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BELIEVING FAKES NEWS


1. *Introductory remarks*


The proliferation of misinformation, inaccuracy in data processing, twisted scientific findings through the web and social media, in a word the proliferation of "fake news" have raised worries concerning their alleged impact on democratic processes. For example, events such as Brexit and Trump's election are ascribed to the effects of "fake news" on citizens' choices, as well as the xenophobic attitudes against refugees and the mistrust of scientific research. Deception, self-deception, misreading of evidence, biased interpretations of facts, mixed with propaganda and spin have always been present in democratic politics and society. At first sight, what is new is the multiplying effect of web dissemination as well as a diffuse sense of danger and threat induced by the denunciation of the unstoppable spreading of false information among citizens and governments of Western democracy. Despite these worries, which have monopolized media's attention in the past couple of years, research on this subject, though growing, is still in an early stage and mainly focused on web communications. Yet, the nature of fake news and the reasons why they are so massively and virally believed require much more digging and theorizing.

In this paper, I want to tackle this phenomenon by raising two questions. The first concerns what fake news is, or, to put it differently, whether it is a specific form compared to traditional public disinformation and deception. More precisely, I shall ask whether the novelty of fake news lies just in the multiplying effect of the web and in the speed of dissemination, or if there is something more specific to it, linked to the information selection allowed by the web platform and to the cognitive traps triggered by this means of communication. Incidentally, even if the fake news phenomenon were only quantitative, the mass of misinformation disseminated by the new media is such to engender a different scale of risk for democratic and open society. Therefore, even the mere quantitative dimension of the phenomenon creates a specific new issue for our society.

The second question addresses the issue of fake news from the viewpoint of the recipient or consumer, and asks on the basis of which cognitive traps and mechanisms cognizers end up believing fake news at a higher and faster rate than true news (Vasoughi et al 2018). Is fake news believed in the same ways as lies or are there more complex cognitive and motivational elements factoring into coming to believe in fake news? A first immediately visible difference between

someone duped by a lie and someone duped by fake news is that the latter usually becomes an active propagator of the false information to large audiences through social media, contributing to the deception of many other users.

In the first section of the paper I shall thus take up the discussion on what fake news is and see whether a specific account can be provided that mark it specifically off compared to traditional forms of public deception. The relevant deception here is public for fake news typically affects large audiences and constitutes a public concern for a healthy democracy. In the second section of the paper, I shall try to map the cognitive and motivational traps making people victims of this form of disinformation and deception. Finally, in the third section, I shall take up the discussion about possible remedies, focusing on the ones directed at improving individual epistemic responses to fake news exposure. There is a lot of discussion about institutional remedies, whether through the web providers or through political institutions, as well as there is a significant resistance to forms of political control and censure of the web. The issue of institutional control, however, must preliminarily consider what political values are at stake and whether political intervention can defend them effectively without endangering others. But this work goes beyond the scope of this paper. Meanwhile, on the issue of cognitive countermeasures, as we shall see, the research is still to be developed. While there is a number of studies focused on new media communications, and while there is an important literature on cognitive and motivational distortions and bias and on the epistemology of testimony, there is little work connecting the two and seeing how the findings in cognitive psychology and in epistemology bear on the fake news belief formation, persistence and dissemination. I shall try to connect the two literatures and see whether some hints for counteracting the effect of fake news can be found.

2. *What is fake news?*

The expression "fake news" was introduced more than a decade ago to connote a special genre of popular television entertainment, such as the *Daily Show*, where political satire is embedded in the humorous reviews of daily news (Holbert 2005). It is a form of reality-based television for the content of the satire is taken from current political news. The satirized reporting though often creates ambiguity concerning what is factual and what is fictional, so that the audience must play an active role in determining the true meaning of the satire. The original sense of the expression, then, relates to a style of news presentation, uncorrelated to truth, highlighting inconsistencies in political rhetoric, which might make difficult to viewers to separate satire from facts, truth from fiction. Fake is more precisely the form in which satire is presented as (inverted) news, while it is up to the

audience to decipher the satirical and fictional nature of the show. Some researchers still use "fake news" with reference to either political satire (Balmas 2014) or, by extension, to the "tabloidization" of news as means of attention grabbing and sharable reporting, epitomized by clickbait headlines (Chen, Conroy, Rubin 2015). In this latter sense, the sensationalist form is responsible for blurring the line between fact and fiction. More specifically, in the case of clickbait headlines, the indifference towards the truth leads to information whose only purpose is to induce people to click on a link to a webpage to increase the page views. The content of the message is not necessarily fiction, but often misleading, unverified and seldom corrected. Fake here is referred to the fact that clickbait headlines are exaggerated, suggestive, easily misleading, hence represents one important source of fake news and of its spread.

