

# The Power of a Good Story: Narrative Persuasion in Extremist Propaganda and Videos against Violent Extremism

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# The Power of a Good Story: Narrative Persuasion in Extremist Propaganda and Videos against Violent Extremism

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The perceived threat of extremist online propaganda has generated a need for countermeasures applicable to large audiences. The dissemination of videos designed to counter violent extremism (CVE videos) is widely discussed. These videos are often described as “counter-narratives,” implying that narrativity is a crucial factor for their effectiveness. Experimental research testing this assumption is rare and direct comparisons of narrativity effects between propaganda and CVE videos are lacking. To fill this gap, we conducted two experiments (one in a laboratory and one online) in which we confronted German participants with different religious affiliations and from various cultural backgrounds (NStudy 1 = 338 and NStudy 2 = 155) with Islamist extremist or right-wing extremist propaganda videos and with corresponding CVE videos. The results confirmed that narrativity (a) increases persuasive processing of propaganda and CVE videos, (b) fosters amplification intentions regarding these videos, and (c) increases attraction to extremists versus counter-activists. Thus, our studies highlight the crucial role of narrativity in both extremist propaganda and video-based CVE approaches.

**Keywords:** Islamic extremism, right-wing extremism, online videos, propaganda, media effects, prevention, counter-narratives, narrative persuasion

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*“Studying extremism without studying stories is like studying the brain without studying the neurons” (Ebner 2017, 21)*

Extremist propaganda videos have become a frequent phenomenon in online media. More than half of German adolescents report previous experience with extremist content, 17 percent of them via YouTube (Reinemann et al. 2019). Recommendation algorithms can increase the risk of exposure: Consumers of civic education campaigns, need only two

clicks to reach Islamic extremist (ISEX) or right-wing extremist (RWEX) content when following the platform’s recommendations (Schmitt et al. 2018).

One highly promoted strategy against the potentially noxious effects of propaganda is the dissemination of so-called alternative or counter-narratives (for example, Doosje and van Eerten 2017)—stories that reach their audience via the same online channels, discredit the extremists’ interpretation via a credible story-line, counter their legitimization of vio-

lence, while, at the same time, making a compelling case for civic participation (Aly 2014). Five out of eight projects by the European Commission in the “Support dialogue and exchange of best practice in fostering tolerance and mutual respect (REG-AG)” program promise to collect or create counter-narratives (The European Commission, 2018). YouTube itself uses “ad word targeting tools and curated YouTube videos [...] to confront online radicalization” (<https://redirectmethod.org/> 11.11.2018). Although there is initial evidence that users do welcome videos countering deviant behavior obtained in contexts of health communication (Oksanen et al. 2015) and violent extremism (Silverman et al. 2016), evidence for persuasive effects of counter-narratives regarding radicalization-related attitudes and behaviors is surprisingly scarce. Particularly, the implicitly proclaimed causal role of narrativity in the “battle of the hearts and minds” (Payne 2009,1) between propaganda and CVE, has not been tested experimentally so far. The two experiments presented in this paper aimed to fill this gap.

## 1. Literature Review

### 1.1 Narratives and Narrativity

The call for counter-narratives is based on the assumption that extremist propaganda persuades via stories, or *narratives* (for example Braddock 2015; Corman 2011; Leuprecht et al. 2009). Narratives have been studied extensively across a range of humanities and social sciences (for example in criminology (Presser 2009; Sandberg et al. 2014), sociology (Loseke 2007), psychology (Mar et al. 2011), and communication (Slater and Rouner 2002; Moyer-Gusé 2008; Green and Brock 2002)). Research from communication science is thereby particularly informative for understanding propaganda effects.

Narratives use different *story types* (Hinyard and Kreuter 2007), for example stories about personal experiences (personal narratives), official accounts of events by organizations (organizational narratives), or culturally rooted tales (cultural narratives). As Glazzard (2017) argue, all these storylines can be artfully interwoven in extremist propaganda.

Given that not all stories are “good stories” (Kinnebrock and Bilandzic 2006, 5), understanding the persuasiveness of propaganda and CVE videos, requires considering their level of *narrativity*. Narrativity is scalable and different stories can

score higher or lower (Fludernik 1996; Prince 2004). Narrativity is a story attribute, the “presence and interaction of a set of [...] elements” (such as dramatic, emotional depictions or insights into character development) “that constitute the potential [...] to create a rich mental representation” (Kinnebrock and Bilandzic 2006; Kalch and Bilandzic 2017). Narrativity is also a subjective perception (de Fina and Geogakopolou 2012)—not all recipients perceive all stories under all conditions in the same manner (Schreiner 2016).

### 1.2. Narrativity and Persuasion

The processing of narratives is a very fundamental human ability. As “Homo Narrans” (Fisher 1985, 74), humans are natural-born story-tellers who use narratives to lend meaning to their lives and the world around them (Bruner 1991, 1987) and to construct their personal, collective, and cultural identities (Loseke 2007). Meta-analyses show that narratives are also a valuable tool for persuasion (Braddock and Dillard 2016; van Laer et al. 2013).

Different models have been developed to describe how narratives persuade, with the *Extended Elaboration-likelihood Model* (E-ELM) by Slater and Rouner (2002), the *Overcoming Resistance Model* by Moyer-Gusé (2008), and the *Transportation-Imaginary Model* by Green and Brock (2002) being the most established in communication science. Although these models set different foci, they agree that narrative persuasion is a process characterized by specific antecedents that motivate narrative engagement, which in turn leads to the persuasion outcome.

#### 1.2.1. Antecedents

On the recipients’ side, interest in the type of story (for example, heroic versus romantic, see Slater and Rouner 2002), familiarity with the topic (Green and Brock 2000), and need for affect (Appel and Richter 2010) increase narrative persuasion, whereas contradictory attitudes (such as prejudice when watching videos against discrimination) impair narrative persuasion (Igartua and Frutos 2017).

Concerning the medium, production quality intensifies narrative processing. Stories written by famous authors generate higher levels of narrative processing than material produced by non-experts (Green and Brock 2000). Good stories have been described as those scoring higher on narrativity (Kin-

nebrock and Bilandzic 2006). Most plausible, narrativity also increases the appeal of propaganda and CVE videos. Judging a video as appealing can in turn be expected to increase its persuasiveness. Although the role of appeal has not been tested directly in narrative persuasion research, research on medium credibility provides ample evidence that more appealing (online) content is more persuasive (Flanagin and Metzger 2007; Metzger et al. 2003).

