



Systematic Review and Research Agenda Emphasizing Persuasion Knowledge Model as an Alternative Tool That Can Mitigate the Effect of Fake News on Consumers' Intention to Adopt an Innovation

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ABSTRACT

Aim: This study aims to conduct a systematic review to gather evidence from existing literature for the purpose of developing a new behavioural model. The model will leverage Persuasion Knowledge (PK) to mitigate the harmful effects of fake news in the context of the Behavioural Reasoning Theory (BRT) and Diffusion of Innovations (DOI). Specifically, it seeks to demonstrate that Persuasion Knowledge can help counteract the negative impact of fake news on Romanian consumers' intention to adopt a new product. **Design:** A systematic review was conducted, following the **Cochrane Handbook (2019) guidelines**. The study examines transdisciplinary research on theories, methodologies, and outcomes, identifying both similarities and differences to construct a model that links **fake news** (misleading reasons against adoption) with **consumer innovation adoption behaviour**. Results were synthesised narratively, rather than statistically, due to the transdisciplinary reach, which encompassed an expected diversity of approaches. **Results:** 39 studies were included in the review. **Conclusion:** There is interest in finding ways to counter fake news malign effect, Persuasion Knowledge could be such a term, and not much has been researched on how this tool could moderate, in a behavioural reasoning – diffusion of innovations context, the effect of fake news/(fake)reason against onto consumers' intention to adopt an innovation when targeted by a fake news.

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1. Introduction

Marketing has constantly had a key-research interest in how consumers respond to innovation. This response is framed within a decision-making process, that evolves from an initial phase, in which consumers gather information about the innovation, in order to form an attitude, grounded in potential reasons favouring/disfavouring the adoption of the innovation, and, eventually, to a more terminal phase, where they decide whether to adopt or reject it.

This study proposes to conduct a systematic review with the purpose of gathering evidence from extant literature that could support the generation of a new behavioural model, which would make use of Persuasion Knowledge in order to avoid the potentially malign effect of a fake news/fake reason against, when it comes to the launching of a new product; more precisely, the model is expected to prove that Persuasion Knowledge could moderate the negative impact of a fake news onto Romanian consumers' intention to adopt an innovation.

According to the Cochrane handbook (2019), a systematic review 'uses explicit, systematic methods that are selected with a view to minimizing bias, thus providing more reliable findings from which conclusions can be drawn and decisions made. (Munn, Z. et al., 2018). This study aimed to review the theories, methods, and outcomes of existing transdisciplinary research emphasizing both similarities and differences, in order to organize a model around a main relation between fake news (fake reason against) and consumer's intention to adopt an innovation. A narrative synthesis was used instead of a statistical one, especially since a diversity of methodologies across studies was noticed, when looking at studies that analyse Persuasion Knowledge, especially. Our purpose is to connect the latter with Diffusion of an Innovations approaches, in a behavioural reasoning context.

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It is known that new products, especially technological innovations, are *insecure* in the early phases of the diffusion of innovations (DOI) process (Rogers, 1983), especially due to the numerous and, in cases, such as the one presented in this study, sometimes, unverified information, be it from mainstream and/or alternative sources. Such concern makes sense, especially if one is to think of the fact that, nowadays, “*modern consumers are bombarded with numerous persuasions attempts by marketers on a daily basis*” (Rahmani, 2023, p. 12).

Some of these info – with impact similar to persuasion attempts – in the form of fake news, can instil misleading beliefs ((Lewandowsky et al., 2012), which can negatively modify consumers’ attitudes towards firms ((Visentin et al., 2019); (Berthon and Pitt, 2018), and products in general, but also, more so, in the case of innovations.

Fake news has become, again, a major concern for society at a global level, coherent with the unprecedented progress in technology: professionals of various fields show interest in countering malign effects of this phenomenon. Among the fields that have a justified interest in tackling the fake news problem, is marketing.

Fake news could interfere – as earlier mentioned - with the launching of new products, a process that is vulnerable, especially at the level of initial information; since not much is known in the early stages of diffusion (stages where info barely get collected from various sources), a lot can be speculated about new products, aspects that could turn out to be either true or false, but which could generate an unjustified negative attitude and, thus, could lead to the failure of the new product.

All these can be easily operationalized and tested empirically, by emphasizing the BRT (Behavioral Reasoning Theory) dichotomy – ‘reason in favour’ vs. ‘reason against’, when it comes to making the decision of purchasing an innovation.