In sum, originally, fake news meant something quite different from lies, namely messages whose fictional nature was wrapped up in a form mimicking reality, leaving the job of drawing the boundaries and decoding it in an appropriate way to the individual recipient. The very categorization of this genre of satirical news as "fake" exploits a line of reflection in experimental psychology on the effect of (explicit) fiction in inducing beliefs in subjects (Gerring-Prentice 1991, Gilbert et al. 1990, Marsh-Fazio 2006). Even if authors of fiction do not aim at producing an accurate account of the world, there is a lot of information that readers acquire from fiction. Some of this information is accurate, and some is instead made up in the fictional story. Experiments have shown that some of the fictional inaccuracies about the real world go undetected by readers and come to be encoded in subsequent beliefs, as if the compartimentalization of fiction vs. real world information were blurred. The integration of fiction and real world sources into self-ascribed beliefs is apparently less significant when fiction deals with fantastic world remote from daily and familiar experience. By contrast, when fiction deals with familiar events in a realistic world similar to ours, the integration is eased, resulting in inaccurate reports of state of facts by the readers (Rapp-Hinze 2014). Hence, a satirical content presented in a form similar to news reportage may well induce confusion between fiction and reality.

If the original meaning of fake news was thus referred to forms of communication blurring the boundaries between fiction and real world, and yet not meant to spread false information, the prevalent meaning of fake-news is now rather different. Especially after the 2016 American election, the term has come to mean false stories describing events in the real world by mimicking the forms of traditional media reportages, fabricated and promoted on social media either for ideological reasons or for financial gain (Rubin et al. 2015, Silverman 2016, Mustafaraj-Panagiotis 2017, Alcott-Gentzkow 2017, Rini 2017, Lang-Kim 2017). In this new definition, the following features characterize fake news: 1. News occurrences are *false,* being explicitly *fabricated* by their

producers, and are not simply the result of mistakes. 2. They are propagated though *social media*, implying that they are targeted on *large audiences*. 3. They are usually *motivated* either by the wish to manipulate people's beliefs in a polarized political context or by the wish to grab attention in order to increase the clicks on certain links and pages for financial gain. In the latter case, there is no interest in the doxastic states of the social media consumers, only in inducing a certain behavior advantageous for the producers. This definition covers both intentionally fabricated news articles, large scale hoaxes, and humorous fakes, i.e, articles originated in satirical websites that can be misunderstood as factual, especially if viewed out of context on Twitter or Facebook. Moreover, it is agnostic concerning the intentional deception component in fake news. Some authors in fact hold that intentional deception is one of its characterizing features (Rine 2017, Lang-Kim 2017, Mustafaraj-Panagiotis 2017), while others do not take side on the matter (Alcott-Gentzkow 2017, Vosoughi et al. 2018). I think that the intentional deception component is neither a necessary nor a sufficient condition for fake news. We have seen that some fake news is motivated by financial gain, while some others depend on the consumer's inability to understand humorous jokes as such. Hence, not all instances of fake news are prompted by the intention to deceive the social media users into believing something that is false but in the interest of the liar to have them believe. Moreover, I suspect that those scholars who underline the intention to deceive conflate the fact that the information passed on is false and the producer is aware of this fact with the explicit intention of deceiving others. The two things must be set apart for in the first case the deception usually occurs but simply as a by-product of passing on false information for other reasons, while in the second case the deception of others is the outcome of a deliberate strategy of lying. True, some fake news information, notably the ones with political content, is deliberately created and disseminated aiming at the manipulation of beliefs and behavior of citizens. In this respect, political manipulation by fake news seems to be no different from traditional political manipulation via politicians' statements, apart from the social media effect of multiplying and speeding up dissemination. But this similarity concerns only a section of fake news and, even in this section, evidence coming from current research shows that there are specific features setting political fake news apart from old propaganda and manipulation. On the one hand, as many scholars hold, internet and social media seem to affect the selection process of the information one is exposed to (Sunstein 2007, Pariser 2011, Mustafaraj-Panagiotis 2017), and, on the other hands, cognitive traps, heuristics and motivational interference are more easily triggered in social media contexts (Levy 2017). Moreover, there are consequences of the spreading of fake news, such as their agenda setting power on traditional media and public discourse (Vargo 2018).

In other words, current research has successfully shown a) that there are some specific features of the platform's algorithms allowing producers of fake news to find the people likely to disseminate the false news, and b) that the dissemination is parasitic on cognitive features of users. Fake news producers exploit the technological possibilities of the platforms to reach potentially sensitive users (Mustafaraj-Panagiotis 2017), while clickbait headlines exploit the proneness to attention grabbing cues of human minds (Chen, Conroy, Rubin 2015).

