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Critical Thinking as Dynamic Shield against Media Deception. Exploring Connections between the Analytical Mind and Detecting Disinformation Techniques and Logical Fallacies in Journalistic Production

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Abstract: As research on fake news and deepfakes advanced, a growing consensus is building towards considering critical and analytical thinking, as well as general or topic specific knowledge, which is related to information literacy, as the main significant or effective factors in curving vulnerability to bogus digital content. However, although the connection might be intuitive, the processes linking critical or analytical thinking to manipulation resistance are still not known and understudied. The present study aims to contribute to filling this gap by exploring how analytically driven conclusions over a media content relate to proper evaluations of its credibility. In order to observe how observations highlighted through critical engagement with a specific content are related with awareness on its manipulative structure, a biased, not fake, journalistic article was first passed through Faircough's (2013) model of Critical Discourse Analysis, which was adapted for media studies. The same article was then screened for disinformation techniques embedded in its architecture, as well as for logical fallacies incorporated as arguments. Preliminary conclusions show that analytical thinking outcomes are consistent with evaluations based on particular filters for credibility attribution. Furthermore, the two ways derived observations over the same content, partially overlap.

Keywords: *critical thinking; media bias; manipulation detection; logical fallacies; disinformation techniques; media literacy.*

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1. Introduction

A growing body of research investigating fake news related phenomena shows that manipulation resistance is positively correlated to no other factors than analytical or critical thinking, and general or specific knowledge, which may be, in turn, related to information and media literacy (Dobber et al., 2021; Jones-Jang et al., 2021; Pennycook & Rand, 2020; Zyl, Turpin, & Matthee, 2020). However, although the relation between deception immunity and critical thinking or media literacy might sound intuitive, the processes explaining the connection are yet not known, as field, experimental and theoretical research on this subject is still lacking (Zyl, Turpin, & Matthee, 2020). The present study aims to address this gap by exploring how Critical Discourse Analysis (CDA), as cognitive framework powered by both critical thinking and information literacy, relates to or favor manipulation detection in media contents. Specifically, the research inquires if conclusions driven through Faircough's (2013) model of CDA, applied on a journalistic material, after adaptation for media studies, are consistent with evaluations based on screening the same article, for structural disinformation techniques and embedded logical fallacies. Since critical thinking and information literacy correlate with relative better scores in media manipulation detection, than other factors, considerations based on CDA should be conducive to or even mirror observations over the usage of disinformation techniques and logical fallacies built in a message.

Vulnerability to media manipulative contents is explained through a protean constellation of factors which curve cognitive heuristics into a mind trap. Five rules of thumb were shown to shape someone's evaluation over content credibility (Zyl, Turpin, & Matthee, 2020). The reputation of the messenger, source or anchor works as a shortcut to ascribe value to a message, previously or even apart from cognitively engaging with its content itself (Renn, 2009). The very same heuristic is related to the logical fallacy known as "appeal to authority" (Michaud, 2018). Other cues embedded in human reasoning, to sort messages as believable or not are related to information consistency or redundancy, and to the endorsement effect, respectively (Zyl, Turpin, & Matthee, 2020; Renn, 2009). Repeated exposure to a bit of information, which is shared, liked or otherwise legitimized by presumably large crowds, accounts for content familiarity which is one of the strongest predictors of fake news deception (Pennycook & Rand, 2021). Both heuristics may be related to "joining the bandwagon" logical fallacy, which describes how majority consensus attribution is falsely equated with truth, validity and higher value (Hess, 2018).

The forth rule of thumb shaping evaluation prior to cognitive content engagement regards the expectancy violation (Zyl, Turpin, & Matthee, 2020). It is related to motivated or partisan thinking (Pennycook & Rand, 2019; Ross, Rand, & Pennycook, 2019), describing people's tendency to pay attention and endorse messages confirming their prior knowledge and beliefs, while discarding those which contradict their views. Explained through confirmation bias (Peters, 2020) and rooted in cognitive dissonance avoidance (Kaaronen, 2018), motivated reasoning explains to large extent both deception vulnerability in exposure to bogus contents confirming previous beliefs, and deception resistance in exposure to bogus contents challenging previous beliefs (Dobber et al., 2021). As related to confirmation bias, this heuristic plays a significant role in mind resistance as proved by studies showing that after deceptive exposure to fake news, people tend to stick to their false assumptions even after debriefing (Gu et al., 2017).

Furthermore, this heuristic may be consistently bended through a variety of logical fallacies, like appeal to purity, appeal to nature, appeal to emotion, appeal to authority, slippery slope, or black or white, to name just a few. However, the appeal to skepticism fallacy or argument from personal incredulity (Manninen, 2018) is the closest related error of judgment from informal logic. On the one hand, it draws on the assumption that uncommon ideas or perspectives contradicting common sense and common knowledge on a subject are necessarily false. On the other hand, it fuels personal elation, as people tend to think of themselves as preformat thinkers, difficult to manipulate by others. They resort to skepticism as prophylactic schemata, in order to not be perceived as gullible by their peers and to avoid associated emotional costs of being deceived. However, skepticism has long been debunked as a faulty mind strategy (Huemer, 2020). It is, though, also related with the fifth rule of thumb, the persuasive intent heuristic, which prevent someone to trust a message if clear persuasion intention is detected (Zyl, Turpin, & Matthee, 2020). This cue might also be related to the so called "fallacy fallacy", or the belief that if some argument is faulty built, than it is necessarily false, or that if some mind patterns are frequently proved to be irrational, then all conclusions based on them are always irrational, when this is not the case (Kovic & Kristiansen, 2019).