The systematic review aims to organize synthetically the linkages among the variables, but also clarify key-concepts; also, to identify gaps and deficiencies, which once answered to, could lead to a potentially new behavioural model that could bring new insights into the malign impact of fake news, in a DOI context, thus generating solutions to the pressing issue of the high percentage of new product failure.

Study background and justification: fake news/(fake) reason against, a threat to consumer’s intention to adopt an innovation

Innovation theory brings along two approaches – one in favour of adopting the innovation, according to which innovation is always a good thing (Laukkanen et al., 2007), since it brings along an improvement (*pro-change bias*) (Sheth, 1981)); the second approach, underlined by the already-established fact that innovation means **change**, is that consumers don’t have an *a priori desire to change* (Sheth, 1981). Consequently, when trying to determine consumers to accept and adopt an innovation, the more realistic approach is to focus on identifying the reasons against adoption.

Usually, such reasons “against” impact decision mechanisms, in the category of **perceived risks** (Laukkanen et al., 2007).

The overly - technologized times we live in bring new meaning to the risks companies face when introducing new technology or innovative products on the market. More pressing and unavoidable threats and challenges face the already established diffusion of innovations approaches, when it comes to taking action with the aim of preventing product failure, due to unneeded customer resistance to innovation.

It happens more frequently, nowadays that consumers across all markets are exposed to malign communication, of a fake news type, which could have the same effect as a psychological barrier, quite efficient in generating unjustified resistance to adopting an innovation, especially in its *early phases of diffusion* (Rogers, 1983).

What could be done to counter the malign impact of such communication, functioning as a psychological barrier, is a legitimate question of real interest.

Previous techniques, i.e., correcting and retracting the possible communication (Pennycook et al., 2020) with fake content, may only activate the so-called *reactance bias* (Brehm, 1966) of the consumers, who want to make their own decision on what is real news and fake news. We live in times where the unprecedented free and wide access to information is, both a blessing, and a curse, after all.

It is the hypothesis put forward by the author of this study – in the attempt of designing a research agenda – that the better, alternative, method to react to possible reasons against adopting an innovation is to *trust and empower consumers*, rather than *correcting* and retracting an unjustified **fake reason against** the adoption.

The results of this theoretical endeavour could be fundamental in generating practical outcomes, which can be relevant at an individual level, in a context in which - considering nowadays consumers’ reactance to being told what is true vs. what is false - offering an instrument that allows consumers to independently make correct decisions about purchasing or not a product, could ensure that unjustified *reasons against* adopting don’t generate unneeded resistance to the adoption of the potential innovation.

Thus, consumers can reach their own decision, with increased validity, when faced with the decision mechanism involved in adopting or resisting an innovation, based on the impact of a malign piece of news that may generate a psychological barrier, able to cause resistance to adoption.

Such malign communications – fake content/ fake news communication - are quite frequent, and represent a threat that can generate high percentage of new product failure. So, a solution to such threat is still needed.

This study, drawing insights from a transdisciplinary literature review and explores a potentially new behavioural model - built on previously validated models, i.e., Persuasion Knowledge Model (PKM), Behavioural Reasoning Theory (BRT), Diffusion of Innovations (DOI), etc. – which could address consumers' resistance to adopting an innovation, when the innovation is targeted by a fake news, operationalized as a fake 'reason against' (concept derived from Westaby's Behavioural Reasoning Theory, (Westaby, 2005)). This model ambitions to explore the role of Persuasion knowledge in deterring fake news effect on consumers' Intention to adopt an innovation.

Consequently, this study brings a contribution by laying out a research agenda and a systematic review, both aimed at generating a new approach to adopting an innovation, when potential risks to the adoption present themselves as fake news/fake reasons against.

There are three main research objectives, which are fundamental in setting up the research agenda put forward for analysis in the present study:

1. Analysing consumer's behaviour in the context of early stages of diffusion of an innovation.
2. Analysing the effect of a fake news (operationalized as a fear-inducing fake reason against) on consumers' behavioural intentions and, implicitly, on the decision -making process.
3. Analysing the impact Persuasion Knowledge could have on consumers' adoption intentions of an innovation.