### 1.2.2. Processing

The processing of narratives is usually described along two related but distinct dimensions (for example, Slater and Rouner 2002): (1) *transportation* (see also Green and Brock 2000), as the construction of and immersion in a mental model of the narrative world, and (2) *identification* with the characters (see also Cohen, Tal-Or, and Mazor-Tregerman 2015; Tal-Or and Cohen 2010). Relevant for the study of propaganda and CVE videos, transportation was found to be more relevant for textual than visual stimuli (Lien and Chen 2013) and identification (but not transportation) was found to reduce counterarguing against a persuasive attempt (Moyer-Gusé and Nabi 2010).

Recently, a third dimension has been proposed to mediate narrative persuasion: (3) retrospective reflection (Hamby, Brinberg, and Daniloski 2017) or the “recall of self- or other-relevant memories” (12). Igartua, Cheng, and Lope (2003) refer to a similar aspect as cognitive inducement. Supporting the idea that cognitive engagement mediates narrative persuasion, Das, Nobbe, and Oliver (2017) found that preventing such engagement decreased persuasion. However, in contrast to identification and transportation, cognitive engagement does not seem to steer narrative persuasion for all recipients; Hoeken and Fikkers (2014) found that a substantial share of recipients do not think about narratives at all.

### 1.2.3. Outcomes

The general persuasiveness of narratives is well established by meta-analyses (Braddock and Dillard 2016; van Laer et al. 2013). Narrative persuasion has mainly been tested for socially desirable outcomes such as health behavior, and has been found to increase, amongst others, the willingness for physical exercise (Das, Nobbe, and Oliver 2017), and decrease favorable attitudes towards drinking and driving

(Moyer-Gusé, Jain, and Chung 2012). More directly related to CVE videos, narratives have also been found to reduce stereotypes (Vezzali et al. 2015), foster empathy with devaluated groups (Oliver et al. 2012) and increase intentions to engage more deeply with CVE videos and share them online (Frischlich et al. 2017). So far, narrative persuasion has not been examined in the context of extremist propaganda videos, although there is mounting evidence suggesting that extremists heavily rely on narratives in their propaganda campaigns.

## 1.3. Narrative Persuasion and Extremist Propaganda

### 1.3.1. Narratives versus Narrativity in Propaganda and CVE videos

Relying on content analytical data, different authors have argued that the persuasive power of narratives extends to extremist propaganda and has the potential to foster radicalization (Corman 2011; Ebner 2017; Braddock 2015; Braddock and Horgan 2015; Dean, Bell, and Vakhitova 2016; Mahood and Rane 2017; Musial 2016). For instance, Halverson, Corman, and Goodall (2011) reported that several hundred documents of ISEX groups refer to the narrative of the “crusaders” who “occupy” Muslim territory and must be repelled (110 ff.). RWEX groups refer to the same context demanding the Reconquista, the regaining of “their” territories from the “Muslim invaders” (Bayrisches Staatsministerium des Inneren, für Bau und Verkehr 2016).

The use of narratives does not necessarily imply narrativity. A content analysis of 112 RWEX and ISEX videos in German showed that most of them used a non-narrative style (Rieger, Frischlich, and Bente 2013). Narrative propaganda tends to be received more positively. In a series of focus groups with British Muslims, Baines et al. (2010) found that the only video having a “strong political impact” was a dramatic cartoon relying on an “overt entertainment format [with] a narrative momentum” (490). Similarly, Rieger et al. (2013) found recipients gave more favorable ratings to propaganda videos using a dramatic movie-clip style.

The same is true for CVE videos. A content analysis of 130 German CVE videos tackling RWEX and ISEX showed that although three-quarters of the videos entailed prototypical stories, most used a non-narrative documentary style (Rieger, Morten, and Frischlich 2017) but—as the same authors re-

ported—CVE videos scoring higher on narrativity were also rated more favorably (Frischlich et al. 2017). However, these results do not allow conclusions on the potential role of narrativities for radicalization.

### 1.3.2. Extremist Propaganda, CVE Videos and Radicalization

Radicalization is a highly contested term and definitions vary between research fields. In the current paper, we use the definition by Doosje et al. (2016), who describe radicalization as “a process through which people become increasingly motivated to use violent means against out-group members or symbolic targets to achieve behavioral change and political goals” (79). The model distinguishes three stages: (1) *Sensitivity*, in which individual *vulnerabilities or push factors* (for an overview of push factors, see Neo, Dillon, and Khader 2017); affect the response towards the pull of the extremists (2) Group membership, where individuals start to feel, think, and act as part of the (virtual or real-life) extremist group; and (3) Action, where finally violence is executed. Although there is scientific consensus that propaganda alone is not the cause of radicalization (for example, Meleagrou-Hitchens and Kaderbhai 2017), it is generally assumed that propaganda has the potential to fuel radicalization processes (for example, Zick and Böckler 2015) in individuals, social groups and entire societies (Frischlich 2018).

In the current paper, we are particularly interested in effects of propaganda and CVE videos on early attraction to extremist groups. Causal evidence for such effects is surprisingly rare (Conway 2017; Matthes 2012). Claims are often based on retrospective, biographical analyses (Koehler 2014) or anecdotal evidence (von Behr et al. 2013). The few experimental studies on the effects of extremist propaganda videos (Frischlich et al. 2015; Rieger, Frischlich, and Bente 2017), show that propaganda videos are mainly rated negatively, although level of rejection varies as a function of the videos’ style and the recipients’ individual characteristics (for example their level of authoritarianism or education, see Rieger et al. 2013). For instance, Cottee et al. (2018) found that an ISEX video telling a person-centered story about idealized life in the self-declared “Islamic state” (IS), was “received positively among a not insignificant number of those who profess no sympathy for the group” (20).

Yet evidence for effects of propaganda on radicalization, for example in terms of increased acceptance of violence, remains mixed. On the one hand, Shortland et al. (2017) found that individuals who watched an ISEX video reported lower aggression levels afterwards than control participants, indicating a distancing from radical means after propaganda reception. On the other hand, Rieger et al. (2013) found higher levels of terrorism acceptance after watching such content. Notably, none of the studies considered narrativity.

