) and Pennycook and Rand (2021).

The risk of disinformation is that it can influence people's position on social matters such as politics and climate change. The result can be for example that political campaigns and elections are highly influenced by fake news and that climate scientists are mistrusted (Allcott & Gentzkow, 2017). Studies on fake news suggest two primary motivations for creating fake news. The first one is economic motivation. By using so-called "clickbait", news articles can

generate revenue through advertising (Allcott & Gentzkow, 2017; Fernández-López & Perea, 2020). This pecuniary incentive makes it attractive to publish content fast, without fact-checking and with potentially exaggerated or false copy.

The second motivation deals with the ideological impact of fake news (Allcott & Gentzkow, 2017; Fernández-López & Perea, 2020). For instance, disinformation is used for political gain through normative influence and framing during elections and wars. For example, former US President Trump labelled adverse information as "fake news" to create disbelief and mistrust in traditional media and in his opponent's campaign communication. Another example of the ideological motivation is how President Putin masters the Russian media to nourish the population with disinformation to possess support for his policies (Coll, 2017; Oremus, 2022).

Fake news is widely spread through social media, and social media users are mostly young people (Auxier & Anderson, 2022). According to research done by McGrew et al. (2017), especially young people risk being influenced by false information. The researchers suggest that their ability to process information reasonable "needs improvement". This was based on the result that the thousands of students in their study scored insufficient on evaluating information that flows through social media (McGrew et al., 2017).

To reduce the impact of fake news, it is required to study the factors that makes people believe and share this false information. Solely by gaining all the insights, corrective measures can be taken. Whether the FLE does or does not influence the credibility of fake news would add value to previous and future research because it is a new context.

The foreign language effect and fake news
A study executed by Fernández-López and Perea (2020), examined whether the language in which fake news was presented modulated the credibility of the content through two experiments. The first experiment consisted of forty-four native Spanish students who evaluated the credibility of four news articles. Half of the participants evaluated the news in English (foreign language), and the other half in Spanish (native language). Results showed no significant difference between the credibility ratings of the fake news in the foreign language and in the native language (Fernández-López & Perea, 2020). An important limitation of this experiment was that the news message did not evoke emotion, thus, was not emotionally loaded. Based on previous literature, the FLE in decision making is often explained through an increased emotional distance in the foreign language (Costa et al., 2017; Corey et al., 2017; Hadjichristidis et al., 2019; Hayakawa et al., 2016). Fernández-López & Perea (2020), thus, suggest that an experiment with emotionally loaded fake news articles is needed to establish

whether there is a FLE when reading fake news. This was implemented in their second experiment where the news presented to respondents was emotionally loaded.

The second experiment conducted by Fernández-López & Perea (2020) included a sample of one hundred Spanish students. Again, with a between-subjects design, half of the participants were presented with English fake news (foreign language) and half of the participants read Spanish fake news (native language). In this experiment, participants were instructed to evaluate credibility and emotion (sadness, anger, helplessness, and fear). Similar to the first experiment, no difference was concluded for credibility. Also, emotion did not differ between the languages. However, the researchers found that emotion modulates credibility (Fernández-López & Perea 2020).

The study of Fernández-López and Perea (2020) has several limitations. Firstly, the researchers only obtained information regarding the participants' English proficiency in the second experiment, which was also based on a self-rating, objective, measure (the Common European Framework of Reference for Languages). Secondly, the second experiment consisted of solely one fake news message, which raises questions about its generalizability since the content of the message might influence results. Lastly, the study found similar credibility scores for fake news messages regardless of the language in which it was presented. However, these scores could not be compared to credibility evaluations of factual news because of the experimental design. A question was raised about whether the FLE would be observable when participants evaluated news messages of which one is fake, and which one is factual.

The present study

The present study aims to shed more light on the influence that the FLE has on the credibility of fake news by filling the gaps of the previously mentioned study by Fernández-López and Perea (2020). First and foremost, the present study includes factual news messages aside from the fake news messages. Furthermore, this study integrates emotional loading to check the difference in effect between emotional and non-emotional messages. This study will contribute to previous research by adding a control group of factual news messages. Still, the present study partially overlaps with the previously mentioned study. However, by using participants with another native language (NL: Dutch, FL: English), the study will be of added value to FLE literature.

Main research question

To what extent is the Foreign Language Effect present in evaluating the credibility of fake news, and what is the influence of emotion within this effect?

Hypotheses

H1: The FLE is present and results in lower credibility judgments on fake news messages presented in the foreign language than in the native language.

H2a: Emotional news message are evaluated as more credible than non-emotional news messages.

H2b: The difference in credibility evaluations between emotional and non-emotional news messages is smaller in the FL than in the NL.

Methodology

Materials

This study included two independent variables which were both subdivided into two levels. The first independent variable being the language of the text: (1) NL Dutch and (2) FL English. Due to the scope of this study and the availability to reach participants in the Netherlands, Dutch was chosen as the native language and English was chosen as the foreign language.

The second independent variable was the nature of the information provided in the experiment. This variable was also subdivided into two levels: (1) factual (real) news and (2) fake news (disinformation). As emotional loading was included as a within-subjects factor in this experiment, for both factual and fake news, two news messages were collected of which one message was emotionally loaded and one was emotionally neutral.

To secure validity and accuracy in the research, the theme's for the emotional and non-emotional news messages were comparable in the factual and the fake news messages. The emotional news messages regarded in both cases (factual and fake) discriminatory violence, whereas the two non-emotional news messages regarded the environment.