Accessing Persuasion Knowledge could allow consumers to resist malign effect of fake news, and, as a result, not unnecessarily resist adopting an innovation

Fake news could interfere – as earlier mentioned - with the launching of new products, a process that is vulnerable, especially at the level of initial information, since not much is known, therefore a lot can be speculated about new products, while consumer ought to decide what could be true or false, thus avoiding an unjustified negative attitude and that could lead to the failure of the new product.

All these can be easily operationalized, by emphasizing the BRT (Behavioral Reasoning Theory) dichotomy – 'reason in favour' vs. 'reason against' adopting and eventually making the decision of purchasing an innovation. Things could become even more complicated if a fake news is used in the Behavioral reasoning framework, as a (fake)'reason against' adopting an innovation...

The solution put forward here for further exploration is that of countering fake content, by activating a resource that people use in all interactions with marketers; and that is Friestad and Wright's *Persuasion Knowledge* – which we ambition to measure and test as a tool/resource/function able to empower consumers to efficiently cope with potentially fake 'cons', and avoid an unjustified variance, at the level of consumers' adoption intentions towards an innovation

Could Persuasion Knowledge be a resource, which consumers could make use in order to avoid (by themselves, and not due to influence exercised by outside observers) being duped by fake news? – this is one of the important questions this research ambitions to respond to.

At the same time, a more specific question is the following: *what can be done to make sure a fake news does not drastically influence consumers' intentions, when they are in the process of deciding to adopt an innovation?*

As this research aims to empirically test whether Persuasion Knowledge can mitigate the influence of fake news, in the context of a persuasion episode, this may open up towards a transdisciplinary analysis around the possibility of an alternative method to resist fake news, since the classical ones (among them, the correction/retraction methods), proved to be inefficient (Lewandowsky et al., 2012); (Jost et al., 2020); Pennycook, 2020).

Placing the debate – as far as identifying such a method – in the context of persuasion theory and consumption decision, future research in other fields could speak of a more up to date method: *one that empowers consumers to resist persuasion embedded in a fake news, by accessing/using/activating something she already uses in sales and other contexts - Persuasion Knowledge (PK).*

The reason why this could be the topic of a research agenda, in order to solve a pressing problem (fake news impact on product/innovation launch) is the fact that this particular framework, the Persuasion Knowledge model (PKM), according to extant literature, "is a general framework that can be applied to any persuasion interaction" (Kirmani and Campbell, 2009). Following up with such views, the anticipated research will emphasize the possible role of Persuasion Knowledge in mitigating fake news effect, in a DOI context, and more specifically, the potentially moderating role of PK on Romanian consumers' intention to adopt 5G technology.

Exploring a new conceptual model, built upon previously validated behavioural models

The present study aims to organize the agenda for research on how a Romanian sample of respondents would react, as far as adoption intention of a new technology/innovation, such as 5 G, if targeted by a health-related fake news, operationalized in a BRT manner, as (fake) reason against.

This research objective will be addressed by exploring the development of a new behavioural schema that integrates, entirely/or only parts of, specific various behavioural models - Behavioural Reasoning Theory (BRT), Diffusion of Innovations (DOI), Persuasion Knowledge Framework (PKM), Technology Acceptance framework (TAM), Value-based Adoption Model (VAM) - relevant in assessing the predicting of intentions in the context of the consumer decision-making process, all projected on an SOBC (Stimulus-Organism-Behaviour-Consequence) psychological framework, which is acknowledged as being extremely useful in analysing behaviour.

The main approach will feed off of Westaby's *Behavioural Reasoning Theory (BRT)*, emphasizing the *linkage reasons - intentions*, more precisely, the fact that reasons (in the given case/scenario, as 'reasons against') could predict consumer's behaviour (Claudy et al., 2014), when it comes to adopting a new technology, by negatively influencing adoption intentions, and, subsequently, generate variance in consumer's behaviour, even with impact on decisions (the end of the SOBC schema).

The framework put forward by this research agenda will aim to verify empirically whether a health-related fake news, operationalized as **reason against** adopting an innovation/new technology, could generate variance – as expected from Westaby's BRT model – at the level of adoption intentions.

The path of the connection reason – adoption intention has been measured experimentally in previous DOI and BRT studies, confirming that reasons 'for', or 'against' innovation – could predict adoption intentions. One must also keep in mind findings of even earlier/updated research, according to which "*reasons for resisting innovations are not necessarily the opposite of reasons for adoption*" (Claudy et al., 2014).