## 2. Theoretical Expectations

**Antecedents.** Based on the literature, we developed a theoretical model adapted to the context of propaganda and CVE videos, which we will detail in the following. Narrativity served as the central antecedent for both propaganda and CVE videos.

**Mediator variables.** As narrativity has been suggested to be a characteristic of good stories (Kinnebrock and Bilandzic 2006), we expected that:

*H1. Narrativity is positively associated with appeal.*

Narrativity has been demonstrated to increase identification (Cohen, Tal-Or, and Mazor-Tregerman 2015; Tal-Or and Cohen 2010). We thus predicted that:

*H2. Narrativity is positively associated with identification.*

More recently, cognitive engagement with the narrative has gained increased attention in narrative persuasion research (Hamby, Brinberg, and Daniloski 2017; Das, Nobbe, and Oliver 2017). However, not all recipients respond to narratives with cognitions (Hoeken and Fiekkers 2014). As such, we asked:

RQ1. *Is narrativity positively related to cognitive inducement?*

Participants’ identification with the protagonists in the videos is plausibly associated with their level of cognitive inducement. Identification with media characters is conceptualized as “an imaginative process” (Cohen 2001, 250), that “consists of increasing loss of self-awareness and its temporary replacement with heightened [...] cognitive connections” (251). As such, we expected that:

*H3. Identification is positively associated with cognitive inducement.*

**Outcomes.** Based on the literature on radicalization, we identified three main outcomes of interest: (1) willingness to

amplify the message of the videos as an indicator of active online engagement; (2) attraction towards the extremist respective counter-activist group as an indicator of a group approach; (3) change in agreement with extremist claims.

Drawing from narrative persuasion research we specified identification and cognitive engagement as mediator variables of *narrative processing*. In addition, we specified perceived appeal as additional mediator on the basis of credibility research. Overall, we expected narrative processing to be related to our outcome variables of interest, namely that narrative processing increases:

H4. *amplifying intentions*,

H5. *attraction towards the group behind the respective videos (extremists versus counter-activists)*,

H6. *story-consistent attitudes*.

Further, we expected that:

H7. *persuasive processing mediates the effect of narrativity on the outcome variables*.

The initial narrative persuasion model by Slater and Rouner (2002) suggests that reinforcing the message, for instance via subsequent discussions, additionally intensifies persuasive outcomes. We speculated that amplification intentions (that is, the intention to post the video or watch similar content) could have similar effects and suggested that:

H8. *Amplifying intentions are positively associated with attraction towards the group and story-consistent attitudes*.

**Control variables.** Finally, it has been shown that the persuasive processing of narratives is affected by participants' a

priori attitudes (Igartua and Frutos 2017). As such, we controlled our analyses for pre-existing agreement with RWEX and ISEX attitudes. Figure 1 summarizes our theoretical model.

### 3. The Present Research

We tested our hypotheses in two experiments. Study 1 was a laboratory assessment, Study 2 replicated our findings in an online sample. Both studies were conducted in Germany.

#### 3.1. Study 1: Methods

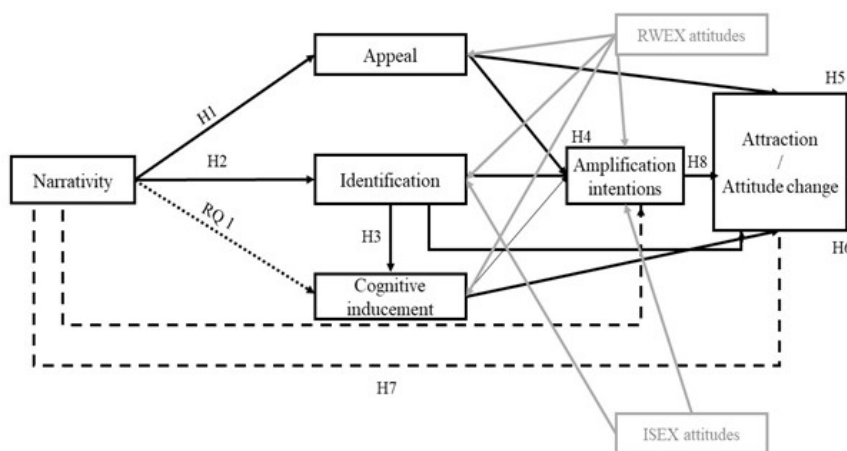
##### 3.1.1. Procedure and Measurements

The ethical review board of the researcher's university approved the study. To account for the influences of educational level on propaganda evaluation (Rieger, Frischlich, and Bente 2019), we recruited students and apprentices. Participants were recruited in cities in western Germany for a 30- to 45-minute study about "judging political videos". Recruitment at universities was via student mailing-lists and flyers on campus, at vocational schools via teachers. All participants completed the study in separate cubicles to avoid emotional contagion. Participation was incentivized with €15.

The whole study was computer-driven. After giving informed consent, participants completed some personality and demographic measures. The current analysis focusses on the variables relevant for narrative processing as described below. An overview of all measurements, including those not in

focal attention in this paper, is provided in the supplementary material 1 via the Open Science Framework (OSF, available online via <https://osf.io/eqmgs/>). Embedded in these questionnaires, participants stated in how far they agreed with ten extremist statements. The statements were distilled from the propaganda videos and selected to represent similar story-lines in right-wing extremist (RWEX) and Islamic-extremist (ISEX) ideologies (for example, "the caliphate [the national resis-

Figure 1: Hypothesized model



Control variables indicated in grey, dashed lines indicate fully mediated paths. RWEX = right-wing extremism, ISEX = Islamic extremism.

tance] shows the Muslims [the Germans] the solution to their problems”). All items were answered on a seven-point scale (-3 = “very strong disagreement”, 3 = “very strong agreement”). Although reliability for both factors was initially below the desired threshold (RWEX  $\alpha = .65$ , ISEX  $\alpha = .59$ ), reliability increased after the video reception (see below). Thus, we aggregated the items to form indicators of RWEX respectively ISEX baseline attitudes.