The factual news messages were gathered from https://www.politifact.com/, a common fact-checking source recommended by Pennycook et al. (2021). The news content was extensively checked on whether the facts were genuinely factual. Both the emotional and the non-emotional factual news messages were found on the fact-checking website. The emotionally loaded news messages regarded the unfear treatment of Black Lives Matters protesters in contrast to the rioters who breached the Capitol. The emotional neutral news message regarded the United States making progress on cutting greenhouse gas emissions.

The fake news messages were collected from the study of Fernández-López and Perea (2020), who also studied fake news with a distinction of emotional loading. Fernández-López and Perea (2020) created easy-to-read fake news messages. The emotional news message was about gender-based violence being a leading cause of death. The emotionally neutral news message regarded an announcement of NASA on ten days of darkness in large cities. Both messages were considered to be disinformation: false or misleading information spread deliberately to mislead people (Ecker et al., 2022; Pennycook & Rand, 2021).

The news messages were originally written in English but were translated into Dutch by two native Dutch speakers who are highly proficient in English (C1 and C2 level). The translations were compared and, if necessary, adjusted in consultation. In the experiment, the news messages were all presented in the same format. The news messages presented to respondents can be found in Appendix 1.

Subjects

The participants were reached by the researcher personally and through social media by means of a snowball sampling method digitally. In total, 142 persons started the survey, eighteen respondents did not complete the experiment and were therefore excluded from the data. Two respondents were excluded since their nationality/native language was not Dutch. Additionally, eleven respondents were excluded as their response time was unnecessary long. It was implied that these respondents did not complete the survey in one go and other activities or distractions were involved during the process. After exclusion of not usable respondents, the date of 111 useful respondents were considered in the analysis. The participants in this experimental study were between the ages of 18 and 64 ($M = 32.3$, $SD = 13.9$). Out of all respondents, 72% were female. The education level of the respondents ranged from high school to university. 52.3% of the respondents highest completed educational level was university, 33.3% University of Applied Sciences, 6.3% post-secondary vocational education, and the other 8.1% was high school level.

The distribution among conditions was analysed to determine whether no effects could be related to background variables such as age, gender, and educational level. Within the four conditions, separate chi-square analyses showed no significant effect on both gender ($\chi2$ (3) = 2.934, $p = .402$), educational level ($\chi2$ (18) = 19.178, $p = .381$). A one-way analysis of variance showed no significant difference of age between conditions (F (3, 107) > 1). Based on the results it was concluded that the samples were similar, thus can be compared.

To test background variables, questions regarding participants' social media activities were included in the questionnaire. 95% of the respondents indicated to have one or more social media accounts. From these 106 respondents with accounts, 68.9% is inactive to somewhat active on social media and 31.1% is regularly to very regularly active on social media. A chi-square analysis showed no significant effect on participants (not) having a social media account ($\chi2$ (3) = 2.241, $p = .524$). A one-way analysis of variance showed no significant difference of social media usage between conditions (F (3, 102) > 1). Based on these results, the distribution among conditions is considered similar and thus comparable.

Design

The study contained 2 (news language: NL Dutch vs. FL English) x 2 (news message type: factual vs. fake) x 2 (emotional loading of the news: yes vs. no) mixed between within design. The design results in four conditions: (1) Dutch and factual news, (2) English and factual news, (3) Dutch and fake news, and (4) English and fake news. Emotional loading of the news

outlines was added as a within-subjects factor making this experimental study a mixed design. Respondents in each condition were presented two news messages of which one was emotional and one was non-emotional.

Instruments

The dependent variables of the current study were emotion, credibility, willingness to share, and familiarity with the news. Emotion was included in order to check the manipulation in the stimulus material. In the results section, the manipulation check with this variable is included.

Emotion was measured by asking about the degree of emotion elicited by the news item using a self-report inventory consisting of four items measuring four types of emotions, sadness, anger, helplessness, and fear, based on Fernández-López and Perea (2020). The participants had to evaluate the degree of emotion elicited by the news message on a bipolar scale ranging from 1: no emotion to 7: very much emotion. The reliability for perceived emotional load of the news comprising four items was excellent according to Cronbach's alpha for the emotional news messages ($\alpha = .85$) and also for the non-emotional news messages ($\alpha = .89$).

Credibility was measured with a single statement "I consider this news content as…" on a 7-point Likert scale ranging from 1: not at all credible to 7: absolutely credible based on Fernández-López and Perea (2020).

Willingness to share the news was measured with a single statement "If you were to see the above article on social media, how likely would you be to share it?" on a 7-point Likert scale ranging from 1: very unlikely to 7: very unlikely based on Pennycook et al. (2021).

Familiarity with the news was measured with a single statement "Are you familiar with the above headline (have you seen or heard about it before)?" on a 7-point Likert scale ranging from 1: not at all to 7: extremely based on Pennycook et al. (2021).

As the participants in each condition were presented with two news messages, each dependent variable was asked and measured twice. Once for the emotionally loaded news message and once for the non-emotional news message.

Procedure

This study was conducted through the online survey software Qualtrics. The researcher reached the participants digitally and personally to participate in the experiment. No information regarding the details of the study was shared while approaching the participant. Before the participant agreed to participate, information regarding the data usage and privacy was shared.

An explanation was presented that the Radboud requirements concerning data collection have been followed.

If the participant agreed to participate, they were randomly matched to one of the four conditions. The participants were asked to carefully read the instruction, read the text, and respond to the questionnaire (see Appendix 2 for the questionnaire). Upon completion, the participants were thanked by the researcher regardless of their responses. The time required for the experiment was on average 5 minutes and 45 seconds ($M = 5.76$, $SD = 4.43$).

Statistical treatment

For data analysis of the experiment, IBM SPSS Statistics 27 was used. For all statistical tests, a confidence interval of 95% was used. A two-way univariate analysis of variance with between-subjects and within-subjects factors (repeated measures) was performed on the four dependent variables (emotion, credibility, familiarity, and willingness).