In such a context (where, due to the *qualitative* distinction (Claudy et al., 2014) among the two types of reasons), while exploring the impact of a fake news - acting as a presumed 'reason against' (n.n. against adopting an innovation) - on consumers' adoption intentions of new technology, the author's objective will be that of exploring a possible solution (other than offering more reasons "in favour", which – according to BRT – do not lower the impact of reasons "against") to the fake news malign effect on consumer's behavior (n.n. the intentions level), by making use of Wright and Friestad's iconic *Persuasion Knowledge Framework (PKM)*.

This path will be coherent with previous research that looks at fake news as embedding a hidden persuasion intent (Nyilasy, 2019), while its imitating of real news reminds one the *nativeness* embedded in a specific, deceiving, form of advertising – there is a certain similarity as far as the mechanism used by fake news, with *native advertising*. At the same time, fake news shares with native advertising an essential *persuasion* characteristic; this could also be pursued in further potential research.

When reviewing the updated definition of advertising, it is easily noticeable that the mechanism is similar to the one of fake news: "*paid, mediated form of communication from an identifiable source, designed to persuade the receiver to take some action, now or in the future*" ((Dahlen and Rosengren, 2016), p. 1)

As we predict that fake news has the potential to generate, in the context of the decision-making process, variance at the level of adoption intention, the authors propose to measure whether the activation of Persuasion Knowledge could function as a moderator of the potential effect of fake news on the intentions of adopting a new technology.

Should data confirm that a PK impulse could diminish the negative influence of a fake news on consumer's intention and, possibly, decision, then we could *flirt* with the idea that a change of focus would be achievable: rather than favouring the classical, correction methods, when it comes to reacting to fake news, we could rely on consumer to develop her own reaction, PK-based. So, aside from the objective/classical correction methods, which have proved their inefficiency, according to previous research, we propose to rely on consumer to self-defend from fake news, by stimulating her to use a skill which proved its usefulness in a sales context: Persuasion Knowledge.

Projecting the entire analysis on the theoretical framework of SOBC, values, as stimuli, can predict the adoption intention and, eventually, the decision-making process, when it comes to adopting a new product of a new technology class.

The values considered here are the ones from the field of openness to change, previously used in extant literature (Claudy et al., 2014); (Schwartz, 1992), in the context of decision-making mechanisms. The empirical study will test this aspect: if the association values (i.e. openness to change) – adoption intention could be influenced significantly by a fake news that interposes itself, as a sacrifice/risk/ *reason against* the adoption intention of new technology/innovation.

At the same time, as antecedents to adoption intention, the following constructs - exposure to news and technology awareness - are proposed as variables that could have a significant influence on the dependent variable - adoption intention (of a technological innovation). It is expected that their relation could be affected by the influence of a potential fake news, in such a way as to negatively impact consumers' intention to adopt the innovation, where variance is expected to be generated. What this conceptual model puts forward, originally, is the potential moderating role of Persuasion Knowledge in the context.

In order to do so, a deeper examination is considered to be needed, on the one hand, to verify whether a behavioral type of decision- making could be used to understand the effect of fake news on adoption intention (thus, the fake news being in line with the BRT construct of ***reason against adopting the innovation***). This would extrapolate from previous research (Claudy et al., 2015), analysing, in a BRT context, the predictors of either adoption of, or resistance to innovation.

This study brings forward the possibility of moderating the effect of a **reason against** (which is a fake news, actually) on consumers' intention to adopt 5 G technology, when consumers make use of Persuasion Knowledge (PK) in this particular context. It is believed that a closer examination would be in order, so as to analyse the potential role of PK in combating fake news negative effect, in the context of the diffusion of an innovation, and, thus, react to a possible knowledge gap. Actually, the proposed research may aim at testing empirically if the effect of the fake reason against on adoption intention could be diminished by giving the respondent a PK impulse (basically making consumer aware of the preponderance of fake news nowadays, a method also inspired from extant literature).

Consequently, it is intended to lay a research agenda which could generate a study that will attempt to answer the following research questions:

RQ1: What type of relation is there between openness to change, exposure to news, technology awareness, as independent variables, and adoption intention (of an innovation, i.e. 5 G), as dependent variable?

RQ2: Would a potential fake news (the “deceptiveness risk/fake reason against” variable in the behavioral schema of the present research) negatively influence (in a BRT understanding)/disrupt consumers' intention to adopt an innovation?