The present study argues that detecting logical fallacies and disinformation techniques represent particular methods to avoid media deception and that they are both expressions of media literacy which, in turn, is defined as analytical thinking applied on media products, allowing someone to critically engage, sort, evaluate and create digital products. To

explore if critical engagement with a digital content favors identification of logical fallacies and disinformation techniques, one media material was passed through three types of analysis and outcomes were compared. The paper starts with a short review on media literacy concepts, disinformation techniques and logical fallacies. The method is then presented, by highlighting intersections and overlaps between Fairclough's (2013) model of Critical Discourse Analysis (CDA) and the "five key concepts" approach in media literacy education (Wulff, 2020; De Abreu, 2019). The section of results begins by presenting observations over a journalistic product, as prompted through CDA appliance. The second part indexes disinformation techniques identified within the textual and video architecture of the same material. The third part points out the logical fallacies found to replace sound arguments in the article. The general discussion section underlines how observations based on CDA favor detection of disinformation techniques and logical fallacies, drawing towards similar evaluations in regards with credibility attribution over the same media content. Conclusions, at last, emphasize the utility of recovering analytical approaches as mediators when dealing with media production. Future directions in researching analytical thinking as shield for media deception are marked out.

2. Literature review on media literacy, disinformation techniques and logical fallacies

2.1. The five shades of media literacy

Although the field of media literacy is rooted in the first age of the internet, as a response to the social need to train people in using and understanding the online environment (Kellner & Share, 2005), ability based approaches migrated strongly towards media cultural studies (Sari et al., 2018; Shcherbakova & Nikiforchuk, 2022), as the phenomena of fake news became more and more worrisome (Jones-Jang et al., 2021). The field also split into various branches, with pundits focusing now on distinguishing between media literacy, information literacy and digital literacy, while others derive even more types of related literacies, like the civic one (Mihailidis, 2018; Wuyckens, Landry, & Fastrez, 2022). However, the "five key concepts" approach, championed by the Center for Media Literacy (n.d.), is the most common and widely applied model. It allows someone to critically engage and make sense of the large variety of digital products, contents and messages flooding all life domains.

The first concept challenges someone to recognize that all media products are human creations and not final truths or even objective, neutral

reflections over reality, as long journalists claimed (De Abreu, 2019; Wulff, 2020). The second concept draws attention over the influence of esthetic norms and various rules applied in content creation, as they massively influence message selection, message building and message reception. Embedded structures and discursive architectures, which are also channel dependent, are considered to be bearers of hidden truths, which weight more in proper message decoding than the apparent content. The third analytical concept establishes that all media productions are ideological channels, shaping mind-frames and fueling or combating various power structures. The fourth principle builds on diversity of perspectives. Walking in another person's shoes is considered essential for bias detection. It is also related to intuitive evaluation of the social stakes embedded in each and every message. At last, the fifth concept works as a red flag pointing that all messages are essentially power grabbing devices, aimed to attract money or influence (De Abreu, 2019; Wulff, 2020).

2.2. Structural, content and rhetorical disinformation techniques

While the five key concepts approach in media literacy is strongly focused on analytical content analysis, other scholars tackle the problem of digital manipulation by identifying the most common disinformation techniques which digital users should be prepared to detect, in order to avoid deception. One of them regards the coordinated use of several websites in reciprocal referencing, to artificially push contents as highly relevant hot topics, bypassing search and newsfeed related algorithms (Gu et al., 2017). However, most of the disinformation techniques are structure, content or rhetoric related. No evidence technique, comprising in building contents which are not based on factual proofs, along with false facts and images usage, or altering quotes, sources or contexts, correspond to means of content fabrication (Lewandowsky & Van Der Linden, 2021).

The wolf cries wolf, an approach used by organizations to blame other actors of committing the same mistakes they incriminate others for, is a rhetoric disinformation technique. So are denial of facts, presenting facts as opinions and vice versa, forcing a false dilemma, to make an audience pick a side, exaggeration and over-generalization, Totum Pro Parte/ Pars Pro Toto, the representation of whole by part and vice versa, or joining the bandwagon, an approach based on building the impression that the majority prefers a certain situation or understands a certain issue in a specific way (Lewandowsky & Van Der Linden, 2021). Drowning facts in emotions, using metaphors and loaded words, ridiculing, discrediting and belittling

someone are also rhetorical disinformation techniques (Harkova & Shigapova, 2014).

Structural disinformation technics cover the usage of misleading titles and headlines, but also card stacking, or presenting truncated truths in specific order, to influence the overall perception on a topic, as well as context prefabrication, which implies creating a written, radio or television display by intentionally distributing different materials in specific order, so that public perception on various events would be contaminated through contingent exposure to other materials (Wanda, Hamzah, & Marlina, 2020).