So far, we have seen that "fake news" can be characterized as something specific compared to traditional political deception and propaganda, with reference to: 1) How the false news is fabricated, posted, and disseminated through social media and research engines. 2) How the dimension of misinformation, due to the size of the affected audiences and to the speed of the dissemination is incomparable with traditional forms. 3) How it comes to be believed by the social media users. 3) How it powerfully affects the agenda setting in the public discourse of a society. Despite the possibility of a specific characterization of fake news, some researchers doubt that the expression represents a useful notion for analytical purpose. The ideological use of the concept, now habitually employed polemically to criticize and reject unfavorable political information, seems to discourage its adoption in a more analytical context. Whatever negative information comes about in the public forum about any politician or party, it is now commonly rejected as fake news, as intentionally planted falsehood to discredit him or her, apparently without need to provide evidence for the allegation. This partisan and symmetrical use of fake news to reject critical information about oneself or one's party has the effect of wrapping political discourse in a fog where truths and fabrications are mixed together, leading some commentators to speak about the present as a regime of post-truth (Manjoo 2008). For this reason, some researchers have grown suspicious of using the expression in scholarly analysis, and now they prefer to substitute the expression with *false* news and information vs. *true* news and information (Vosoughi, Roy, Aral 2018). While I understand their qualms, I think that fake news better conveys the specificity of this novel form of misinformation compared to traditional false information. Hence, I shall stick to the expression fake news, aware of the misuse in partisan politics, but also confident that conceptual analysis can dispel the fog.

3. *Why do we believe fake news?*

The question why we do believe in fake news may appear otiose, for we believe fake news in the same ways as we believe true information. Experimental psychology has actually validated an intuition by Spinoza concerning belief formation while understanding a message: as Spinoza

claimed, evidence supports that while understanding a piece of information we accept it as true, and maybe later we come to disbelieve it (Gilbert, Krull, Malone 1990). This experiment gives primacy to believing information as true rather than suspending judgment. One usual way of getting information is through testimony and, as a rule, we believe information by testimony, if there are no reasons either to mistrust the testifier or to doubt the content of the information that is either incoherent or at odds with our system of beliefs.[1] A recent paper has actually argued that from the point of view of the epistemology of testimony, believing in fake news is often individually reasonable (Rini 2017). Despite the relationship between testifier and testimony is in the case of social media more ambiguous, nevertheless people mainly treat social media transmission as if it were a normal form of testimony. Even though, according to Rini, social media transmission is a form of *bent* testimony that should make us more cautious before accepting the information as true, nevertheless certain conditions in the use of social media make the acceptance of testimony through them subjectively reasonable. That is because social media news often concerns political matters and, to be precise, highly polarized political messages. If, as Rina claims, partisanship is not epistemically unreasonable, then it follows that accepting partisan testimony transmission is compatible with epistemic virtues. For this reason, she concludes that believing fake news with a political partisan content, all in all, is not subjectively unreasonable. I shall not discuss this claim now. I only refer to this argument in order to show that the question of why we believe in fake news may appear otiose prima facie, given that not only we believe in testimony as a default, but also that there are good subjective reasons to believe in the form of bent testimony represented by social media.

Yet, despite the fact that accepting fake news may be judged in line with the epistemology of testimony, the question of why we do believe in fake news is not otiose, given that recent research has established that fake news is spread on social media more broadly, rapidly and in a deeper way than true news (Vosoughi et al. 2018). This work, based on the analysis of Twitter from its beginning to 2017, confirms the finding of another research, which instead examined Facebook news during the final three months of the US presidential campaign in 2016, "The analysis shows how viral fake election news stories outperformed real ones on Facebook" (Silverman 2016). Both researches actually measure the *spread* of fake news, and not the *beliefs* resulting from it, but, as we shall see more properly below, beliefs are a function of their diffusion and, even if not all re-tweeters are in fact believers in the news content, a good number of them supposedly are. If we are to infer, then, that the social media induce false beliefs at higher rate than true beliefs, why we do believe in fake news is far from being an otiose question.

Going back to the findings of the Vosoughi research, the authors looked for an explanation of the superior capacity of penetration of falsehoods; hence, they firstly tested the conventional wisdom according to which the spreading of fake news is explained by the structure of communication and by individual variances. In other words, the conventional wisdom attributes these results on the different –longer or shorter-- presence of people on Twitter, on their being more or less active, having more or less contacts and so on. But Vosoughi and his colleagues found there this explanation has no grounds. For alternative answers, they subsequently looked out at information theory and Bayesian decision theory, and hypothesized that novelty might be an important key factor for news spreading. Novelty has not only a grabbing attention power, but it is more valuable for it provides new information and grounds for decision making, as well as for social factors. The provider of new information acquires a higher social status as the one who is "in the know".  Since fake news usually contain new and striking information, given their attention grabbing nature, novelty could represent the relevant cue. The novelty hypothesis was in fact confirmed by a check on subjects' previous exposure to fake vs. true information, as well as by a check on the emotion displayed in the re-tweeting. For fake news, the prevalent emotions were surprise and then disgust, which corroborate the hypothesis that fake news typically transmits new and surprising information. Thus, the cue priming re-tweeting has nothing to do with the truth credentials of the news. As said above, this very important research concerns the diffusion of news on social media, and more specifically on Twitter, by checking the rumor cascades from any original tweet, whether true or false. It does not advance any claim about beliefs.  Retweeting is not equivalent to endorse and believing the information one is transmitting.  The difference between the two has to do with the uncertainty of the norms of communication governing social media,  even if, despite ambiguity in testimonial intentions, it seems that above a certain threshold of sharing, any ambiguity seem to be washed away and people take the sharing as a form of endorsing the transmitted claim (Rini 2017).