To avoid Type I error, Bonferroni correction was used for ANOVA's. Furthermore, in case the assumption of homogeneity of variances (Levene's test) was violated, significance level changed from $p < .05$ to $p < .001$ also to avoid false positives.

Results

Manipulation check: emotional loading of the news messages

In the experiment, two news messages were presented to each participant. One news message was emotionally loaded, and the other news message was emotionally neutral (i.e. non-emotional). To check whether the emotional loading of the news messages was perceived by the participants as intended, a manipulation check was conducted. A repeated measures analysis for emotion with condition (Dutch Factual/Dutch Fake/English Factual/English Fake) as between-subject factor and message type (emotional/non-emotional) as within-subject factor showed no significant main effect of condition ($F (1, 107) < 1$) (for means and standard deviations see Table 1).

The analysis did show a significant main effect of message type ($F (1, 107) = 148.70$, $p < .001$; partial eta squared $= .582$). This main effect is explained in such that the participants rated the emotional news messages ($M = 4.05$, $SD = 1.23$) as significantly more emotional than the neutral news messages ($M = 2.43$, $SD = 1.31$) over all conditions.

There was no significant interaction effect between condition (Dutch Factual/Dutch Fake/English Factual/English Fake) and message type (emotional and non-emotional) ($F (3, 107) = 1.57$, $p = .254$). Based on these results, the manipulation was considered successful as participants evaluated the emotional news messages significantly more emotional than the non-emotional news messages.

Table 1. Means, standard deviations and N for emotion per message type (emotional and non-emotional) in function of the four conditions (Dutch Factual/Dutch Fake/English Factual/English Fake) (1 = low; 7 = high)

	Dutch Factual			Dutch Fake			English Factual			English Fake			Total		
	M	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N
Emotional	4.23	1.11	30	3.80	1.47	31	4.20	1.01	22	3.99	1.24	28	4.05	1.23	111
Non-emotional	2.23	1.22	30	2.34	1.42	31	2.50	1.25	22	2.68	1.36	28	2.43	1.31	111
Total	3.23	.83	30	3.07	1.25	31	3.35	.97	22	3.33	1.17	28	3.24	.10	111

Credibility

A repeated measures analysis for credibility with condition (Dutch Factual/Dutch Fake/English Factual/English Fake) as between-subject factor and message type (emotional/non-emotional) as within-subject factor showed no significant main effect of condition ($F (3, 107) = 1.33$, $p = .268$). The test did present a significant main effect of message type ($F (1, 107) = 21.26$, $p <$

.001; partial eta squared = .166). This main effect shows that the participants rated the emotional news messages (*M* = 4.47, *SD* = 1.65) as significantly more credible than the non-emotional news messages (*M* = 3.47, *SD* = 1.72).

There was no significant interaction effect between message type (emotional/non-emotional) and the four conditions (Dutch Factual/Dutch Fake/English Factual/English Fake) (*F* (3, 107) = 3.04, *p* = .032) (for means and standard deviations, see Table 2).

The difference in credibility evaluation was independently of the condition, meaning that the language of the news and whether the news was factual or fake did not influence the evaluation difference between the emotional and non-emotional news messages.

Table 2. Means, standard deviations and N for credibility per message type (emotional and non-emotional) in function of the four conditions (Dutch Factual/Dutch Fake/English Factual/English Fake) (1 = low; 7 = high)

	Dutch Factual			Dutch Fake			English Factual			English Fake			Total		
	M	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N
Emotional	5.03	1.25	30	3.90	1.87	31	5.05	1.56	22	4.04	1.55	28	4.47	1.65	111
Non-emotional	3.17	1.66	30	3.58	1.73	31	3.59	1.82	22	3.57	1.75	28	3.47	1.72	111
Total	4.10	1.16	30	3.74	1.09	31	4.31	1.09	22	3.80	1.30	28	3.97	1.19	111

Familiarity

A repeated measures analysis for familiarity with the message with condition (Dutch Factual/Dutch Fake/English Factual/English Fake) as between-subject factor and message type (emotional/non-emotional) as within-subject factor was performed. Levene's test was violated (*p* = .032). Therefore, significance level changed to *p* < .001.

The repeated measures analysis showed a significant main effect of condition (*F* (3, 107) = 12.84, *p* < .001; partial eta squared = .266). A significant difference in familiarity was found between the Dutch factual news (*M* = 3.52, *SD* = 1.15) and Dutch fake news (*M* = 2.16, *SD* = 1.02) (*p* < .001). Also, a significant difference was found between Dutch fake news (*M* = 2.16, *SD* = 1.02) and English factual news (*M* = 2.80, *SD* = 1.10) (*p* < .001). English fake news (*M* = 2.57, *SD* = 1.21) also differed significantly from English factual news (*M* = 2.80, *SD* = 1.10) (*p* = .001). No significant difference was found between (1) English fake and Dutch fake, (2) English factual and Dutch factual, and (3) Dutch factual and English fake (all *p*s > .009)

The repeated measure analysis also presented a significant main effect of message type (F (1, 107) = 127.71, $p < .001$; partial eta squared = .544). Overall, participants evaluated the emotional loaded news message as more familiar ($M = 3.96$, $SD = 2.00$) compared to the non-emotional loaded news message ($M = 1.95$, $SD = 1.33$).

Furthermore, the repeated measure analysis showed a significant interaction effect between condition (Dutch Factual/Dutch Fake/English Factual/English Fake) and message type (emotional and non-emotional) (F (3, 107) = 12.38, $p < .001$; partial eta squared = .258). To understand the interaction effect between condition and message type, four two-way univariate analysis of variance were conducted for familiarity.