After the initial questionnaires, participants watched two video blocks. One entailed two CVE videos, the other block two propaganda videos.<sup>1</sup> As shared collective identities have been found to attenuate the response to propaganda (Rieger et al., 2019), Muslim participants saw ISEX propaganda and accordant CVE videos, whereas non-Muslims saw RWEX propaganda and CVE videos. The order of videos within the blocks was randomized. We selected the videos based on prior studies (Rieger, Frischlich, and Bente 2013; Frischlich et al. 2017). The selection aimed for (a) similar genres for the RWEX and the ISEX videos and (b) similar narrativity in the propaganda and CVE videos within one ideology. Based on these criteria, we selected a video in which one or more young extremists talk directly to the camera (so-called “talking head lifestyle activist format”) and a dramatic, Hollywood-like “movie clip” from the database by Rieger et al. 2013 as propaganda videos. For the CVE videos, we selected an ex-extremist talking directly into the camera and an informative documentary from the database by Rieger, Morten et al. (2017). We describe the videos in detail in the supplementary material 2 uploaded to the OSF (Table A<sup>3</sup>, accessible online via <https://osf.io/eqmgs/>). An independent coder coded the narrative elements (for example whether the videos had an emotional style or described personal challenges), confirming that the propaganda and the CVE videos within one ideology entailed similar numbers of narrative elements.

Participants rated each video on a set of dependent variables immediately after watching.<sup>2</sup> **Subjective narrativity**, our main antecedent of narrative persuasion, was measured via

participants’ agreement with the statement: “the video told a story” (Lien and Chen 2013; Frischlich et al. 2017) on a five-point scale (0 = “not at all”, 4 = “totally”).

**Narrative processing** was measured with nine items (see supplementary material, 2, accessible online via <https://osf.io/eqmgs/>) addressing *appeal* (for example: “the video was professional”), *identification* (for example: “I could identify with at least one person in the video”), and *cognitive inducement* (for example: “the video made me think”), on the basis of prior research (Frischlich et al. 2017). A multi-group confirmatory factor analysis (MG-CFA) confirmed that the basic model structure was identical across video blocks (*configural invariance*), and that the items had largely the same loading onto their factors irrespective of video block (*partial metric invariance*). One item (“I could picture myself in that situation”) loaded higher on identification after the propaganda than after the CVE videos. The final model showed an acceptable fit to the data (see Table 2). All factor loadings were significant (all  $p < .001$ ) and substantial (all  $> .60$ ), and the Fornell-Laker criterion confirmed discriminant validity (see supplementary material 2, Table B in the OSF, for details).

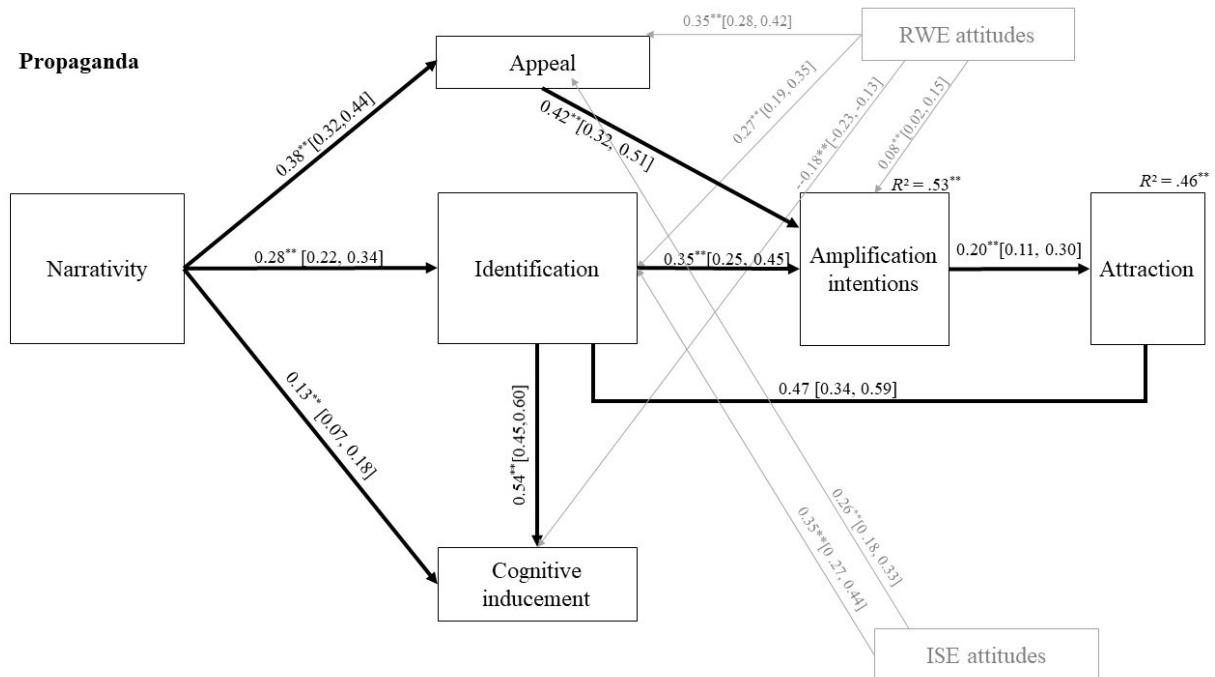
As first **outcome** variable, we measured intentions to *amplify* the video’s message with two items (“I would post the video”, “I would watch more videos like this”) taken from Frischlich et al. (2017). The other two outcome variables (*attraction* to the group and changes in *agreement* with extremist statements) were measured after each block. Participants read the following statement:

“People belong to all kinds of groups, such as sports teams, political parties, religious communities, or interest groups. The videos you have watched show the attitudes of a specific group of people. Please report how much you agree with the following statements about this group.”

<sup>1</sup> The order of videos and blocks was randomized. The order of blocks was uncorrelated with most of the dependent variables, wherefore we did not inspect this variable further. There was only one small association ( $r = .14$ ,  $p < .05$ ) between the order of the blocks and identification reported after the CVE videos, showing that participants identified more with the CVE videos when they had seen the propaganda first, all other  $r < .13$ , all  $p > .05$ .

<sup>2</sup> The current study focusses on the hypothesized variables of narrative persuasion.