The relationship between news spreading and correspondent beliefs formation deserves to be analyzed more closely for it may help to respond to our question. In general, a precondition for a piece of news to be believed is to reach out to people, and, in that sense, the broader and faster spreading of fake news increases the probability of its being believed. Yet, given that retweeting does not imply believing the news, we can speculate here that the reasons or causes for retweeting can be different from of the reasons or causes of coming to believe the news. The novelty of the message, as suggested in the research above, grabs the attention and surprises the user, which, in turn, motivates her to retweet the message. The correspondent belief can at this point more easily be formed, even if at the beginning the subject was unsure about the truth of the message, on the basis

of two different mechanisms described by cognitive psychology. One is predicted by perception theory, that is the tendency to infer belief from behavior, or, to put it differently to use behavior as a sign of the correspondent belief, justifying the behavior ex post (Bem 1967, Bem et al. 1970). In this sense, retweeting may be taken as revealing the correspondent belief justifying the action of spreading the message. The second consists in the effect on fluency processing of information, so that a more easily retrievable stimulus affects what people come to believe (Alter 2007, Rapp et al. 2014). Suppose that the retweeting user is originally agnostic about the claim of the message. Yet retweeting exposes the user twice to the same message, and if the dissemination proceeds, there is a good chance that the same claim may reach the user by a different cascade, and furthermore by the claim being reported on traditional media. Repeated exposure facilitates familiarity and the fluency processing, which, in turn, induces the correspondent belief, just because the retrieval of the information is easier and more readily available (fluent). The fluency effect strikes automatically, even if, originally, one had doubts about that piece of information, and it may be activated by the salience and simplicity of the message, as well as by repetition and familiarity. It may seem that novelty and familiarity are going in opposite directions concerning their effect on belief, and that the one should limit the effect of the other. In fact, in the dissemination of fake news, the two, apparently opposite, cues for fluency processing are likely to work together. The novelty arouses attention and emotion of surprise, which make the message salient and the subjects prone to suggestibility (Eslik, Fazio, Marsh 2011). Then, retweeting is a repetition, which is likely to be only the first, for the message can reach the user through other cascades and from traditional media commenting on it. This increases familiarity as well as the perception that the information is shared and held by others, reinforcing the belief in it being true.

Both self-perception and fluency processing work below the radar of awareness and analytical reasoning, and strike anyone, in the appropriate context. I like to stress the difference between the two mechanisms. Self-perception is a distorted form of self-attribution of beliefs ex-post based on actual behavior, which has been interpreted as a form of reduction of cognitive dissonance (Festinger 1957); by contrast, fluency processing is a heuristics, a process speeding our cognitive process bypassing epistemic rules, which, under the appropriate circumstances, produces reliable judgments open to epistemic justification (Reber, Unkelbach 2014).[2] Yet, heuristics can as well lead to wrong conclusion in the unfavorable circumstances. The consideration of fluency processing shows that, even if the media user is relatively sophisticated epistemically, and not immediately duped by the fake news, the latter may automatically affect his doxastic state at a later time, just because of the repeated exposition and to the action of retweeting (Levy 2017). In sum, even though the researches by Silverman and by Vosoughi and al. concern the spreading of fake

news, the broader and faster rate of spreading is likely to induce an increase of correspondent false beliefs, given certain cognitive mechanisms.

The reason why fake news is believed is thus firstly correlated to certain cognitive features, amply analyzed by cognitive psychology, which are displayed in all sorts of acquisition and retrieval of knowledge, but which are especially triggered by the working of social media. That is because not only the news on social media are presented in a simplified, but grabbing attention form, but also because they tend to spread rapidly and to come back from multiple paths to social media users so as to induce familiarity, hence enhancing fluency processing. Beside these two features of news circulation on line and on social media, another factor affecting the credibility of information is its general acceptance by others. The larger the number of people believing that P affects the tendency to acquire and share the belief that P. Now it is unclear whether the influence of a popular view on our doxastic system belongs to the same kind of automated mechanisms above described or not, for the fact that a belief is shared among other people is often a reasonable corroboration of its truth (Schwarz and al. 2016). If however other grounds justifying the belief are lacking, accepting a belief as true because it is largely popular may be a display of conformity bias. Clearly, the multiplying effect of social media largely amplifies this tendency, contributing in making believe falsehoods as true facts. Evidence shows that, when a view is held by people with whom we identify, the influence on our doxastic system is especially powerful (Del Vicario et al. 2015; Levy 2017).