The difference between the familiarity evaluation between the two message types (emotional and non-emotional) was found among the Dutch factual news messages (F (1, 29) = 81.67, $p < .001$; partial eta squared = .738). The emotional message ($M = 5.13$, $SD = 1.76$) was significantly more familiar to the participants than the non-emotional message ($M = 1.90$, $SD = 1.21$). The same pattern occurred in the Dutch fake news message; which also showed a significant difference (F (1, 30) = 14.55, $p < .001$; partial eta squared = .327). The emotional message ($M = 2.74$; $SD = 1.55$) seemed more familiar than the non-emotional message ($M = 1.58$, $SD = 1.06$). Similarly, a significant difference between the familiarity of news messages was found within the English factual condition (F (1, 21) = 56.39, $p < .001$; partial eta squared = .729). The emotionally loaded message ($M = 5.36$; $SD = 1.47$) seemed more familiar than the emotionally neutral message ($M = 2.23$, $SD = 1.48$). Lastly, familiarity did not differ significantly between the message type within the English fake news condition (F (1, 27) = 4.00, $p = .056$) (for means and standard deviations, see Table 3).

Table 3. Means, standard deviations and N for familiarity per message type (emotional and non-emotional) in function of the four conditions (Dutch Factual/Dutch Fake/English Factual/English Fake) (1 = low; 7 = high)

	Dutch Factual			Dutch Fake			English Factual			English Fake			Total		
	M	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N
Emotional	5.13	1.76	30	2.74	1.55	31	5.36	1.47	22	2.96	1.64	28	3.96	2.00	111
Non-emotional	1.90	1.21	30	1.58	1.06	31	2.23	1.48	22	2.18	1.54	28	1.95	1.33	111
Total	3.52	1.15	30	2.16	1.02	31	3.80	1.10	22	2.57	1.21	28	2.96	1.29	111

Willingness to share

A repeated measures analysis for willingness to share the news with condition (Dutch Factual/Dutch Fake/English Factual/English Fake) as between-subject factor and message type (emotional/non-emotional) as within-subject factor showed no significant main effect of condition (F (3, 107) < 1) and no significant main effect of message type (F (1, 107) = 1.89, p = .172). There was also no interaction effect between condition and message type (F (3, 107) < 1). According to the results, the willingness to share the news messages did not differ significantly between the four conditions nor between the emotional loading of the messages (for means and standard deviations, see Table 4).

Table 4. Means, standard deviations and N for willingness to share per message type (emotional and non-emotional) in function of the four conditions (Dutch Factual/Dutch Fake/English Factual/English Fake) (1 = low; 7 = high)

	Dutch Factual			Dutch Fake			English Factual			English Fake			Total		
	M	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N	*M*	*SD*	N
Emotional	2.03	1.30	30	1.97	1.87	31	1.82	1.14	22	1.93	1.86	28	1.95	1.58	111
Non-emotional	1.83	1.64	30	1.71	1.51	31	1.50	1.10	22	1.75	1.51	28	1.71	1.46	111
Total	1.93	1.10	30	1.84	1.45	31	1.66	.90	22	1.84	1.37	28	1.83	1.23	111

Conclusion and discussion

The aim of this study was to investigate first of all, whether the foreign language effect (FLE) was present in credibility evaluations regarding fake news messages. Secondly, it was tested whether emotion influenced the effect. The experiment was constructed to answer the research question: "To what extent is the Foreign Language Effect present in evaluating the credibility of fake news, and what is the influence of emotion within this effect?" Grounded on the data of 111 Dutch survey respondents, relevant conclusions regarding the research question were drawn.

After conducting a literature review, three hypotheses were formulated. Firstly, it was hypothesized that the FLE would lead to lower credibility evaluations for fake news in the foreign language (English) than in the native language (Dutch) (hypothesis H1). A second hypothesis was formulated regarding the impact of emotion on the credibility of fake news. Hypothesis H2a proposed that emotional news messages would be evaluated as more credible than the non-emotional news messages. This expectation was based on the studies by Loewenstein et al. (2001), Naqvi et al. (2006), and Quartz (2009) who suggest that in an emotional context, people have a reduced logical reasoning mechanism. Continuing on H2a, another hypothesis was formulated regarding the difference in credibility evaluation between the emotional and non-emotional news messages. It was expected that this difference would be smaller in the FL than in the NL (H2b). Conclusions per hypothesis are explained below.

The FLE, fake news credibility, and emotion

In the present experiment, no significant difference in credibility evaluations between the four conditions (Dutch Factual/Dutch Fake/English Factual/English Fake) occurred. Therefore, the FLE was not to be found and the hypothesis (H1) was not supported. Although the participants evaluated the fake news messages less credible than the factual news messages (but also not significantly), this did not differ significantly between languages. Thus, there was no FLE for credibility evaluations of fake news. This hypothesis was formulated based on the information provided by Costa et al. (2017), Hadjichristidis et al. (2019) and Hayakawa et al. (2016) who suggested that in a foreign language context, the analytic mode of processing is used, while in the native language, people tend to use the emotional system. It was insinuated that the analytic mode of processing would help people distinguish fake news from factual news. Nevertheless, this was not proven in this study.

As mentioned in the introduction, studies on the FLE show various outcomes per domain, context, and modulating factors. There are other studies that investigated the FLE in

contexts in which it appeared not present. For instance, Costa et al. (2018), tested whether people focused more on the outcomes of an action and less on the intentions behind the action during moral judgment. However, they did not find a difference between the foreign language context and the native language context. Gerritsen et al. (2010), and Nederstigt and Hilberink-Schulpen (2017), found that there is no FLE in persuasive communication such as product advertisements. Costa et al. (2018) argued that the FLE has mainly been found in studies where there is a trade-off between the negative and positive outcomes of a choice or action. As this is not the case in the evaluation of fake news, this might be an explanation for why the FLE is not to be found in this context.