2.3. Logical Fallacies – the truths of yesterday

Yet another approach in spotting and evaluating deceptive media content consists in identifying embedded logical fallacies, used to counterfeit the impression of argumentation, while providing no sound arguments. They are highly related to rhetorical disinformation techniques, as they used to be exercised as persuasion approaches in various contexts of public speaking (Paul & Elder, 2019). The most common fallacy is probably the scarecrow, an approach based on ridiculing, diminishing, mocking or otherwise discrediting a person or organization, so that peoples' perceptions over his or her ideas and actions are strongly distorted. Another extremely common logical fallacy is the anecdote, used to generalize a particular situation and ascribe it with general significance and representation power (Paul & Elder, 2019).

False causality, where correlation is perceived as a causal relationship, and false correlation, the assumption that two events which happen within the same context must be related, along with ambiguity are also commonly used in pernicious media production (Manninen, 2018). Joining the bandwagon, or considering true a majority endorsed message, and appeal to emotions are probably the most researched logical fallacies in the context of social networks (Hess, 2018), while the false dilemma or the forced black and white framing of an idea or situation is a highly used logical fallacy in political communication (Culver, 2018).

3. Method

Fairclough's (2013) model of CDA was applied and adapted to highlight different strata of truth-curving in the production of journalistic discourse. A strong relation is predicted between biased editorial choices, enforced by and rooted in structural prerequisites, on the one hand, and the variety and quantity of disinformation techniques used to shape content

architecture, along with the range of logical fallacies embedded in the argumentation, on the other hand.

CDA builds upon the critical theory of language that explains its usage as a specific field of social practice, reproducing or contesting broader power dynamics reflecting and, also, modeling historical contexts. Discursive practices and contents are mainly translated as positioning acts in accordance with a wide range of cultural values, signaling structures of interest. Discursive contents support or contradict specific assumptions ordering the experienced world, by serving specific interrelated interests of various actors, negating others' interests, and producing direct and indirect consequences by powering or disempowering hegemonic perspectives and world views underlying the social, cultural, economic and politic reality, in different places and moments in time. That's why CDA is regarded as a strong research instrument for political (Gu, 2019; Kerbleski, 2019; Sengul, 2019; Tambunan et al., 2018) and media communication (Hassan, 2018; KhosraviNik, 2022; Mustika, & Mardikantoro, 2018).

Fairclough's (2013) model of CDA covers three types of analyses, related to three discursive dimensions. Textual analysis, based on description, is applied to the object of analysis, which may cover any kind of textual verbal and visual contents. Processing analysis, rooted in interpretation, is directed towards processes and means of discursive production, covering the medium specificities, actors, resources, tools and techniques used to produce and disseminate contents, as well as the associated repertoire of means needed by receivers, to engage with those contents. The third dimension of the model consists in the social analysis of the conditions governing the production and consuming processes, serving to explain the previously descripted and interpreted content. Bridging CDA with media discourse studies proved to be a perfect match, expanding and deepening the analytical frameworks employed in meaning making in the field of journalistic and social media communication (Anwar et al., 2020; KhosraviNik, 2022; Sari et al., 2018).

The "five key concepts" approach in media literacy education (De Abreu, 2019; Wulff, 2020) mirrors quite flawlessly Faircough's (2013) model of CDA. The first concept, regarding that all messages are objects of construction, stresses out a multidimensional understanding over a specific content, as a production determined by authorship and producer's objectives. It takes into account the economics and the purpose embedded in any media content, as well as its social, cultural or economic impact, to support consumers' decision over the appropriate response to the message (Jolls & Wilson, 2014). The second concept, highlighting the persuasive

effects of the creative grammar embedded within channel prerequisites and superimposed by genre and species codes (Buckingham & Sefton-Green, 2018), asks for considering what is depicted in packaged messages, in terms of means of production and the cultural and economic environment in which industries swallow up and develop various esthetic grammars, rooted in specific webs of cultural values which support their self-replication and market power expansion.

The third analytical concept deals directly with invisible choices of meaning making which convert any message into a direct plea serving specific interests and particular social groups (Kubey, 2018). Labeling and framing different events and behaviors to render them less or more acceptable, directly or indirectly portraying specific actors as trustworthy or not, singling them out or completely ignoring them, decisions regarding the order of their appearance and quoting strategies, they are all means of control over public understanding and representation of contingent events and social groups. Critical interpretation and explanation of a depicted content is strongly enhanced by applying this filter to journalistic productions.

The fourth concept allows for deepening the interpretation and social analysis dimensions constitutive to Fairclough's (2013) model of CDA, by revealing different patterns of understanding and emotional processing of the same message, across a variety of receptors. By channeling social imagination and social empathy, the basic principle draws attention over the fact that different persons read and react differently when exposed to the same content, an observation of cornerstone value in reconnecting citizens to their communities and shared realities, as a meaning making process (Mihailidis, 2018). The fifth concept is focused on underlying economic relations, modeled by profit or influence seeking, which prompt specific decisions related with content choices, framing options, usage of specific creative grammar and distribution strategies, in order to control audiences' responses (Jolls & Wilson, 2014). This filter, again, works smoothly to highlight dynamic relations between content, means of production and means of consuming, within a particular socio-cultural and economic context.