This phenomenon leads me to consider the motivational interference in the acquisition of information, as a relevant cause of misinformation, and the effect of partisanship and ideology, as sources of specific form of motivated false beliefs. I define partisan viewpoints "ideological", if they work as screens for selecting information, blocking out the adverse news, and prompting the acceptance of favorable ones. Much research done on political misinformation either through politicians and old media or through new media confirms the effect of partisanship in accepting or rejecting certain news, according to whether its source is one's party or more generally one's side or not (Cohen 2003; Uhlman, et al. 2009, Silverman 2016, Piacenza 2018). However, relative little reflection is available on the different components contributing to the effect of ideological views on beliefs. I argue that relying on ideology as selector of information embodies: 1) a reasonable component; 2) a fluency processing component and 3) a motivational component influencing the belief formation. The reasonable component has been argued for by Rini (2017), in the article previously discussed. If someone holds a comprehensive view of politics and society, and is genuinely convinced it to be true, she shares a special bond and trust with the people sharing the same worldview. As much as one trusts the testimony of a trustworthy friend, similarly, one tends to

trust information coming from the party or the group sharing the same comprehensive view, for that makes them trustworthy. In that respect, believing information coming from the party or group that one trusts is in general reasonable, at least if the content of the news fits with what one knows about the world and is consistent with one's other beliefs. However, and that is precisely one of the fake news feature, the content of the information passed on via social media is often outrageous and striking, has sometimes the character of a hoax, or of satire. Think of the infamous news spread during the last US presidential campaign against Hillary Clinton, concerning the use of the basement of a pizza parlor in Washington, for pedophile activities (Cush 2016). This is tipically the kind of information that should makes anyone who has previous information about Hilary Clinton to be dubious of its veracity, no matter whether one liked her politically or not, and whether the news source comes from one's party. Nevertheless, the news was widely believed by Trump's supporters who willingly contributed to its spread on social media. In such a case, which is far from being isolated in the dissemination of political falsehoods on social media, there is no reasonable justification to believe the information, even from the subjective viewpoint of a partisan. Lacking reasonable justification, external cues may perhaps explain the belief formation. Such information is new, surprising and attention grabbing: such features contribute to make it salient, and, in turn, salience triggers fluency processing. This kind of news arouses attention and emotional responses of both surprise and disgust, as reported by Vasoughi's research, and sticks to one's memory much more than mundane pieces of facts. Partisan misinformation through social media are especially fit to elicit such cognitive responses. However, if the reason of believing such an incredible news were just fluency processing, that is, a "cold" cognitive mechanism, how come the believers were all Trump's supporters? Fluency should strike indiscriminately either conservatives or liberals. This consideration leads me to consider the motivational component as crucial, which, in case, may trigger the fluency processing component. Evidence of the motivational component is abundant in all studies on political polarization. Motivated irrationality is a well know area of study in epistemology and philosophy of mind. It has mostly concentrated on two specimens, namely self-deception and wishful-thinking. The analysis of motivated irrationality has also been applied to ideology, under the strictly Marxian notion of false consciousness (Elster 1983). Now I propose to extend the motivated irrationality analysis to ideological convictions in a broader sense, as comprehensive worldviews, which people not only believe as true, but with which they also identify themselves. In general, if we firmly hold a worldview, we are inclined to believe any news consistent and fitting into that view. The "consistency push" is neither irrational nor necessarily motivational: actually, among the criteria for evaluating whether a belief can be accepted as true, one is precisely its consistency with the other beliefs one holds, and another is the coherence of the

content of the information (Schwarz et al. 2016). Yet, we have seen that in case of fake news, such checks are usually suspended when the misinformation comes from the group or party sharing our worldview, despite the fact that its content is unfitting the world as we know it. In front of a preposterous news, such as the pizzagate and Hilary Clinton, what makes people believe it cannot be the consistency push. We must rather presupposing a wish to believe information favorable to one's party as the push for partisans to believe something without warrant and despite good sense. Obviously, ideology has always worked in this way much before fake news were circulating on line, and contributed to people's holding falsehoods. What is new now is the quantity of partisan information spread through social media and coming back to research engines on the web and on traditional media and the preposterous nature of fake news claims. In turn, the false beliefs seem to be immune from correction and new evidence.

This observation leads me to a final issue, which represents a major concern for the effect of fake news, that is, the resistance to corrections: even in case of subsequent exposure to new and compelling evidence against the fake news, subjects tend to retain their false belief in line with their ideological views, despite debunking. When a subject believes that P according to her wish but against available evidence, this is precisely a case of self-deception. The fact that once formed beliefs seem immunized to new evidence and new arguments is widely reported in many researches in experimental psychology and political psychology (Gilbert, Krull, Malone 1990; Marsh, Fazio 2006; Neylan, Reifler 2010; Eslik, Fazio, Marsh 2011; Lewandowsky et al. 2012, Peter, Koch 2016). Furthermore, some experiments have proved that the attempt of debunking fake news with evidence and arguments often have the backfire effect of reinforcing the false belief. Strangely enough, this kind of research has never considered the work done in the area of self-deception, both by epistemologists, philosophers of mind and by experimental psychologists, for I think that it might have helped to made a clearer sense not only of the resistance to corrections but also of the backfire effect.