The findings of the present study are in line with the study of Fernández-López and Perea (2020). They also found no evidence for the FLE in the context of fake news. As Fernández-López and Perea (2020) mention, it is required to establish more understanding on which contexts are sensitive to the foreign language effect. This study contributed to FLE research since the FLE was tested in the same context as their study but with other languages.

Hypothesis H2a proposed that emotional news messages would be evaluated as more credible than the non-emotional news messages. In this study, the participants rated the emotional news messages as significantly more credible than the non-emotional news messages, regardless of the condition (Dutch Factual/Dutch Fake/English Factual/English Fake). This indicates that also for fake news messages, people are impacted by their emotion toward the content and believe that emotional content is more credible than non-emotional content. This result supports hypothesis H2a. This finding was also in line with Fernández-López and Perea (2020) who found that the higher the negative emotional load elicited by the news, the higher was the credibility evaluation.

In the present study, as well as in Fernández-López and Perea's (2020) study, this difference in credibility evaluation between emotional and non-emotional news messages did not differ between the foreign language context and the native language context. Yet, hypothesis H2b predicted that the effect would be smaller in the foreign language than in the native language. It was expected that the foreign language context led to the usage of the analytic mode of processing, while in the native language context people tend to use the emotional system (Costa et al., 2017; Hadjichristidis et al., 2019; Hayakawa et al., 2016). As this was not the case, it was suggested that the automatic thinking mode – the emotional system, remained unchanged for the participants whether they were presented the news messages in the native language of in the foreign language. Again, no foreign language effect was found. Solely, an effect of emotion could be proven in this experiment.

Additionally, the experiment tested whether participants were familiar with the news messages. Whereas the credibility evaluations did not differ significantly between the fake and the factual news messages, there were significant differences between the conditions for familiarity with the news. The Dutch factual news seemed more familiar to the participants compared to the Dutch fake news. Furthermore, the English factual news seemed more familiar to the participants than the English fake news and also than the Dutch fake news. It was striking that while the participants seemed to be not so familiar with the fake news messages, this is not reflected in the credibility evaluation. One could assume that when someone is not familiar with the content, someone raises questions on whether or not it is true. However, the participants might be influenced by the authors names that were mentioned in the news message.

The results showed that emotional news messages were more familiar to the participants than the non-emotional news messages. This was the case for the English factual, Dutch factual and Dutch fake conditions. Solely in the English fake condition, there was no significant difference between the familiarity of the emotional and the non-emotional news message. The fact that emotional news messages seemed more familiar to the participants than the non-emotional news messages can be explained by the increased vulnerability to heuristic biases that one experiences in an emotional context (Loewenstein et al., 2001; Cherry, 2019). Heuristic bias (i.e. availability heuristic) is a psychological shortcut that lead people to believe that emotional incidents are more typical than they truly are (Cherry, 2019). In the present study, this is reflected by the fact that the emotional news messages seemed more familiar to the participants than the non-emotional news messages, while in reality half of it was untrue/fake.

Lastly, it was tested whether there were differences in the type of news that participants would share online on social media platforms. This variable was included in the study as fake news is widely spread through social media, and people are not yet capable of evaluating information correctly (McGrew et al., 2017). Nonetheless, in the present study, no differences were found between the type of news messages (emotional or non-emotional) that participants would be willing to share online. Also, no differences were found between conditions (Dutch Factual/Dutch Fake/English Factual/English Fake). Overall, the means for willingness to share the news were low (all $M < 2.04$; on a scale: 1 = low; 7 = high). A possible explanation could be that the majority of the participants (68.9%) indicated to be inactive to somewhat active on social media, thus do not share much online.

To conclude, an answer to the research question "To what extent is the Foreign Language Effect present in evaluating the credibility of fake news, and what is the influence of emotion within this effect?" is formulated. In this experiment, the FLE was not found to be present in evaluating the credibility of fake news. Furthermore, emotion did not influence this effect. Nonetheless, emotion showed to influence credibility rating of news messages in the sense that emotional news messages were evaluated more credible than non-emotional news messages. This was the case for both the fake news messages, as the factual news messages. This is valuable information for further research on fake news as it can manipulate news readers and make them believe things that are untrue/fake.

Theoretical and practical implications

This study was partly based on the experiments executed by Fernández-López and Perea (2020), therefore, theoretically, this study does not provide completely new information to fake news literature and FLE literature. Nevertheless, this study contributes to the previous study and other FLE literature by using a revised experimental design with different implications. Consequently, the findings of Fernández-López and Perea (2020) were confirmed with different languages, and altered statistical tests.

The significant effects that were found in the results also show that the variables contribute to studies regarding emotional loading of news messages, and in a more broad sense, emotional context. In terms of practical implications, this study provides novel insights which are valuable for todays information society. Today, people have the desire to be informed online, however, more and more information is manipulated or simply false as there are no entry barriers in the new media environment (Waldrop, 2017). This study discovered that emotional news messages were found more credible by news readers than non-emotional news messages regardless of whether it was factual information or misinformation. This is valuable information, as news readers can be manipulated into believing news messages that are untrue/fake.

Finally, this study, together with the study by Fernández-López and Perea (2020), is one of the first studies to investigate the FLE in the fake news context. Both studies are valuable for theoretical implications and can be used as building material for new theories.

Limitations and suggestions for further research

Although this study is in line with several findings of earlier literature, the current study was limited in several ways. First of all, no manipulation checks were performed for the independent variables aside from emotion (i.e. credibility, familiarity, willingness to share). Also, these three independent variables were measured with one sole statement per variable. To guarantee that the independent variables measured what was intended, scales could have been used that measured the variable with a combination of multiple statements. This way, Cronbach's alpha could have been calculated and ensured higher reliability and validity.