In order to explore how CDA analysis relates to processes involved in media manipulation detection, the "five key concepts" approach in media literacy education (Wulff, 2020; De Abreu, 2019) was adapted to correspond to Fairclough's (2013) model for processing discursive contents. The grill was then applied to analyze a Romanian textual and video journalistic material, on the state of national Education during COVID-19 pandemics

(Năstase, 2021). It was produced and published by ProTv, the audience leader television in the country (Holdis, 2019). The same material was then screened to identify disinformation techniques embedded in its construction. A list of 22 disinformation techniques was compiled based on literature review, in this scope (Gregor & Mlejnková, 2021; Innes, 2020; Shu et al., 2020). The same material was then analyzed by contrasting its content upon a list of 19 logical fallacies. The specific cognitive errors were selected based on their instrumental use in manipulative settings (Goldberg & Vandenberg, 2021; Macagno, 2022; Paronyan, 2020; Paul & Elder, 2019). Density and variety of disinformation technics and logical fallacies are related to findings extracted through CDA analysis.

The case study qualitative approach, based on in depth, multidimensional analysis of the same media material, was considered better suited to the scope of the research, aiming to explore relations between critical content processing and manipulation detection, than quantitative research designs. Various studies indicate critical thinking (Pennycook & Rand, 2020; Zyl, Turpin, & Matthee, 2020), information literacy (Jones-Jang et al., 2021) and general or specific knowledge (Dobber et al., 2021) to be the only significant factors accounting for a lesser degree of vulnerability to manipulation. However, the same studies show that, although somewhat intuitive, these results are not explained on a basis of clear understanding of processes linking critical thinking, general knowledge and manipulative content identification. The present research starts building towards a better image over how critical thinking and information literacy, as embedded thinking structures in CDA, help cutting through media bias and manipulation. Significantly, the analyzed material is not a piece of fake news, by definition, but a product of mainstream journalism. However, during pandemics, online learning became a hot topic stirring divergent attitudes (Muflih et al., 2020; Muflih et al., 2021; Rucsanda, Belibou, & Cazan, 2021; Unger & Meiran, 2020), which makes the article to be prone to bias through topic selection.

The results are organized along the three methods used to analyze the article. Observations derived through CDA adaptation to the five key concepts in media literacy are depicted first. The next part covers disinformation techniques found within the textual and video architecture of the material. The logical fallacies identified in the media product are then presented. Preliminary results show that red flags triggered through CDA partially overlap or favor detection of disinformation techniques and logical fallacies built in a journalistic material, raising similar worries in regards to content credibility and objectivity.

4. Results

4.1 Observations derived by applying the five key concepts approach in media literacy, adapted as CDA framework

At first, the five key concepts approach in media literacy were used as analytical grid, to define how the press material would be perceived by someone using her or his analytical mind to process it.

(1) *The first analytical concept in media literacy states that all media messages are constructed. The concept is operationalized through a series of questions such as "who created this message?", "with what purpose?", and "what beliefs, assumptions, values or prejudices are reflected in its content?"*

By answering to these questions, in regards to Năstase's (2021) textual and video material, someone would straightforwardly identify Năstase as the lead-journalist assuming authorship for the production, as the host of "Romania, I love you!", a TV broadcast reaching high audiences for ProTV, one of the most prominent private TV channels in Romania. Launched in 1995, ProTV was owned by Adrian Sârbu and Ion Țiriac, Romanian businessmen, and CME Group (Central European Media Enterprises), an American global market company. In 2007, Adrian Sârbu becomes operational director at CME, and in 2009 he sells Media Pro, another related media group he owned, to CME. During the same year, Adrian Sârbu becomes the president of CME (Marincea, 2021). In 2013, the Romanian businessman resigns from his functions at CME, as company's financials went down (Ionescu, 2013). Adrian Sârbu was investigated for tax evasion, misappropriation and money laundry and in 2020, the case was opened again (Dosarul Adrian Sârbu-Mediafax, retrimis, 2020).

In 2019-2020, CME is bought by PPF group, owned by the Czech oligarch, Petr Kellner (Miliardarul Ceh Petr Kellner Va, 2020). The wealthiest businessmen in Czech Republic, Kellner built his financial empire by taking advantage, during democracy transition in the 1990s, of the mass privatization of state owned properties and affairs, a mechanism that several Czech politicians label it as the biggest financial fraud of the 20th century. PPF was formed through buying 200 companies during that period (Gosling, 2021) and evolved into an economic conglomerate company, covering various markets, such as assurances, real estate, broadcasting and energy, among others. It also developed strong ties with Russia and China (Eckel, 2021). The acquisition of CME by PPF meant buying more than 30 TV stations broadcasting in Bulgaria, Czech Republic, Romania, Slovakia and Slovenia, being partially funded by the International Investment Bank, which has its headquarters in Budapest and is majority Russian owned

(Kraemer & Sybera, 2021). The International Press Institute, along with other five press freedom groups expressed concerns that the ownership change of CME could curve the editorial agenda of the TV stations (Press Freedom Groups Write To, 2020). Ladislav Bartonicek, PPF stockholder, became the new director of ProTV, the audience leader television in Romania, after Kellner's death, in 2021 (Cine l-a înlocuit pe Petr, 2021).