The backfire effect has been especially investigated by Neylan and Reifler (2010). They precisely tested participants by exposing to information contradicting their political beliefs and opinions, for example exposing them to negative information relative to their preferred candidate. This is a case where, in order to preserve one's political conviction, a careful selective search of information, to the effect of filtering out all data contradicting one's convictions, is not sufficient. The biased search strategy is actually one of the typical mental activity displayed by self-deceivers to defend their favorite belief that P against threatening evidence. In this case, though, the negative evidence has been put in front of the participants' eye, and in order to defend that P is not sufficient to look away and filter out the evidence for ~P. The account of persisting in a false belief cannot

simply refer to the fact that people believe what they want believe, as the authors of this research pointed out. On the one hand, we cannot believe by fiat, and, on the other, if that were possible, humans would live in a delusional world and that would be extremely dangerous for their own survival. In fact, most of the time we hold beliefs appropriately, whether formed by heuristics or by expressed reasoning. This is what makes so puzzling the phenomenon of self-deceptive beliefs, that is, false motivated beliefs held in the teeth of evidence. Thus how come the participants of the experiment were directly exposed to information contrary to their belief, and nevertheless, not only retain their belief, but also became more firm in their conviction? In this case, in order to defend the belief that P, the subjects must either explain away the contrary evidence or block the inference from the contrary evidence to ~P. Either way, the subjects must engage in sophisticated counterarguments to avoid concluding that ~P, either questioning the credibility of the information, or its relevance for the judgment on their preferred candidate. Since the negative evidence does not directly compel one to believe ~P, there is always a little latitude for engaging in arguments, twisted and yet sophisticated, leading to the self-deceptive belief that P. This finding actually confirms researches and studies on self-deception (Wentura, Greve, 2003, Wentura, Greve, 2005, Michael, Neuwen, 2010) where it is apparent that the persistence of a counter-evidential belief according to one's wish is brought about by a whole host of arguments displaying a quasi-rationality. As a result of such argumentative activity, subjects end up even firmer in their convictions.

In sum, not only ideological convictions contribute to make fake news believed in accordance with one's ideological outlook, but they motivate partisan people to hold on to their preferred beliefs even when contrary evidence becomes available, and may even induce backfire effect. Making use of the work on motivated irrationality, we can say that ideological motivations lowers accuracy, manipulating the acceptance threshold in processing information concerning one's ideological outlook (Mele 2001). The positive information is therefore immediately and fluently processed to form the favorable belief that P. In case of welcoming stimuli, the ideological motivation triggers subintentional mechanisms directly producing the belief that P thanks to a lowered acceptance threshold. This is usually how wishful thinking, that is believing beyond evidence and in accordance with one's wishes, comes about. The negative information, by contrast, primes a self-deceptive process, for self-deception is precisely believing something according to one's wish and against the evidence. But, while wishful thinking is brought about directly by the working of subintentional cognitive mechanism triggered by the wish, self-deception is set in motion by the threatening negative evidence and the emotionally loaded wish to believe that P, in case of costs of accuracy sinking or discounting (Galeotti 2018). The last condition is important to sort out the selectivity issue of self deception, namely the fact that self-deception does not strike all

the times reality frustrates our desires (Talbot 1995, Bermudez 2000). Incidentally, Neylan and Reifler indirectly referred to selectivity, when they pointed out that the backfire effect cannot be explained by the fact that people believe what they want. Self-deception cannot be the default response whenever information run counter our preferences. In front of the negative evidence, the rational response would be to act so as to counteract the threat and bring about the desired state of the world. However, sometimes action is precisely foreclosed by the circumstances, or it is too costly, or, in any case, the consequences do not befall on the agent. This circumstance leads to the sinking or discounting the costs of inaccuracy, lowering the threshold of evidence for believing something true and heightening the threshold to disbelieving it. Let us apply this model to the ideological backfire effect in front of debunking.  The person holding certain ideological convictions is actually powerless to counteract the negative information she is exposed; the discomfort induced by the bad news cannot be undone with an accurate processing of data. In a word, for her there is nothing to gain by epistemic accuracy, only to increase her discomfort and uneasiness. Thus, the circumstances favorable for a self-deception process are all in place. The subject at this point starts thinking how to reject the negative evidence and to go on holding one's cherished conviction. The motivated reasoning is affected by biases in data treatment, so that when the subject has found an explanation washing away the negative evidence, she can stop and go on holding what accords with her favored view. Since the subject must produce arguments to dismiss the negative data, the process embodies explicit reasoning that, though twisted, biased and below standards, does not proceed randomly.

One of the reasons why the reference to the motivated irrationality literature is important concerns the understanding of the motivation underlying the stickiness of ideological convictions. To be sure, lots of research has been done on the persistence of errors in experimental and political psychology, mostly testing interference of inaccurate information with memory retrieval. However, these experiments are designed to highlight the effect of external cues, fluency processing, and other subintentional mechanisms in the difficulty of correction of mistakes, clearly not considering the very possibility of motivational interference. I argue, however, that the motivational influence is crucial to make sense of cognitive phenomena which otherwise would look contradictory, for example the phenomenon of "Blind choice" which seems to go opposite to the stickiness of erroneous beliefs. The blind choice phenomenon emerges in experimental contexts where the participants are asked to express their agreement with certain statements, and then, through a subtle manipulation of the experiment sheets, are asked to justify their own answers, some of which have been reversed by the experimenters. Many participants do not realize the manipulation, and take the answers written down as their own, hence proceed in justifying them. The blind choice experiments