A second limitation was that the lay-out of the news messages was not representative as actual news messages. According to Pennycook et al. (2021), the stimulus material should be illustrative of the actual online environment. In this experiment, solely the title, intro, date and author were mentioned whilst Pennycook et al. (2021) suggests to use the real-life lay-out including an image as if it is "ready-to-share".

Another limitation of the current study was that the languages chosen to investigate were from the similar language family (Germanic family). Studies found that the FLE is reduced, or even not present, when the native language and the foreign language are linguistically similar (Dylam & Champoux-Larsson, 2020; Miozzo et al., 2020). Nevertheless, Dutch and English were chosen since these languages were most practical for the scope of this study and it differed from the previous study by Fernández-López and Perea (2020) who used Spanish and English. Nevertheless, future research could use the current experimental design with languages without language similarity to discover whether this influenced the absence of the FLE. Another suggestion for future research is to explore the relationship between credibility and familiarity, and how this might be influenced by names, authors, sources etc.

Future research on the FLE should also include language proficiency in the research design. The current study was lacking this measurement whilst it would be important to measure in case the FLE would be present. People with high foreign language proficiency might experience a lower FLE than people with a lower foreign language proficiency (Circi et al., 2021; Čavar & Tytus, 2017; Wong & Ng, 2018). Although the majority of studies use self-ratings of language proficiency, it is advised to measure actual language proficiency with an objective measurement such as the LexTALE test (Brouwer, 2020; Lemhöfer & Broersma, 2012). Self-ratings on language proficiency are considered less reliable than actual objective language proficiency as bilinguals can underestimate or overestimate their language ability (MacIntyre et al., 1997; Lemhöfer & Broersma, 2012; Tomoschuk et al., 2018; Brouwer, 2020).

Nonetheless, the subjective measure is often used because of its low time requirement and ease of implementation (Li et al., 2006; Tomoschuk et al., 2018).

Brouwer (2020) suggested that this would be an enhanced option to investigate the influence of second language proficiency on the FLE (Brouwer, 2020; Lemhöfer & Broersma, 2012). LexTALE is a quick vocabulary knowledge test created by Lemhöfer and Broersma (2012) to examine a participant's language proficiency. According to the authors and creators of the test, LexTALE has a superior validity compared to self-ratings of proficiency. Therefore, it is a valuable and valid measure for experimental studies on second language effects (Lemhöfer & Broersma, 2012).

Lastly, this study wished to highlight the importance of further research in order to establish more evidence regarding the FLE in the news context as it is a relevant and current problem. It is required to provide more insights on how our brain works in distinguishing fake news from factual news.

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Appendix 1: News messages

EN Factual Emotional

Black Lives Matter protests faced a more militarized response than Capitol mob | January 8, 2021 | Sherrod Brown

Protesters outside the White House were met with tear gas, rubber bullets, a full militarized response. While this week, white supremacists, rioters were able to breach the Capitol.

EN Factual Non-emotional

U.S. is making progress on cutting greenhouse gas emissions when compared to the rest of the world. | February 3, 2022 | Kelda Helen Roys

The US has made strides in reducing carbon emissions that other parts of the world have not. Meanwhile, @POTUS is trying to send taxpayer dollars to manufacturers overseas that do not abide by the same standards we do at home.

EN Fake Emotional

Gender-based violence is now the leading cause of deaths for women aged between 15 and 44. | January 30, 2019 | Alex McCoy

A United Nations report already puts this cause ahead of deaths caused by cancer or traffic accidents. Another devastating fact, according to Doctors Without Borders, is that 7 out of 10 women in the world will suffer physical or sexual violence at some point in their lives.

EN Fake Non-emotional

NASA announces ten days of night because of pollution. | January 28, 2019 | Joseph McCoy Scott

International NASA warns at the UN Environment Assembly held in Dakar that 10 days of darkness are expected in several months of 2025 at cities such as New York, Mexico City, Tokyo and Beijing because of the polluting discharges into the atmosphere.

NL Factual Emotional

Black Lives Matter protesten ondervonden een meer gemilitariseerde aanpak dan de menigte bij de bestorming op het Capitool. | 8 januari 2021 | Sherrod Brown

Black Lives Matter demonstranten buiten het Witte Huis werden geconfronteerd met traangas, rubberen kogels, een volledig gemilitariseerde reactie. Terwijl deze week, witte supremacisten, relschoppers in staat waren het Capitool binnen te dringen.

NL Factual Non-emotional

De VS boekt vooruitgang in het terugdringen van de uitstoot van broeikasgassen, vergeleken met de rest van de wereld. | 3 februari 2022 | Kelda Helen Roys

De VS heeft vooruitgang geboekt in het verminderen van koolstofuitstoot die andere delen van de wereld niet hebben. Ondertussen probeert VS President Biden belastinggeld te sturen naar overzeese fabrikanten die zich niet aan dezelfde normen houden als wij thuis.

NL Fake Emotional

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Een rapport van de Verenigde Naties zet deze oorzaak al voor op sterfgevallen door kanker of verkeersongevallen. Een ander vreselijk feit, volgens Artsen zonder Grenzen, is dat 7 op de 10 vrouwen in de wereld op een bepaald moment in hun leven te maken zullen krijgen met fysiek of seksueel geweld.

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NASA kondigt tien dagen duisternis aan vanwege vervuiling. | 28 January 2019 | Joseph McCoy Scott

De internationale NASA waarschuwt op de VN-milieuvergadering die in Dakar werd gehouden dat er in enkele maanden van 2025 tien dagen duisternis worden verwacht in steden als New York, Mexico City, Tokio en Beijing vanwege de milieuvervuilende uitstoot in de atmosfeer.