The television station is known for its supportive editorial agenda towards liberal and globalist views (Pora, 2019), positively framing topics regarding private actors and general affairs, while negatively portraying state institutions and public employees. When covering topics related to work, editorial choices generally tend to endorse economic elites and employers, cultivating negative media representations about employees. The same approach may be observed in materials dealing with topics related to economically vulnerable communities.

Năstase's (2021) feature is focused on challenges triggered by switching to online education as a response to pandemics. The key narrative is aligned with the ideology supported by the TV station: institutional actors like the Ministry of National Education, schools and teachers are vilified as the architects of a presumable educational bankruptcy. A gallery of common stereotypes, widely socially circulated for more than 10 years, is weaponized to make the case. State employees, including but not resumed to teachers from public schools, are portrayed as incapable, outdated, and unprepared to understand and manage reality, bored and disinterested in their own jobs, appealing to obsolete methods and primitive practices. Their teaching approaches and their morally doubtful characters are presented as main causes for pupils' educational failure. The end of the feature builds a contrast by showcasing an educational project promoted as a positive example for how day by day education should look like. Children are taking classes following interactive documentaries with teachers filmed as they are lecturing in different places of the country, selected as appropriated with the topic they present. Quizzes and other digital tools are used for evaluation.

The main argument of the feature, as several times repeated by filmmakers, is that bored and old-fashioned teachers are responsible for school dropout and educational failure. However, the article doesn't prove basic documentation on education methods, to support the assumption. The consensus over technologically improved learning shattered some years ago, with many studies pointing that the simple usage of new technologies doesn't translate in better educational outcomes and, in some instances, such choices could prove even detrimental (Kolb, 2017; Serdyukov, 2017). The most prominent stereotype on which the feature is built regards classic

teaching styles, presented in oversimplified manner, as a toxic mix between boring lecturing, mindless reproduction and mechanical following of senseless instructions. What Năstase (2021) and his team are referring to is, actually, explicit instruction which covers specific pedagogic approaches. A consistent body of research debunks the myth that explicit instruction would inhibit creativity while discovery learning would boost it. Critical thinking is actually enhanced through explicit instruction (Marin & Halpern, 2011), which is generally related to greater educational gains (Archer & Hughes, 2010).

By applying the first concept of media literacy, it becomes transparent that while the feature addresses the challenging environment of online education, the topic is used as pretext to reinforce a specific media constructed representation of national education as the inheritor of the so called communist-school. Several stereotypes are reinforced to build the narrative that bad old-fashioned teachers produce bad education, causing pupils to dropout school. During pandemics, their already toxic effects are presumed to become catastrophic.

(2) The second analytical concept in media literacy states that all media messages are constructed by using creative grammars according to their own rules, which has direct influence over the message.

Journalistic production follows particular rules of discursive architecture. Selections for headlines, the lead and the order in which characters and information are distributed in a media material are highly influential, determining receptors' subjective perspective over a subject. The title states that Romanian education is a failed experiment and the content is built as a succession of particular cases, quotes and anecdotes supporting the thesis that bored teachers, appealing to outdated education methods, produce devastating effects. The lead sets the angle on how the story should be understood: online schooling is defined as a shock, a fiasco, a failed experiment with catastrophic consequences. The material is presented as an "investigation", although as a species, it is, at best, a piece of reporting. The reframing exploits audience's lack of media literacy. Reporting pieces are subjective media products, while investigations are supposed to be objective, rigorously documented materials. Labeling a subjective material as "investigation" is assumed to shift audience's perceptions over the overall credibility of the content, giving it the weight of irrefutable factuality.

The feature continues by showcasing an emotional particular story, right after the sentence was expressed. Different editorial choices were made for the textual and the video version, respectively. The video footage opens with the image of a child living in a remote village. He is leaning his phone

against a tree trunk, in the orchard. It is winter and that is the only place where he has a strong enough signal, to connect to his online class. The textual version cuts out this story, and starts by depicting two young girls, also living in a rural area, who share the same phone with a cracked screen, trying to attend classes by turns. Their family struggles to survive. Parents are keen to education but they seem to be faced with an impossible choice: father's health or children's school.

Both cases were selected for situational drama. Once the emotional grip is secured, the feature, however, does not continue with any analysis related to effects and causes of poverty in Romania. Why there are so many rural areas excluded from internet and phone providers' business plans remains an unspoken question. No information is provided on public strategies addressing school drop-out and the reasons they fail to produce significant effects, as public education is chronically underfunded. With no such unfolding, showcasing poverty related drama is solely instrumented to bolster the previous sentence regarding the massive failure of Education. Emotional priming also facilitates ulterior acceptance of various judgments related to online schooling.

In the unfolding of the textual version, the construction of the following scene creates an artificial contrast, to build the narrative about teachers who are presumably cut off from reality, entertaining bogus perspectives on learning which are directly contradicted by the direct experience of their pupils. A teacher opens her class by telling the children there is little difference between online and physical learning. She assures them that it should be easy for them to adjust. In immediate contrast, the audience witnesses a pupil saying that she doesn't understand anything and has forgotten everything, at all disciplines. Although the teacher's speech is not a factual statement, but a common conversational icebreaker expressing encouragement, it is framed as proof of educator's disconnection from reality. Also, the subjective, contextual opinion expressed by the pupil is framed as truth and final judgment. Student's reaction might be symptomatic for various factors influencing learning processes. Teaching method, style and environment play a significant role in learning experience, but so do individual discipline, active listening skills, someone's ability to focus her or his attention and resist distractions, among many others.