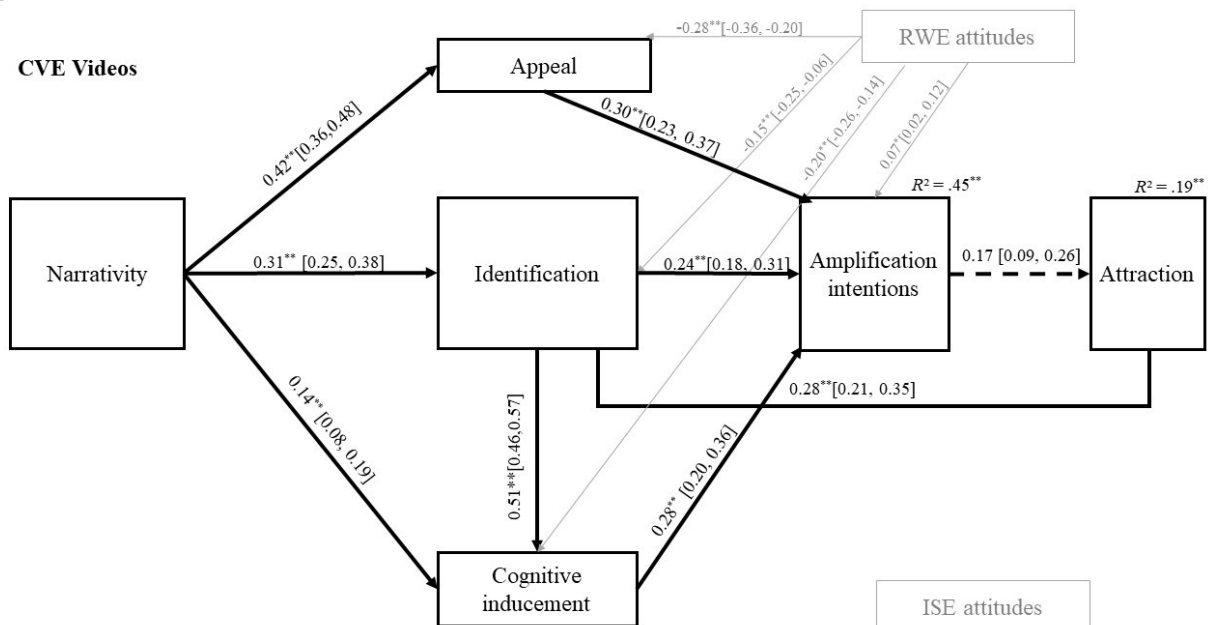
Figure 2: Narrative persuasion in the propaganda videos (Study 1)



\*\*p ≤ .01, \*p < .05.

Missing values imputed via estimation maximization algorithm. Depicted are the standardized coefficients and 90 percent confidence intervals [in square brackets] based on 1000 bootstrap samples. For clarity, co-variances and non-statistically significant paths are not presented. Control variable paths are indicated in grey.

Figure 3: Narrative Persuasion in CVE Videos (Study 1)



\*\*p ≤ .01, \*p < .05. Depicted are the standardized coefficients and 90% confidence intervals [in square brackets] based on 1000 bootstrap samples. For clarity, co-variances and non-significant paths are not presented. Control variable paths are marked in grey.



Afterwards, they stated their agreement with eight items (such as “I can imagine myself supporting the group”), using a seven-point scale (0 = “fully disagree”, 6 = “fully agree”). The scale showed satisfying reliability ( $\alpha_{\text{CVE}} = .90$ ,  $\alpha_{\text{Propaganda}} = .87$ ). Finally, agreement with the extremist statements was measured for the second respectively third time (Post propaganda RWEX  $\alpha = .73$ , ISEX  $\alpha = .71$ ; post CVE videos: RWEX  $\alpha = .70$ , ISEX  $\alpha = .69$ ). In the last step, participants answered some additional questions not examined here, before they were fully debriefed, received information about exit options from violent extremism, and were given their incentive.

### 3.1.2. Sample

A total of 338 individuals (162 women) participated. They were, on average, 23 years old ( $SD = 4.31$ , range 16–55 years). Two-thirds (67 percent) were students, 30 percent were apprentices (3 percent were employed). Most self-identified as Christians (50 percent), Muslims (28 percent), or atheists (19 percent); 3 percent reported another religion. About half had a first- or second-generation migration background (52 percent).

## 3.2. Study 1: Results

### 3.2.1. Missing Values

A pattern analysis via SPSS showed that only a small number of data points were missing (5.11 percent, slightly above the ignorable threshold (Kline 1998)). Little's Missing Completely at Random (MCAR) Test reached significance,  $\chi^2(27) = 3476.73$ ,  $p < .001$ , indicating the need for imputation (Kline 1998; Byrne 2010). As there is no statistical technique to handle non-random missing values (NMARs) to a satisfactory extent, different treatments should be compared (Kline 1998). We compared three: (1) *listwise exclusion*; (2) *estimated maximum (EM) imputation*, where missing values are replaced via an adaptive algorithm before the analysis, allowing for the inspection of modification indices and bootstrapped confidence intervals (Musil et al. 2002); and (3) *Maximum Likelihood (ML) estimation*. ML is considered least biased in case of NMARs but does not allow for bootstrapping (Kline 1998; Byrne 2010). Overall, the different treatments did not change the pattern, wherefore we report only the results for the EM-imputed data (see supple-

mentary material 2 Table C for all results across imputation strategies, accessible online via <https://osf.io/eqmgs/>).

### 3.2.2. Preliminary Analyses

#### Descriptive analyses.

An inspection of the zero-order correlations (Table 1) showed that agreement with extremist statements correlated very strongly across time points (all  $r > .79$ ), suggesting a lack of variability on this outcome. To explore this further, we ran an initial multivariate analysis of variance (MANOVA) using the three time points as within-subjects factor and agreement with RWEX and ISEX statements as dependent variables. Although the effect of time reached significance using Pillai's trace,  $V = 0.74$ ,  $F(1,336) = 487.80$ ,  $p < .001$ , the univariate analysis showed that this effect was driven by *lower* agreement with the RWEX statements after both the propaganda videos ( $M = 1.45$ ,  $SE = .07$ ) and the CVE videos ( $M = 1.50$ ,  $SE = .06$ ) compared to the baseline agreement ( $M = 1.70$ ,  $SE = .06$ ). Thus, H6 had to be rejected, and extremist attitudes were excluded from the subsequent analyses.