MA IBC Thesis Kim

Inleiding

Graag nodig ik je uit om deel te nemen aan mijn master scriptie onderzoek. Meedoen is vrijwillig. Om mee te doen is jouw schriftelijke toestemming nodig. Voordat je besluit of je wilt meedoen aan dit onderzoek, krijg je uitleg over wat het onderzoek inhoudt. Lees deze informatie rustig door en vraag de onderzoeker uitleg als je vragen hebt.

Beschrijving van het onderzoek

Je krijgt twee korte nieuwsberichten te zien. Over beide nieuwsberichten worden een aantal vragen gesteld. Daarna volgen nog een aantal algemenere vragen. De vragenlijst kost ongeveer 10 minuten. De vragen zijn in het Nederlands.

Vrijwilligheid

Deelname aan dit onderzoek is anoniem en vrijwillig. Daarom kan je op elk moment tijdens het onderzoek je deelname stopzetten en je toestemming intrekken. Je hoeft niet aan te geven waarom je stopt. Afzien van of stoppen met deelname heeft geen nadelige gevolgen voor je.

Wat gebeurt er met mijn gegevens?

De onderzoeksgegevens die we in dit onderzoek verzamelen, zullen gebruikt worden voor datasets en artikelen. De anoniem gemaakte onderzoeksgegevens zijn tenminste 10 jaar beschikbaar voor andere wetenschappers. Persoonsgegevens die verzameld worden, blijven vertrouwelijk. Als ik gegevens met andere onderzoekers deel, kunnen deze dus niet tot jou herleid worden. Alle onderzoeks- en persoonsgegevens worden op beveiligde wijze volgens de richtlijnen van de Radboud Universiteit bewaard.

Heb je vragen over het onderzoek?

Als je vragen hebt of meer informatie over het onderzoek wilt hebben, kan je contact opnemen via de contactgegevens onderaan deze brief. Heb je klachten over het onderzoek, dan kan je contact opnemen via kim.vandemeerakker@ru.nl of je kan contact opnemen met de ethische commissie van de faculteit letteren van de Radboud Universiteit via etc-gw@ru.nl.

Toestemmingsverklaring

Als je aan dit onderzoek mee wilt doen, vraag ik je de toestemmingsverklaring te ondertekenen door hieronder te antwoorden. Door toestemming te geven geef je aan dat je de informatie hebt begrepen en instemt met deelname aan het onderzoek.

Met vriendelijke groet,
Kim van de Meerakker

Toestemming Door te klikken op "Ik ga akkoord", geef je aan dat je:
- Bovenstaande informatie hebt gelezen
- 18 jaar of ouder bent

- Vrijwillig deelneemt aan het onderzoek
- Vloeiend Nederlands spreekt

○ Ja, ik ga akkoord

○ Nee, ik ga niet akkoord

Je krijgt nu 2 nieuwsberichten te zien. Over beide berichten worden een aantal vragen gesteld. Lees het nieuwsbericht aandachtig.

Nieuwsbericht 1

Black Lives Matter protesten ondervonden een meer gemilitariseerde aanpak dan de menigte bij de bestorming op het Capitool. | 8 januari 2021 | Sherrod Brown

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De volgende vragen hebben betrekking op het hierboven getoonde nieuwsbericht.

Ik beschouw dit nieuws als geloofwaardig

	1	2	3	4	5	6	7	
Helemaal niet mee eens	○	○	○	○	○	○	○	Helemaal mee eens

Als je het bovenstaande artikel op sociale media zou zien, hoe waarschijnlijk is het dan dat je het zou delen?

	1	2	3	4	5	6	7	
Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

Ben je bekend met de informatie in het nieuwsbericht (heb je het al eens gezien of gehoord)?

	1	2	3	4	5	6	7	
Helemaal niet bekend	○	○	○	○	○	○	○	Heel erg bekend

Deze vraag heeft betrekking tot de mate van emotie die het nieuwsbericht bij je oproept.

	Geen emotie						Heel veel emotie
Hulpeloosheid	○	○	○	○	○	○	○
Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

Nieuwsbericht 2

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De VS heeft vooruitgang geboekt in het verminderen van koolstofuitstoot die andere delen van de wereld niet hebben. Ondertussen probeert VS President Biden belastinggeld te sturen naar overzeese fabrikanten die zich niet aan dezelfde normen houden als wij thuis.

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Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

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	1	2	3	4	5	6	7	
Helemaal niet bekend	○	○	○	○	○	○	○	Heel erg bekend

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Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

End of Block: Nieuwsbericht NL REAL

Start of Block: Nieuwsbericht NL FAKE

Nieuwsbericht 1

Gendergerelateerd geweld is nu de belangrijkste doodsoorzaak voor vrouwen tussen 15 en 44 jaar. | 30 januari 2019 | Alex McCoy

Een rapport van de Verenigde Naties zet deze oorzaak al voor op sterfgevallen door kanker of verkeersongevallen. Een ander vreselijk feit, volgens Artsen zonder Grenzen, is dat 7 op de 10 vrouwen in de wereld op een bepaald moment in hun leven te maken zullen krijgen met fysiek of seksueel geweld.

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Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

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Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

Nieuwsbericht 2

NASA kondigt tien dagen duisternis aan vanwege vervuiling. | Joseph McCoy Scott | 28 January 2019

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Helemaal niet bekend	○	○	○	○	○	○	○	Heel erg bekend

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Hulpeloosheid	○	○	○	○	○	○	○
Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

Nieuwsbericht 1

Black Lives Matter protests faced a more militarized response than Capitol mob | January 8, 2021 | Sherrod Brown

Protesters outside the White House were met with tear gas, rubber bullets, a full militarized response. While this week, white supremacists, rioters were able to breach the Capitol.