RQ3: Could Persuasion Knowledge be a tool, consumer could access/activate in such a way that the effect of fake news on adoption intention could be mitigated?

RQ4: Does openness to change, exposure to news and technology awareness moderate the relation fake news/ fake reason against – adoption intention?

By approaching the above questions, potential answers are offered, as far as what variables would favour consumers' intention to adopt an innovation, as well as an outlook on consumers' behaviour, when their attitude towards an innovation comes under the influence of a fake news. Such an approach scrutinizes the possibility that Persuasion Knowledge could turn into a tool used to resist malign persuasion, thus marketing specialists could entertain strategies that delegate more to consumers the decision mechanisms, rather than trying to push forward, excessively, the reasons “in favour” of adopting an innovation, which may no longer generate the expected positive decision, especially when the innovation is under scrutiny, due to the effect of a (fake)reason against.

The study aligns with extant research emphasizing the fact that DOI approaches oversaw the importance of resistance factors (Garcia et al., 2007), or, in a behavioural reasoning approach, the influence of a *reason against* (n.n. against adopting an innovation).

The result is expected to be the development of a new behavioural model, which draws insights from previously validated models, i.e. DOI, BRT, PKM, etc., and tackles the pressing issue of the malign effect of a fake news on consumers' intention to adopt an innovation; at the same time, the new framework explores the possibility that a tool, like Persuasion Knowledge - which can be activated by consumer herself, when interacting with a contextual reason against adopting the innovation - can be an alternative to classical methods which proved their inefficiency in debunking fake news.

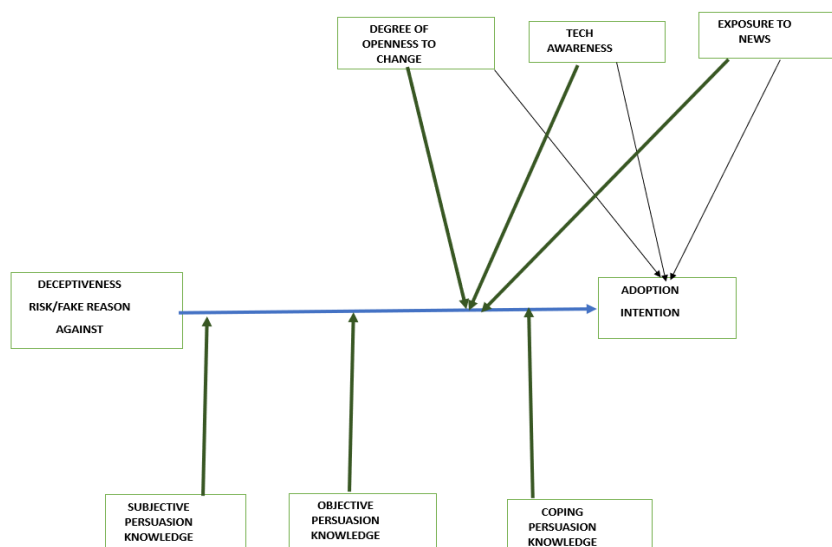


Figure 1. Proposed Conceptual Model

Prior studies emphasizing Persuasion Knowledge as a potential resource used by consumers to deter fake news effect

Recently, the idea has been getting more and more traction, research-wise: a 2023 study looks at PK's positively moderating effect of the relation between social media factors and consumer buying intention (Akram et al., 2023) – PK enhanced, in this study, *the effect of credibility and self-efficacy on consumer intentions by helping consumers recognize and respond to fake news*.

Also, a 2020 study authored by Chen and Cheng examined the way consumers process and react to a fake news about a brand in a social media context, by making use/ activating Persuasion Knowledge (Chen and Cheng, 2020).

Among the contributions of Chen and Cheng's study, it's relevant to mention the fact that they looked at possible antecedents and consequences of Persuasion Knowledge, but also that, by applying the PKM to a social media context, they proved its flexibility, since previously it had been used, mainly, in advertising or marketing contexts.

Kim, Youn and Yoon also tested the moderating role of Persuasion Knowledge, in a study analysing native advertising, concluding that *"Consumers with high Persuasion Knowledge may infer native advertising's selling and persuasive intent and thus are more likely to generate negative responses to the ad and brand...."* (Kim et al., 2019).