The juxtaposition of the two quotes creates a setup producing the feeling, not the evidence, that teachers would wrongly understand how education works, and pupils are the ones paying the price. The next passage of the article directly instructs audience on how to read the previous scene: as evidence that public education is a bunch of bland teachers, who bore

students to death with unattractive lessons, driving them away from school. The next sequence repeats the same sentence, by using the same discursive method: a fragment of an online lesson is presented as incoherent. This particular illustration is framed as proof that teachers fail to do their job in knowledge transfer, which is supposedly the cause of school dropouts.

The second part of the written material expediently mentions the dire situation of children living in a poor village, who don't have phones, tablets or laptops, nor internet connection, so they supposedly interrupted the educational process altogether. The case is presented as illustrative for all children in rural areas or from economically vulnerable families. In line with the ideological line advocated by ProTV, the fragility of these communities is not addressed in an explanatory manner. This would have required the authors to illustrate the systemic causes of poverty and school drop-out, to describe the history of solutions through which different actors - whether governmental or non-governmental - have tried to ameliorate these problems and, respectively, the limitations they have encountered and the contextual causes that have limited the impact and results they could have reached. However, such a discussion would've implied taking into consideration the underfunding of public educational actors and the limited social protection. Instead, the authors weaponize poverty again, as proof of educational inefficiency.

The written feature continues by expanding the gallery of anecdotes, presented as generalizable illustrations. One scene depicts some 12th grade students, this time, situated in an urban environment. On the eve of the baccalaureate, they have major gaps in their general knowledge. Again, the particular case is used to reinforce the assumption that public education is the main cause of functional illiteracy and school dropping out. Prophylactically, the authors prevent receptors from understanding the previous examples as related to poverty in rural areas. They explicitly emphasize that the problem stand with public education, because students from urban areas, for whom parents have invested in educational resources, also fail to achieve proper knowledge. The previously mentioned reasons are reinstated: teachers' jingoism and the unattractive and discouraging nature of traditional teaching methods. In the video version, Mircea Miclea, the former Minister of Education, is quoted to enforce the narrative. There are no voices challenging this line of interpretation.

In order to create a contrast between how public education is and how it should be, the filmmakers show scenes shot in bright colors with modern classrooms where pupils learn by watching spectacular video-documentaries based on drone footage. They take quizzes and express their

enthusiasm for both the topics they covered and the teaching method they experienced. These classes are part of "High Education", a project presented as a viable alternative to day-by-day education. These modern, glossy scenes contrast sharply with those covering the grey, poor education, supposedly perpetuated by outdated or ignorant teachers. However, the material fails to mention that in 2021, when the leading association partnered with a governmental department, 15 lessons were produced (Înșemne Association & Department for Sustainable Development within the Romanian Government, n.d.). High production costs explain the limited number of class materials. Furthermore, the project is not intended to replace, but to complement day by day education. Nonetheless, the feature frames this example as a creation of modern, dedicated educators, which could become a common learning experience, if old-fashioned teachers, along with their methods, would be replaced.

The video version goes on by citing an expert in Education, who states that online lessons are planned based on different principles than those designed for physical class interaction. Again, the insert is weaponized by authors, who shape it as a proof that most teachers would be ignorant of these differences. The general storyline, across the last sections of the material, builds on the presumed contrast separating the old, traditional, bored and incapable teachers from those who are young, motivated, capable and attuned with the reality of their time. Analogical education is also contrasted with a glorified image of learning in the age of the internet. Daniel David, the rector of "Babeș-Bolyai" University from Cluj-Napoca, is further quoted to re-enforce the presumed antinomy. In the age of the internet, knowledge is presented as democratized and easily accessible, a change that supposedly erased knowledge-based differences between students and their teachers. Those who refuse to acknowledge this assumption are presented as either disconnected from reality, or suspiciously attached to authoritarian models.

Again, the glorified perspective equating the internet with a knowledge and mind accelerator or enhancer has long been refuted. A consistent body of research shows that the digital environment is modifying human cognition, as well as memory systems, with disturbing effects illustrated by increased vulnerability to fake news which, if anything, signals a decline in critical thinking abilities. The effect may be correlated with enhanced dependence on external memory (Firth et al., 2019; Marsh & Rajaram, 2019). Significantly, trends of glorifying internet usage, and its positive effects on virtually all fields of life, are timely bound to the period in which big tech players consolidated their market positions. These trends

faded away as tech giants got closer to secure their monopolies (Smyrnaios, 2018).

The feature ends by presenting truncated statistics, as proof of the public education bankruptcy. The audience finds out that 500,000 pupils had no Internet access. However, no contextual data is provided. Statistics may be relevant for a period of time measured since 2020, when pandemics started, until the feature was published, in 2021. Still, it wouldn't be clear if those children lacked internet continuously, on the entire duration of online schooling, or only temporarily. It is stated that 2,500 schools were not connected to the internet, but the proportions reflecting the severity of the situation are not given. 2,500 out of how many? How many schools, with internet connection, shared their resources with other teaching staff from schools without internet connection? How many teachers in schools without internet connection used their personal subscriptions to broadcast their lessons and how many of them simply stopped their work? Truncated data and lack of information about methodologies on which they are based raise concerns about data manipulation.