De volgende vragen hebben betrekking op het hierboven getoonde nieuwsbericht.

Ik beschouw dit nieuws als geloofwaardig

	1	2	3	4	5	6	7	
Helemaal niet mee eens	○	○	○	○	○	○	○	Helemaal mee eens

Als je het bovenstaande artikel op sociale media zou zien, hoe waarschijnlijk is het dan dat je het zou delen?

	1	2	3	4	5	6	7	
Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

Ben je bekend met de informatie in het nieuwsbericht (heb je het al eens gezien of gehoord)?

	1	2	3	4	5	6	7	
Helemaal niet bekend	○	○	○	○	○	○	○	Heel erg bekend

Deze vraag heeft betrekking tot de mate van emotie die het nieuwsbericht bij je oproept.

	Geen emotie						Heel veel emotie
Hulpeloosheid	○	○	○	○	○	○	○
Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

Nieuwsbericht 2

U.S. is making progress on cutting greenhouse gas emissions when compared to the rest of the world. | February 3, 2022 | Kelda Helen Roys
The US has made strides in reducing carbon emissions that other parts of the world have not. Meanwhile, @POTUS is trying to send taxpayer dollars to manufacturers overseas that do not abide by the same standards we do at home.

De volgende vragen hebben betrekking op het hierboven getoonde nieuwsbericht.

Ik beschouw dit nieuws als geloofwaardig

	1	2	3	4	5	6	7	
Helemaal niet mee eens	○	○	○	○	○	○	○	Helemaal mee eens

Als je het bovenstaande artikel op sociale media zou zien, hoe waarschijnlijk is het dan dat je het zou delen?

	1	2	3	4	5	6	7	
Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

Ben je bekend met de informatie in het nieuwsbericht (heb je het al eens gezien of gehoord)?

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Hulpeloosheid	○	○	○	○	○	○	○
Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

Nieuwsbericht 1

Gender-based violence is now the leading cause of deaths for women aged between 15 and 44.
| January 30, 2019 | Alex McCoy
A United Nations report already puts this cause ahead of deaths caused by cancer or traffic accidents. Another devastating fact, according to Doctors Without Borders, is that 7 out of 10 women in the world will suffer physical or sexual violence at some point in their lives.

De volgende vragen hebben betrekking op het hierboven getoonde nieuwsbericht.

Ik beschouw dit nieuws als geloofwaardig

	1	2	3	4	5	6	7	
Helemaal niet mee eens	○	○	○	○	○	○	○	Helemaal mee eens

Als je het bovenstaande artikel op sociale media zou zien, hoe waarschijnlijk is het dan dat je het zou delen?

	1	2	3	4	5	6	7	
Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

Ben je bekend met de informatie in het nieuwsbericht (heb je het al eens gezien of gehoord)?

	1	2	3	4	5	6	7	
Helemaal niet bekend	○	○	○	○	○	○	○	Heel erg bekend

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Hulpeloosheid	○	○	○	○	○	○	○
Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

Nieuwsbericht 2

NASA announces ten days of night because of pollution. | January 28, 2019 | Joseph McCoy Scott

International NASA warns at the UN Environment Assembly held in Dakar that 10 days of darkness are expected in several months of 2025 at cities such as New York, Mexico City, Tokyo and Beijing because of the polluting discharges into the atmosphere.

De volgende vragen hebben betrekking op het hierboven getoonde nieuwsbericht.

Ik beschouw dit nieuws als geloofwaardig

	1	2	3	4	5	6	7	
Helemaal niet mee eens	○	○	○	○	○	○	○	Helemaal mee eens

Als je het bovenstaande artikel op sociale media zou zien, hoe waarschijnlijk is het dan dat je het zou delen?

	1	2	3	4	5	6	7	
Zeer onwaarschijnlijk	○	○	○	○	○	○	○	Zeer waarschijnlijk

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Hulpeloosheid	○	○	○	○	○	○	○
Angst	○	○	○	○	○	○	○
Verdriet	○	○	○	○	○	○	○
Woede	○	○	○	○	○	○	○

End of Block: Nieuwsbericht EN FAKE

Start of Block: Sociale media gebruik

Heb je één (of meerdere) accounts op sociale media?

○ Ja

○ Nee

Ik bekijk iedere dag sociale media

	1	2	3	4	5	6	7	
Helemaal mee eens	○	○	○	○	○	○	○	Helemaal niet mee eens

Hoe regelmatig deel je iets op sociale media?

	1	2	3	4	5	6	7	
Nooit	○	○	○	○	○	○	○	Zeer regelmatig

Ik heb een account op (meerdere kanalen aanklikken is mogelijk)

☐ Facebook

☐ Instagram

☐ Twitter

☐ TikTok

☐ Snapchat

☐ LinkedIn

Wat is je leeftijd?

_____

Wat is je geslacht?

    ○ Man

    ○ Vrouw

    ○ Anders

    ○ Zeg ik liever niet

Wat is je nationaliteit? (bij dubbele nationaliteit gebruik schuine streep, e.g., Nederlands/Chinees)

    ○ Nederlands

    ○ Anders, namelijk: _____

Wat is je moedertaal

    ○ Nederlands

    ○ Anders, namelijk: _____

Wat is je hoogst genoten (of huidige) opleidingsniveau?

    ○ VMBO

    ○ HAVO

    ○ VWO

    ○ GYMNASIUM

    ○ MBO

    ○ HBO

    ○ UNIVERSITEIT

End of Block: Demografische vragen

Start of Block: Einde

Als je relevante opmerkingen hebt (zoals een technisch probleem of een onduidelijke instructie), aarzel dan niet om ze hier te delen.