There are similarities at the level of the mechanism used by both a fake news and a native advertising (some studies even look at the latter being a form of fake news). In order to assess this, a definition of fake news is in order: according to "The Science of Fake News", fake news is *"fabricated information that mimics news media content in form, but not in organizational process or intent. Fake-news outlets, in turn, lack the news media's editorial norms and processes for ensuring the accuracy and credibility of information. Fake news overlaps with other information disorders, such as misinformation (false or misleading information) and disinformation (false information that is purposely spread to deceive people)"* (Lazer et al., 2018).

Native advertising shows interest in facts, more precisely a part of the facts, especially the positive ones, necessary to promote a product or a person that happens to be advertised. For this purpose, it uses the news format to be more efficient in persuading the consumer about its one-sided claims about the product (Tandoc et al., 2018). Persuasion Knowledge is presumed to allow consumers to have the proper response to this form of advertising with a persuasive, manipulative intent.

2. Methods

To answer our research questions, a systematic review methodology following Kitchenham's guidelines was employed (Kitchenham, 2004). This approach involves identifying, evaluating, and analysing published primary studies to explore research questions. A systematic review is a structured and methodical process for selecting, assessing, and synthesizing existing studies to address a specific research inquiry. Additionally, it can reveal trends and patterns within the existing body of research, highlighting gaps that future studies can address (Staples & Niazi, 2007).

The *search strategy* focused on identifying studies that – in a transdisciplinary manner – *tackle* the fake news malign effect, nowadays, the relation between fake news and persuasion, consequently looking at research dealing with the PKM, while placing the study in alignment with BRT (since the projected study will operationalize fake news as a fake reason against adopting a new product), while emphasizing innovation (specifically DOI approach).

Underneath is a model of the preliminary list of such studies, based on an *areas* strategy, meant to ensure *reliability* to the systematic review (Randles and Finnegan, 2023):

#	Author(s)	Year	Title	Journal/Book
1	Berthon, P., Treen, E., Pitt, L.	2018	How Truthiness, Fake News and Post-Fact Endanger Brands and What to Do About It	NIM Marketing Intelligence Review
2	Berthon, P.R., Pitt, L.F.	2018	Brands, Truthiness and Post-Fact: Managing Brands in a Post-Rational World	Journal of Macromarketing
3	Laukkanen, T., Sinkkonen, S., Kivijärvi, M., Laukkanen, P.	2007	Innovation resistance among mature consumers	Journal of Consumer Marketing
4	Lewandowsky, S., Ecker, U.K.H., Seifert, C.M., Schwarz, N., Cook, J.	2012	Misinformation and its correction: Continued influence and successful debiasing	Psychological Science in the Public Interest
5	Lewandowsky, S., Ecker, U., Cook, J.	2017	Beyond Misinformation: Understanding and Coping with the 'Post-Truth'	Journal of Applied Research in Memory and Cognition

#	Author(s)	Year	Title	Journal/Book
6	Rahmani, V.	2023	Persuasion Knowledge framework: Toward a comprehensive framework of consumers' Persuasion Knowledge	AMS Review
7	Ram, S., Sheth, J.N.	1989	Consumer resistance to innovations: the marketing problem and its solutions	The Journal of Consumer Marketing
8	Rogers, E.M.	1983	Diffusion of innovations	Free Press
9	Sheth, J.N.	1981	Psychology of innovation resistance: the less developed concept (LDC), in diffusion research	Research in Marketing
10	Visentin, M., Pizzi, G., Pichierri, M.	2019	Fake news, real problems for brands: The impact of content truthfulness and source credibility on consumers' behavioral intentions toward the advertised brands	Journal of Interactive Marketing
11	Campbell, M., Kirmani, A.	2000	Consumers' use of persuasion knowledge: The effects of accessibility and cognitive capacity on perceptions of an influence agent	Journal of Consumer Research

A number of results (preliminary, at this point), organized as seen above, were obtained based on a search performed on Web of Science, Scopus and Elsevier Science Direct, by inserting in the search tool of these databases the following terms: ***fake news, persuasion knowledge, behavioral reasoning, innovation.***

We got back 63 hits, out of which 39 titles remained, once the search became more specific (all are mentioned in the bibliography section of this article).

It is true that, should one search separately for Persuasion Knowledge, and the same way for each of the concepts, results would be significantly higher number-wise, even in the tens of thousands. What this told us is that the idea to generate a new model is valuable, original, while the transdisciplinary research, as well as secondary sources, will be useful in setting up a new conceptual framework, and develop entirely new, original hypotheses.