In conclusion, by applying the second concept of media literacy as analytical filter, it may be observed that the overall construction of the feature is based on anecdotic materials presented as proofs, with sources lacking diversity in their positioning. A very specific gallery of judgments punctuates each and every descriptive insert.

(3) The third analytical concept in media literacy states that all media products embody inherent, specific values and viewpoints. The concept is operationalized through a series of questions such as "who and what is presented in a positive light?", "who is negatively depicted or affected?", "who and what doesn't appear at all?"

The public education system and "traditional" teachers play the role of the "enemy" in this material. Modern teachers and pupils - who would like to learn, but are prevented from doing so - play the role of "heroes". The framing is congruent with the overall discursive line of the TV channel, which generally places public actors inside a semantic field related to incompetence, inability to adapt, imposture, and disconnection from ground reality. The heroes' description is also consistent. These characters mirror features like flexibility, they are adapted to the present, capable, creative, quickly assimilating technological innovation, and concerned with growth and personal development.

The feature excludes all voices and sources that could expose cultural, economic and political factors of explanatory value for understanding causes of educational setback, other than those related to bad

teachers doing bad things. Significantly, there is not a single voice to challenge or add nuances to authors' hegemonic storyline.

(4) The fourth analytical concept in media literacy states that different people experience the same media message differently. The concept is operationalized through a series of questions such as "How might different people perceive the same media product differently?" and "How does a media product make someone feel, depending on how similar or different they are from people portrayed in the material?"

Someone close to public schools' struggles for survival would perceive this feature as a propagandistic attack, as it doesn't illustrate the relations between resources, constrains and achieved outcomes in public education. The same perception would be held by teachers who fail to self-identify as modern, flexible and technology oriented. In contrast, the material would be perceived as informative, truthful and convincing by middle-class parents with corporate sympathies, as well as by parents who, although lacking above-average incomes, idealize the corporate social profile and try to emulate it. The same perception would be shared by most children and teenagers. For them, the story functions as a justification for personal disempowerment in relation to their own educational path. Finally, the same perception would be shared by teachers successfully self-identifying with or emulating the heroic profile.

People who recognize themselves as old-fashioned teachers would feel diminished, stigmatized and misunderstood. The emotions that might be triggered encompass anger, indignation, frustration and powerlessness. People who recognize themselves in the portrait of the modern teacher would probably feel validated and esteemed. The triggered emotional spectrum could include pride and self-righteousness. Parents and students who recognize themselves in the characters of the material would most likely also feel validation and self-righteousness, while experiencing indignation and anger towards institutions and teachers.

(5) The fifth analytical concept in media literacy states that media messages are designed to gain profit and/or power.

The feature is produced and broadcasted by a commercial TV station, so both profit and power orientation is shaping the message. As ProTV has always preserved a clear ideological line, its audience is already accustomed to specific topics and specific framings, expecting journalists to stay consistent and validate their beliefs.

4.2 Disinformation techniques embedded in content architecture

After clarifying the range of observations someone could draw based on critical reflection upon the media piece, the content was screened for

identifying disinformation techniques used in its construction. Cases when detecting disinformation was favored or anticipated by the previous critical enquire were flagged. Results are presented in Table1.

Table 1 - Disinformation techniques built in content architecture, as related to findings based on the critical interpretation assessment

Disinformation techniques	**Relation with findings based on the critical interpretation assessment**
Misleading headlines	Finding supported by the previous assessment
No Evidence	Finding supported by the previous assessment
Poker Suit	Finding supported by the previous assessment
Denial of facts Although there is general agreement that there is a direct relationship between poverty and school dropout or educational failure, the material denies that the problem is connected to poverty and promotes an explanation that shifts the focus to vilified old-fashioned teachers	Finding supported by the previous assessment
Exaggeration and Over-Generalization	Finding supported by the previous assessment
Totum Pro Parte/ Pars Pro Toto	Finding supported by the previous assessment
Metaphors or loaded wording Metaphors: e.g. "online learning, a failed experiment", "….a fiasco", "mutilated education" Loaded wording: the term "jaded" is repeatedly used – e.g. : "The teacher looks just as jaded ", "... teachers are as jaded as the little ones are" "Jaded" means indifferent, disgusted, bored, and incapable of emotions and feelings. Its usage in the feature is ascribed as strategic linguistic choice. The same attitudes and	Finding supported by the previous assessment

behaviors could have been described as symptoms of burnout or emotional and physical exhaustion. The term "investigation" is used instead of feature or reporting, with the clear intention of boosting the credibility of the article	
Mockery, vilification, diminishment Diminishing constructions appear in fragments referring to public education and traditional teachers. They are presented as protagonists in scenes which show them as inadequate and ridiculous.	Finding supported by the previous assessment
Presentation of opinions as facts (and vice versa)	Finding supported by the previous assessment
Joining the Bandwagon The material creates the impression that the combative, anti-public education perspective is the only correct line of interpretation for understanding difficulties in online education.	Finding supported by the previous assessment
The False Dilemma (us versus them) The material creates an "abusers versus victims" contrast	Finding supported by the previous assessment
Drowning facts in emotions The feature repeatedly appeals to emotional stories to prime the audience to accept judgments of value.	Finding supported by the previous assessment

Source: Authors' own conception

12 disinformation techniques were identified to be embedded in the analyzed press material. All of them were anticipated or depicted, even though not directly named, through previous critical analysis of the content.