### 3.2.3. Tests of Hypotheses

We tested our theoretical model (Figure 1) via a path analysis using narrativity as antecedent, appeal, identification, and cognitive inducement as mediators, and amplification intentions and attraction as outcome variables. RWEX and ISEX served as control variables. We used manifest variables for our constructs as the sample size was too small to estimate a model with latent variables. The initial checks identified four paths that varied between video blocks. Unsurprisingly, RWEX and ISEX attitudes were associated positively with the appeal of, and the identification with extremist propaganda as well as the attraction to extremist groups, but negatively with the response to counter-activists and CVE videos. In addition, the path between cognitive inducement and amplification intentions varied between blocks. As we considered this to be theoretically meaningful, we allowed these factor weights to vary between video blocks in the final model. The final model showed an acceptable fit to the data (see Table 2).

Table 1: Zero order correlations and descriptives

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Age	22.93	4.24	-.08	-.16**	-.12*	-.00	.00	-.09	-.03	-.06	-.22**	-.09	-.19**	-.17**	-.20**	-.19**	-.20**	-.20**	-.19**	-.13*	-.19**	-.20**
2 Political attitude	1.53	0.8	.31**	.16**	-.01	-.10	-.11*	-.12*	-.20**	.20**	.18**	.11*	.21**	.116*	-.13*	.28*	.13*	.28*	.13*	.13*	.27**	.14*
3 Agreement RWEX Baseline	1.70	1.14	.39**	-.06	.14*	-.25**	-.29**	-.05	.18**	.26**	.47**	.12*	.54**	.475**	-.04	.81**	.34**	.81**	.34**	.43**	.83**	.38**
4 Agreement ISEX Baseline	1.63	1.09	-.09	.01	-.07	.31**	.43**	.25**	.24**	-.05	.18**	.50**	.30**	.46**	-.04	.38**	.82**	.38**	.82**	.40**	.41**	.79**
5 Narrativity CVE	2.45	0.97	.67**	.31**	.43**	.25**	.24**	-.05	.18**	.50**	.30**	.46**	-.04	.38**	-.04	.38**	.82**	.38**	.82**	.40**	.41**	.79**
6 Identification CVE	1.41	0.76	.58**	.31**	.43**	.25**	.24**	-.05	.18**	.50**	.30**	.46**	-.04	.38**	-.04	.38**	.82**	.38**	.82**	.40**	.41**	.79**
7 Cognitive inducement CVE	1.87	0.92	.55**	.31**	.43**	.25**	.24**	-.05	.18**	.50**	.30**	.46**	-.04	.38**	-.04	.38**	.82**	.38**	.82**	.40**	.41**	.79**
8 Appeal CVE	2.49	0.73	.54**	.31**	.43**	.25**	.24**	-.05	.18**	.50**	.30**	.46**	-.04	.38**	-.04	.38**	.82**	.38**	.82**	.40**	.41**	.79**
9 Amplification intentions CVE	1.44	0.93	.54**	.31**	.43**	.25**	.24**	-.05	.18**	.50**	.30**	.46**	-.04	.38**	-.04	.38**	.82**	.38**	.82**	.40**	.41**	.79**
10 Narrativity Propaganda	2.01	1.02	.44**	.29**	.53**	.40**	.40**	.29**	.53**	.40**	.40**	.29**	.53**	.40**	.40**	.29**	.53**	.40**	.40**	.29**	.53**	.40**
11 Identification Propaganda	0.87	0.92	.53**	.80**	.75**	.00	.54**	.51**	.73**	.57**	.60**	.35**	.55**	.60**	.35**	.55**	.60**	.35**	.55**	.60**	.35**	.55**
12 Cognitive inducement Propaganda	2.02	1.02	.45**	.41**	.66**	.41**	.45**	.41**	.66**	.41**	.45**	.41**	.66**	.41**	.45**	.41**	.66**	.41**	.45**	.41**	.66**	.41**
13 Appeal Propaganda	1.14	0.84	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**	.75**
14 Amplification intentions Propaganda	0.58	0.80	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
15 Attraction to counter-activists	1.42	0.97	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
16 Agreement RWEX post CVE	1.50	1.18	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**
17 Agreement ISEX post CVE	1.59	1.14	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**
18 Attraction to extremists	0.66	0.71	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**
19 Agreement RWEX post propaganda	1.45	1.19	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**
20 Agreement ISEX post propaganda	1.62	1.18	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**	.42**

Notes: \* p < .05, \*\* p < .001, two-sided. RWEX = right-wing extremism, ISEX = Islamic extremism, CVE = Counter-violent extremism videos. S1 = Study 1, S2 = Study 2. Scales in Study 1 stated with 0 as first value, scales in Study 2 started from 1, as such the mean values cannot be compared directly. Correlations are based on Study 1 and on a dataset where missing values were imputed via the estimation maximization (EM) algorithm. Correlations that failed to reach significance when only complete cases were considered are not marked in bold.

Table 2: Model fit indices for Study 1 and 2

		Absolute fit-indices						Incremental fit-indices	
		$\chi^2$	df	p	$\chi^2/df$	RMSEA	$p_{close}$	TLI	CFI
Threshold for acceptable fit						$\leq 3$	$\leq .10$	$\geq 0.95$	$\geq 0.95$
Threshold for good fit						$\geq .05$	$\leq 2$	$\leq .05$	$\geq 0.97$
S1	MG-CFA								
	Unconstrained only CVE	32.65	22	.07	1	0.04	.76	0.99	0.99
	Unconstrained only propaganda	93.85	22	.00	4	0.1	.00	0.94	0.96
	Unconstrained baseline	126.5	44	< .001	3	0.05	.32	0.96	0.97
	Final Model (MG-CFA)	135.5	49	< .001	3	0.05	.41	0.96	0.97
	Pathmodel								
	Unconstrained baseline	0	0	-	-	0.01	.96	-	1.
	Final Pathmodel	14.27	16	.58	1	0	1.00	1	1
S2	Pathmodel								
	Unconstrained baseline	0	0	-	-				1
	Final Pathmodel	41.44	16	< .001	-	0.07	0.09	0.93	0.98

Notes: MGFA = Multi-group factor analysis with video block as grouping variables. CVE = Counter-violent extremism videos. S1 = Study 1, S2 = Study 2. Missing values were imputed via estimated maximization before analysis.