For this purpose, we found it useful to employ a narrative synthesis, which allows to synthesize all theories around the variables, so entirely new theories can be developed.

As far as the research scope, an *inclusion - exclusion* criteria method was used, which proved very efficient in drawing insights from previous research, which eventually connects to the projected research agenda.

The inclusion criteria were focusing the choices authors made, as far as studies, to those that touched, at the same time, on persuasion theory/ Persuasion Knowledge Model (PKM), behavioral reasoning/ BRT, Diffusion of an Innovation/ DOI, as well as fake news, mainly methods used to react and resist, efficiently, to fake news influence. At the same time, a few studies were identified that favoured the interpretation of fake news as *persuasion attempt*.

The studies resulting from this search have been published in the last 20 years, their number increasing after 2020, when we hypothesize that the fake news concept began to be more visible worldwide.

As previously mentioned, the approach is transdisciplinary, and the perceived outcome would be to generate a method to deter fake news effect in the context of an innovation decision-making process, which could be, eventually, extended to other contexts as well, in the endeavour to find a tool that could empower consumers to resist fake news impact. Both quantitative and qualitative studies will be included, considering that all research pertaining to the above study directions will be explored, in order to generate answers to the research questions above.

Limitations generating exclusion had to do with the fact that authors could read only in English, Romanian and French, while there were studies written in German and other languages that touched upon the focus of our research.

The search strategy used in this study focused on consumers' attitude in general, when it comes to fake news nowadays, given the incredible technological progress of the world we live in, and on whether fake news can be a phenomenon analysable in correlation with persuasion; a specific topic, from this point of view, deals with potentially researching on Persuasion Knowledge being a tool that allows consumers to resist manipulative intent (malign type of persuasion).

The studies that have been consulted thus far by the authors address the difficulty of measuring Persuasion Knowledge. One of the most quoted studies from this point of view was Ham, Nelson and Das' 2015 *How to measure Persuasion Knowledge* (see Apendix), which looked at the **scales** to measure the two types of persuasion knowledge – dispositional and situational.

Researchers are particularly interested in how Persuasion Knowledge (PK) can be effectively activated, as its level varies depending on the situation. Experimental studies have been conducted to measure situational PK, often using different measurement scales. One influential scale is Campbell's six-item IMI scale (Campbell, 1995), which assesses consumers' recognition of manipulative intent and their responses to

persuasive tactics, particularly in advertising. Unlike dispositional PK scales, the IMI focuses on consumers' attitudinal reactions rather than mere recognition of persuasion.

Ham et al. (2015) examined PK measurement across three contexts: advertising (assessing recognition of persuasive intent), retail sales (considering salespeople's ulterior motives in consumer decision-making), and covert marketing (measuring PK when covert tactics are revealed). The literature highlights that existing PK scales mainly assess knowledge of persuasive tactics, beliefs about their effects, or understanding of persuasive intent, with a strong focus on traditional advertising.

Given PK's multi-dimensional nature, directly adopting existing scales may not be suitable, prompting the development of a new scale. Additionally, PK is closely linked to media literacy, which helps individuals critically process media messages and recognize persuasive techniques used in advertising and media communication.

3. Research Agenda and Future Directions

Our review shows that the idea to make use of Persuasion Knowledge as a tool to deter fake news effect, when in the process of adopting an innovation, has not been explored significantly, which is proof that future research is needed.

Such research could have as purpose to investigate the impact of fake news on consumer adoption intention of an innovation, and Persuasion Knowledge (PK) will be explored as a potential moderator able to mitigate fake news influence, in a DOI-BRT context, emphasizing the persuasive dimension of a (fake) reason against. The proposed research envisions to address the gap in existing literature regarding PK's role in innovation diffusion contexts, especially in conjunction with the Behavioural Reasoning Theory.

The Research Objectives that are envisioned through this study will be developed around the following directions:

- Analyse Romanian consumer behavior in the early stages of 5G innovation diffusion.
- Examine the effects of fake news (as a "fake reason against") on consumer behavioural intentions.
- Develop and validate scales measuring PK and its three dimensions: subjective, objective, and coping.
- Investigate moderating effects of PK, openness to change, technology awareness, and exposure to news on the relation between fake news / fake reason against and adoption intention.

All of the above will focus on a main hypothesis, that will put forward the fact that high PK can counteract the malign influence of fake news, promoting innovation adoption. The hypothesis that a fake news could end up by impacting behavioral intentions as a BRT fake reason against has not been explored yet, but it's actual.