are deliberately designed to test ascription theory, namely the tendency to infer beliefs from behavior ex post, and the interpretation of the irrational shift in beliefs is provided by the reduction of cognitive dissonance, in direction of internal consistency. This experiment, however, must be considered in a larger context to be realigned with the findings on the persistence of mistaken belief and the difficulty of correction. It is doubtful that the drive to consistency is purely cognitive and has nothing to do with the sense of self and the desire to save face. The strange behavior of people who argue in favor of viewpoints that earlier on they have explicitly rejected, more than proving that they self-attribute certain beliefs from their written responses, to my mind, proves that they want to avoid embarrassment. My interpretation find confirmation in another experiment on the phenomenon of blind choice reported by Neil Levy (2017): the experiment asks participants to write an essay supporting a view running counter their preferences, namely that university fees should be raised. The participants were divided into three groups: one was given financial incentives, one was asked to volunteer to do the task, and the third was the control group left free to support either views on the issue. As expected, the control group wrote against the raise of university fees; the others instead followed the instruction. Yet, when asked to expand on their essay, the group who received financial incentives had no difficulty in saying that they wrote the essay for money without believing what they argued. The group of volunteers instead defended their essay and endorsed the argument they wrote following the instruction but against their preference. The explanation in terms of self-ascription theory does not seem completely convincing. To my mind, it was not that they inferred their preferences from what they wrote, driven by need of internal consistency, but rather by the wish to defend their integrity, since they felt uneasy and ashamed about having volunteered to switch their positions, and in order to preserve their integrity they ended up endorsing the disliked thesis. This irrational shift of positions concerned more their moral consistency, the integrity of their own self, rather than merely their logical or epistemic consistency. Such a problem did not affect the group payed to write the essay for they had an external reason to sustain a thesis contrary to their conviction and their moral integrity was not stained by their response to the task. The defense of one's image and identity is the same motivation underlying the motivated irrationality induced by ideological convictions: the endorsement of an ideology defines people's identity and self-image. The negative information threatening the robustness of ideology is at the same time a threat on one's self-image as sharing that view and on the group with which one identify himself: no one likes to be associated with political corruption and illicit behavior. Hence, the resistance to corrections, though may well be eased by the presence of implicit or automated cognitive mechanisms, is triggered by the desire to defend one's image and the image of the group with which one identifies. In this respect, the motivational and the cognitive component are

integrated: desires are triggers of cognitive implicit and subintentional mechanisms leading to believing or persisting to believing that P. When the subject is confronted with negative evidence, the subintentional mechanisms are supplemented by explicit, though biased, reasoning arguing against the negative evidence.

Such cognitive distortions, motivated and non-motivated alike, are actually spread in all forms of communication, interpersonal, public, through old or new social media. As already mentioned, the specificity of fake news spread on social media concerns: 1) the quantity of messages and information one is exposed; 2) the way news on social media are fabricated to convey simple, striking, even outrageous messages leading people to disseminate; 3) the enhancement of fluency, given the form of the message and its repetition. Concerning specifically political news, then, many scholars have advanced the worry on the increase of polarization. As effect of social media, citizens not only come to hold more false beliefs in line with their ideology, not only resist correction, but tend to be more ideologically segregated and more polarized, making bleaker the chances for a healthy democracy (Abramowitz, Saunders, 2008). The effect of new media on polarization had first been denounced by Cass Sunstein, at the beginning of the millennium (Sunstein 2001, 2007). He was especially worried by the unlimited filtering of information allowed by web, which would virtually produce the echo-chambers effect where consumers only listen to themselves. The segregation effect is further increased by the working of web-platforms, which propose users contents of their liking, based on previous choices (Del Vicario, et al 2015, Flaxman et al. 2016). A healthy democracy would instead require that citizens were exposed to a large range of opinions in order to form political views through a balanced and informed inquiry of issues and candidates. Much subsequent research, however, have shown that the worries about political segregation via the web and especially social media are largely exaggerated (Gentzkow, Shapiro 2011; Bakshy, Messing, Adamic 2015). These researches pointed out that internet and social media are far less segregated than networks of trusted friends. To my knowledge, there is however no research on polarization specifically, hence so far, the hypothesis that news passed on social media and the internet induce a greater polarization is reasonable, given the nature of the messages. Moreover, the repeated effect at debunking certain fakes by general media may induce in partisans the backfire effect above analyzed, contributing to strengthen increasingly polarized positions.