An inspection of the paths largely confirmed our expectations: Narrativity was associated with a higher appeal of (H1) and higher levels of identification with (H2) both propaganda and CVE videos (see Figure 2 and 3). Narrativity also predicted higher levels of cognitive inducement (RQ 1), as did identification (H3). All three paths of narrative processing were associated with stronger amplification intentions (H4) and had positive indirect effects on amplifying intentions (H7) for both the propaganda videos and the CVE videos (standardized  $ab_{CVE} = .29$ , CI [.24, .34],  $ab_{Propaganda} = .27$ , CI [.23, .33]). Attenuating our expectations formulated in H5, only identification was significantly associated with attraction. Narrativity also had a significant indirect effect on attraction towards the extremists (standardized  $ab = .21$ , CI [.16, .26]) and the counter-activists (standardized  $ab = .15$ , CI [.12, .19]). In addition, intentions to amplify the messages of the respective videos were positively associated with attraction, too (H8).<sup>3</sup>

### 3.4. Discussion

Overall, Study 1 confirmed narrativity as a crucial antecedent for the narrative processing of both extremist propaganda

and CVE videos. In addition, the study lent initial support to the assumption that narrativity could foster attraction to extremists versus counter-activist and motivate online engagement for either the one or the other side. Although we did not aim at comparing the average level of these processes, the data showed that recipients rated the CVE videos consistently more positively than the propaganda videos. As we cannot exclude the possibility that this difference is at least partially driven by the higher social desirability (King and Bruner 2000) of rating CVE videos favorably, we decided to rerun the study in a more anonymous online environment.

### 4. Study 2

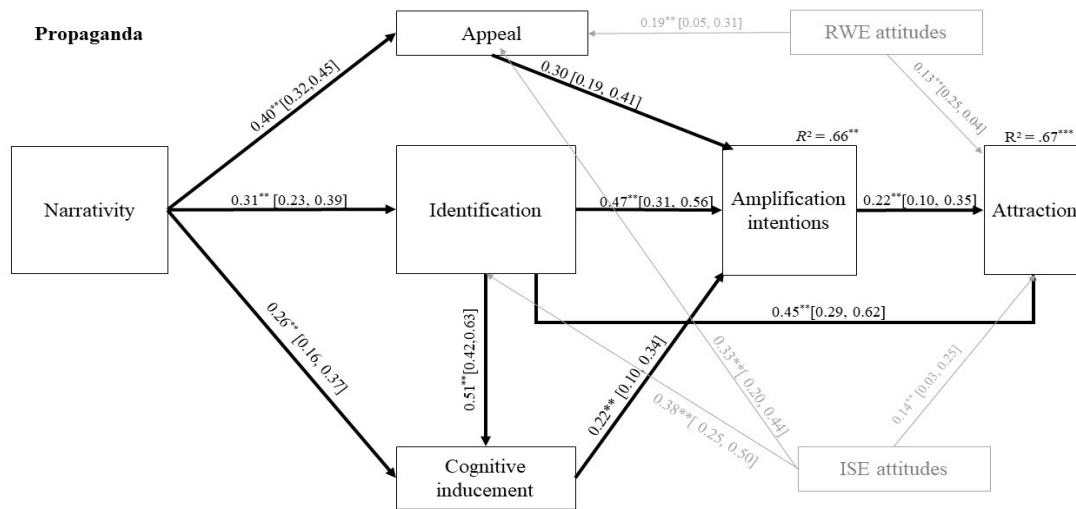
Overall, Study 2 employed the same procedure and measurements as Study 1 with the exception that it was structured as an anonymous online survey and, in contrast to Study 1, the output used 1 (not zero) as lowest value. Invitation was sent via email over university mailing lists across Germany, shared by Muslim communities in the researchers' home town, and advertised at local vocational schools.

#### 4.1. Sample

A total of 157 individuals (69 women) participated; average age was 28 years ( $SD = 9.63$ , range 18–62 years). Two-thirds (65 percent) were students at the time of data collection, and 31 percent were apprentices. The rest were already in the workforce (4 percent). Most identified as Muslims (47

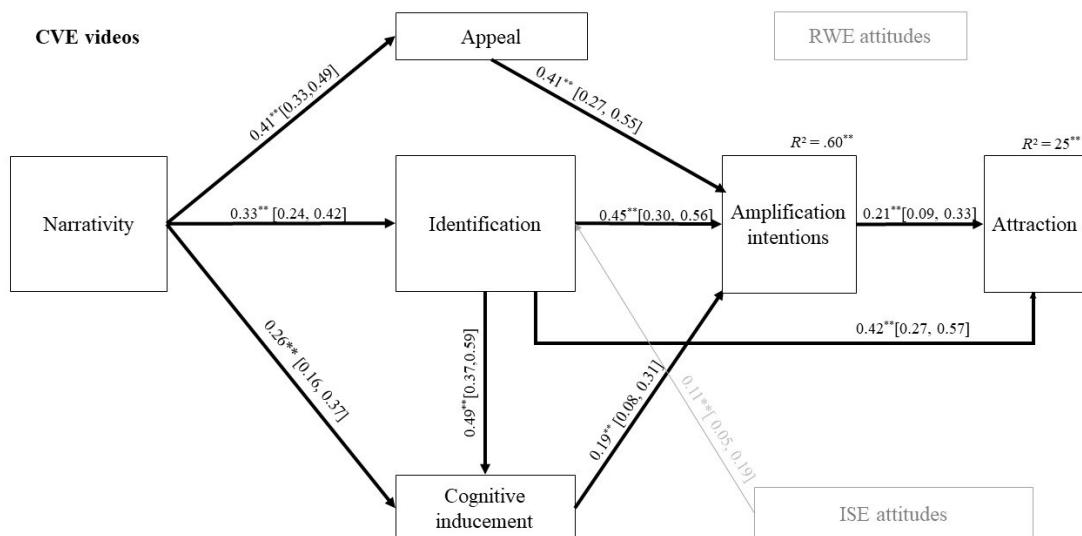
<sup>3</sup> When age and political attitude were controlled for, the paths between narrativity and cognitive inducement failed to reach significance for the propaganda videos and amplification intentions for the CVE videos no longer predicted attraction to the counter-activists. Otherwise the main process for narrative persuasion did not change.

Figure 4: Narrative persuasion in propaganda videos (Study 2)



\*\*p ≤ .01, \*p < .05. Depicted are the standardized coefficients and 90% confidence intervals [in square brackets] based on 1000 bootstrap samples. For clarity, co-variances and non-significant paths are not presented. Control variable paths are marked in grey.