The Research Hypotheses that we foresee developing through the upcoming study:

- Fake news negatively impacts adoption intention, when Persuasion Knowledge is not activated/ accessed.
- PK moderates the relationship between fake news and adoption intention.
- Degree of openness to change and technology awareness positively influence adoption intention.
- Exposure to news moderates' fake news' impact on adoption intention.
- Objective PK influences coping PK, enhancing resistance to fake news persuasion.

The methodology anticipated to be developed will use an exploratory research design – a cross-sectional survey. Through this exploratory investigation, a new behavioural model will be generated, emphasizing the input/use of PK, at a behavioural intentions level, if consumers were to be trying to adopt a 5G innovation, when confronted with a fake reason against, functioning as a psychological barrier. The methodological approach will emphasize a positivist approach, focused on measuring the variables in the framework and their relationships, and consequently generating hypotheses which will be tested for confirmation. A structured questionnaire, will be used as data-collecting instrument.

Three different warning conditions will be simulated – in the questionnaire - in order to identify the impact of fake news on adoption intention: level 1- null warning, level 2 (moderate) warning and level 3 (intense) warning, which were expected to signal the fact that, when consumers become aware of the prevalence of fake news, their adoption intention does not decrease (and Persuasion Knowledge has an essential role in this).

It is expected that the three resulting subsamples will react differently, depending on the PK impulse the receive (moderate and intense) vs. null impulse.

Predicted Findings and Implications

- High PK significantly mitigates fake news influence on adoption intention.
- Subjective PK is expected to enhance consumer resilience against manipulative persuasion tactics.
- Objective PK should diminish the effect of fake news; nevertheless, when excessive, it may induce skepticism, reducing innovation adoption (and this aligns with previous findings - Isaac and Grayson, 019).
- Exposure to news and openness to change play significant roles in shaping adoption intention.
- Education and income positively influence adoption, while age negatively affects it.

4. Conclusions

Our research revealed some specific issues: on the one hand, it is clear that the novelty of addressing fake news malign impact by employing Persuasion Knowledge is unquestionable; at the same time, looking at fake news as persuasion attempt has also been understudied – from our knowledge, there was only one case of study that speaks about fake news as persuasion attempt.

Thirdly, placing the analysis in a DOI context is also new and practically necessary, given the high percentage of product failure, in the incipient stages of diffusion.

It is anticipated that – when it comes to new technologies – given the preponderance of fake news in the very technologized environment which makes co-creation very accessible, the percentage of innovation failure is significantly higher. Greater understanding is in order to generate solutions to the above-mentioned pressing issues.

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Appendix

	Dispositional persuasion knowledge	Situational persuasion knowledge
Quantitative measure	<p>Scales</p> <p><i>Knowledge about Persuasion Tactics</i> (Boush, Friestad, and Rose 1994)</p> <p><i>Lay people's Persuasion Knowledge</i> (Friestad and Wright 1995)</p> <p><i>Skepticism toward Advertising</i> (Obermiller and Spangenberg 1998)</p> <p><i>Self-Confidence of Persuasion Knowledge</i> (Bearden, Hardesty and Rose 2001)</p> <p><i>Pricing Tactic Persuasion Knowledge</i> (Hardesty, Bearden and Carlson 2007)</p>	<p>Scales</p> <p><i>Inference of Manipulative Intent</i> (Campbell 1995)</p> <p><i>Understanding of Persuasive Intent/Motive</i> – Advertising; Retail Sales; Covert Marketing Context</p> <p><i>Perceptions of Advertising Effectiveness and Appropriateness</i></p> <p><i>Response Strategy</i></p> <p>Cognitive response (e.g., Campbell and Kirmani 2000)</p> <p>Implicit response (e.g., Williams, Fitzsimons and Block 2004)</p> <p>Content analysis (e.g., Lorenzon and Russell 2012)</p>
Qualitative measure	Depth interview (e.g., Kirmani and Campbell 2004)	Netrography (content analysis) (e.g., Nelson, Keum and Yaros 2004)
Special target (Children) measure	N/A	<p>Nonverbal measure (& mixed measure) (e.g., Mallinckrodt and Mizerski 2007)</p> <p>Verbal measure (& mixed measure) (e.g., Rozendaal et al. 2013)</p>