4.3 Logical fallacies embedded in content architecture

The third stage of the analysis sought if logical fallacies detection may be related or favored by qualitative critical analysis of a particular content. The journalistic feature was screened for logical fallacies and cases

when identification was rooted in the interpretative enquiry were flagged. Results are presented in Table2.

Table 2 - Logical fallacies built in content architecture, as related to findings based on the critical interpretation assessment

Logical Fallacies	**Relation with findings based on the critical interpretation assessment**
Scarecrow The public education system is presented as a fiasco, a failed experiment; teachers using direct instruction related methods are portrayed as jaded and obsolete. They are "mutilating" Romanian education.	Finding supported by the previous assessment
Anecdote The feature builds strongly on anecdotic and particular cases, to expand the persuasion effect of passages constructed as sentences.	Finding supported by the previous assessment
False causality (correlation is perceived as a causal relationship) The feature enforces the assumption that poor school results are caused only and most significantly by old-fashioned teachers	Finding supported by the previous assessment
Ambiguity The feature showcases children from vulnerable families in rural areas, explaining the audience that they completely drop out of school because they do not have access to digital devices. Although poverty seems to be the cause of the problem in this situation, filmmakers turn this example into proof that the public education system is incapable. The cause of incapability, as presented in the next excerpt, is represented by old-fashioned teachers. Recomposing the train of thought results in the following contradictory storyline: Poor pupils drop out of school because of old-fashioned teachers, whom they do not meet because they do not have the necessary digital devices.	Finding supported by the previous assessment
Appeal to emotion Emotional stories trigger empathy for pupils	Finding supported by the previous assessment

who can't attend school. Empathy is accompanied by strong vigilante reaction, which is morphed into righteous indignation and anger against the „enemy" responsible for children's suffering. The "enemy" is constructed as the public education, with its old-fashioned teachers. The audience has no mental space to wonder whether indeed the public education system is the main "enemy" of education.	
Black or white The feature excludes perspectives on causes related to educational decline which diverge from those promoted by its authors. Someone who would entertain a different view would be forced into the category of old-fashioned, communist, incapable, ill adapted teachers and their supporters.	Finding supported by the previous assessment
False correlation The scene in which a teacher assures her students that online schooling will not be much different from classroom based education is contrasted with the student's statement that she doesn't understand anything. Even though teacher's encouraging speech and her student's observation occur in the same interaction situation, they are not necessarily correlated, as expressing encouragement is not a factual statement. Pupil's reply may signal, at most, that the pep talk failed to cheer her up and not that the teacher doesn't understand the differences between the two educational set-ups.	Finding supported by the previous assessment
Join the Bandwagon The succession of anecdotes and subjective quotes, building the narrative that old-fashioned teachers are the archenemies of attractive and efficient education, this doesn't make this thesis true.	Finding supported by the previous assessment

Source: Authors' own conception

Nine prominent logical fallacies were identified to be embedded in the analyzed content. Again, all of them were anticipated or depicted, even though not directly named, through previous critical analysis.

5. General Discussion

By applying CDA on the selected media piece, one might easily conclude that its content seems highly tailored to fit a specific narrative. The message was shown to be poorly supported by sound arguments, but strongly enforced through repetition and anecdotal illustration, with high interpretative redundancy. All disinformation techniques identified as embedded in the content were anticipated or depicted through the previous interpretative assessment. The same was true for identified logical fallacies. The strong relation might be explained by considering detection assessments to be highly derivative from the analytical treatment of the content. Future research should clarify if this is the case, by expanding the pool of selected examples, in order to check if identification of logical fallacies and disinformation techniques merely mirrors, in a more structured way, the results of qualitative critical enquiry of a particular content. Future research designs would also benefit from more experimental approaches, allowing checking for differences between critical thinking based observations and the quality of detection of logical fallacies and disinformation techniques. Participants could be asked to pass a media content through all three analytical stages and difference between their scores could be, as such, analyzed. However, such a design would imply selecting only short journalistic pieces, which are not best adjusted to prompt in depth analytical interpretative thinking.

6. Conclusions

Critical thinking, applied as CDA adapted for media studies, proves to be strongly related to other methods that might be used to evaluate media content credibility, such as screening for logical fallacies or disinformation techniques embedded in a particular content. Although future research should build an extended pool of case studies, in order to better understand the relations and also, to generalize the results, the main question that should be answered concerns the intimate relation between critical thinking and the ability to detect manipulative red flags. In other words, future studies should clarify if someone able to detect logical fallacies and disinformation techniques would necessarily rate down the credibility of a particular content, properly understanding its purpose and its social effects. As

training for logical fallacies detection, as well as for disinformation techniques, could simply create mechanic cognitive reflexes, based on recognition and association, the meaning of these manipulative structures could still escape to various verifiers. Such a scenario would better explain, for example, why people resist changing their minds over different topics related to fake news, even after researchers exposed them to debunked briefings.

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