Figure 5: Narrative Persuasion in CVE Videos (Study 2)



\*\*p ≤ .01, \*p < .05. Depicted are the standardized coefficients and 90% confidence intervals based on 1000 bootstrap samples. For clarity, co-variances and non-statistically significant paths are not presented. The control variables marked in grey.

percent), Christians (19 percent), or atheists (17 percent). Sixteen percent reported another religion (6 percent of them were Jewish, 4 percent Buddhist, 4 percent Hindu, and 3 percent other). About two-thirds had a migration background (70 percent).

## 4.2. Results

### 4.2.1 Missing Values

A pattern analysis via SPSS showed that only a small number of our data points were missing (one percent), all of them completely at random (Little's MCAR test,  $\chi^2(34) = 27.09$   $p = .79$ ) suggesting that missing values could be ig-

nored (Kline 1998)). As such, we focused on a dataset where missing values were imputed via the estimated maximization algorithm (see Table 1 for the descriptives). Notably, in contrast to the laboratory assessment, the online survey allowed participants to simply close their browser and thus not be counted by the survey software. As such, the true number of missing values might be larger, but data set does not allow for examination of these cases.

#### 4.2.2 Model Test

As we were primarily interested in the path model's fit to the new dataset, we used the same model as in Study 1. Although the partially constrained model fitted less well to the data than the fully unconstrained one,  $\chi^2(16) = 41.44$ ,  $p < .001$ , the final model from Study 1 still showed an acceptable fit to the data (see Table 2) so we retained it. Replicating our results, narrativity was positively associated with all three dimensions of narrative processing (H1, H2, RQ1), identification increased cognitive inducement (H4), and narrative processing was positively related to amplification intentions (H4). As in Study 1, only identification was also related to attraction towards the extremist group (H5). Figure 3 and 4 display the corresponding paths. An inspection of the indirect effects of narrativity confirmed the indirect effects on amplification intentions (H7) (standardized  $abc_{VE} = .38$ , CI [.29, .47],  $ab_{Propaganda} = .27$ , CI [.19, .35]) as well as attraction (H8) (standardized  $abc_{VE} = .18$ , CI [.12, .26],  $ab_{Propaganda} = .20$ , CI [.13, .29]).

### 5. General Discussion

It has been suggested that extremist propaganda persuades by narratives, wherefore so-called counter- or alternative narratives are needed (Braddock 2015; Corman 2011; Leuprecht et al. 2009). Although there is growing evidence for extremists' usage of narratives in their propaganda (Braddock and Horgan 2015; Corman 2011; Ebner 2017), experimental evidence for causal effects of narratives in the context of extremist propaganda and CVE videos is scarce. The current two studies filled this gap. Drawing on established models of narrative persuasion (Slater and Rouner 2002; Green and Brock 2002; Moyer-Gusé, Jain, and Chung 2012), and recent studies highlighting the role of narrativities in narrative persuasion (Kinnebrock and Bilandzic

2006), the current paper developed a theoretical model for narrative persuasion in propaganda and CVE videos and confirmed this model in two studies.

#### 5.1. Summary and Evaluation of Hypotheses

In both studies, when controlling for pre-existing agreement with RWEX and ISEX statements, narrativity predicted an increased appeal of (H1) and identification (H2), and cognitive engagement with (RQ1) both extremist propaganda and CVE videos. Further, identification and cognitive inducement were positively related (H3). Thus, our data provides first evidence that narrativity – in both propaganda and CVE videos – does indeed motivate narrative processing of such videos. In line with narrative persuasion research, this narrative processing was positively related to amplification intentions (H4). Furthermore, identification was also related to attraction towards extremists (H5). As such, our results echo scientific reviews stating that online media might fuel but not trigger radicalization processes (Meleagrou-Hitchens and Kaderbhai 2017; Gill et al. 2015). At the same time, they underline the need for democratic, pluralistic voices in online media that offer non-extremist identification figures.

Mediated via appeal, identification, and cognitive inducement, narrativity consistently had a strong indirect effect on amplification intentions. Mediated via identification, narrativity also had a medium-sized indirect effect on attraction (H7), with amplification intentions and attraction being positively associated (H8). Overall, our findings underline the need to consider narrativity (and not only narratives) in the context of propaganda and CVE videos.

In contrast to our expectations, propaganda did not increase agreement with extremist statements (H6). Instead, watching propaganda decreased agreement with RWEX statements (and did not affect ISEX statements), indicating a contrast effect. A prior study by Appel (2011) already found that stories about a stupid, xenophobic hooligan can evoke such contrast effects where people are motivated to distance from the protagonist. Exploring these conditions in detail seems to be a fruitful direction for future research. Overall, our results add to the scarce literature on propaganda's causal effects on radicalization processes (Conway 2017) and contradict dystopic visions about immediate radicalizing effects. At the same time, they speak against ignoring propa-

ganda effects, as narrativity can foster attraction towards extremists.

Notably, although CVE videos did not affect agreement with ISEX statements, they did decrease agreement with RWEX statements (although the effect was smaller than for the propaganda videos). Complementing our findings with a qualitative approach exploring participants' thoughts about extremist statements following CVE video consumption seems to be necessary to understand these differences better.

### 5.2. Limitations and Future Research Directions

The two studies in this paper had several limitations. First, we focused on (young) adults in Germany. Although we had a wide age range, most participants were either students or apprentices. We also focused on extremism-distant individuals with moderate religious and political attitudes. Future research in samples with different attitudes is needed to examine the generalizability of the results.

Second, the present studies tested the relevance of narrativities as a video feature. The effects might vary between video and other media (Braddock and Dillard 2016), making the examination of different media types desirable.

Finally, our studies focused on attitudes and intentions. Although there is meta-analytical evidence that behavioral intentions predict subsequent behaviors (Robin et al. 2011), the results of our study are not immediately transferrable to concrete behaviors. Extremists themselves have reported a large gap between online and offline engagement (Schils and Verhage 2017).

### 5.3. Conclusion

Nonetheless, our studies provide initial evidence for a positive association between narrativity in propaganda videos and the attraction to extremist groups. Returning to the initial quote by Ebner (2017, 35), they provide first evidence that not only is "Studying extremism without studying stories is like studying the brain without studying the neurons" but studying propaganda and CVE videos without studying the power of narrativity is like dissecting the figurative brain instead of examining its vibrant flow.

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