4. *What is to be done?*

Neil Levy in his article "The Bad News about Fake News"(2017) projects a very bleak view on the possibility of changing the communicative landscape so as to free our society and polity from fake

news. We usually tend to think that fake news dupes unsophisticated people, typically "others" with respect to the groups we identify with. This third-person effect of fake news has actually been detected and analyzed: people perceive the effect of fake news as being greater on outer political groups than on themselves or on their own group (Lang, Kim 2018). Clearly, such perception is deceptive, yet it is reasonable to think that fake news does not affect everyone in the same way. Levy's argument is instead meant to counter the common idea that sophisticated social agents may be immunized against fake news. He claims that the danger implicit in fake news is not just caused by the difficulty to detect and debunk them, but also by the mere fact of being exposed to them. Experimental psychological work on fiction (Gerring, Fazio 1991; Marsh, Fazio, 2006; Rapp, Hinze 2014), as we have mentioned, shows that even when people know that they are reading or viewing fictional works, the latter leave representations in their mind, subsequently retrievable by memory and often giving rise to beliefs, in case related beliefs are not stable and clear. In sum, there is no way to escape from fake news and the related dangers, according to him. If one is easily taken in by them, then, as we have seen, she is likely to resist corrections and to become more convinced as a result of the backfire effect. If one is sophisticated and epistemically cautious so that she is not easily duped by misinformation, she is in any case exposed and repeatedly, given the fake news agenda power in traditional media and the public forum. Such repeated exposures increase the chances to end up believing what she knew from start being false. In a word, Levy precisely projects a world of post-truth where our reasoning capability and epistemic virtues are at loss in the fight against misinformation. Similar conclusion is reached by a different argument also by Rini (2017): if believing fake news is subjectively reasonable in many circumstances, then, she argues that we cannot rely on epistemic virtues to fight falsehood. That is why she advocates institutional measures, which seem the only possible conclusion from Levy's view. However, as said, I do not intend to open the Pandora box of the institutional measures, whether concerning web-platform or politics, because, to start, we should have preliminarily clear what are the values and rights to protect here. Assuming we have epistemic rights (Watson 2018), how can such rights be enforced, and does not the enforcement risk infringing on other rights? These complex questions deserve to be dealt with at length. For this reason, I shall now confine myself to consider measures at the level of the individual epistemic subject.

In this respect, I would start by saying that the danger of mere exposition to fake news has been greatly exaggerated by Levy: exposition may facilitate the formation of a correspondent belief, but only in a second time and only in case the subject is not certain about his beliefs on that matter. Otherwise, all of us would believe anything that comes in our way and, as a result, we would all share the same beliefs, instead of being polarized on controversial information. Moreover, despite

the emphasis on automated and implicit processes in bringing about false beliefs, on the base of suggestibility, repetition, familiarity, fluency memory retrieval, cognitive psychology also provides some guidelines to counter the misinformation effect on beliefs. A first interesting suggestion comes from a research aimed at blocking the fluency effect in belief formation (Alter et al. 2007). The authors have found that when subjects experiences metacognitive difficulty in activating fluency processing, they activate instead analytic forms of reasoning that assess, and in case correct, the output of more intuitive form of processing information. In other words, facilitating disfluency helps setting in motion explicit forms of reasoning leading to a more critical validation of the received information. The finding is undoubtedly interesting, yet the problem is how such disfluency can be induced outside the lab, and especially in users of social media. A different kind of suggestion derives from a research specifically on validation of information (Richter et al. 2008). This research tested the hypothesis of a fast-track validation system interacting with comprehension, and activated in early stages of information processing, based on background knowledge. Contrary to the thesis according to which the acceptance of information is primary and implicit in comprehension while the epistemic validation, if at all, comes later (Gilbert et al. 1990), and is slow and costly, the researchers provide evidence that the validation takes place at the same time as comprehension, and is a fast, routinized process relying on the cognizer's background knowledge. This validation modality, called epistemic monitor, actually checks the inconsistencies in the incoming information vis-à-vis what we know of the world, and represents an efficient filter to detect falsehoods and deception. Thus, we are in principle endowed with a system allowing us to believe only what is in line with epistemic validation: how come then are we so easily duped by fake news? The experiment shows that the epistemic monitor works efficiently only if the cognizer has the relevant background knowledge: in the opposite case, as it happens with medical information, the subject is not able to detect falsity and is actually prone to believe the news to which she has been exposed. Here we have an important hint, namely that the more people are educated and knowledgeable, the less they can be victim of misinformation. This consideration actually correlates with findings in political psychology: the more educated the people, the less prone to believe in fake news (pace Levy). The finding is not unexpected, and some more definite suggestions may be inferred concerning the areas where misinformation is especially widespread and publicly dangerous, namely politics and science. Some researches on political polarization have actually found that more worrisome than polarization is the widespread ignorance among citizens about political facts (Bullock et al. 2015).

In conclusion, we seems to know quite a lot about how we are duped by fake news, but relatively little about how to fortify our epistemic capacities, though knowing that we are endowed

with an epistemic monitor is reassuring. A different path to avoid cognitive traps is to adopt strategies of pre-commitment, that is, strategies providing external constraints compelling us to be more accurate cognizers.[3] In a way, such strategies implement the idea to create disfluency in order to provide a warning flag activating explicit and analytical reasoning. For example, the symbols used by Facebook to alert of the possible inaccurate claim of a certain news can be seen as a form of pre-commitment. It is clear though that in order to work such kind of strategy presupposes the acknowledgment of the problem and the willingness to overcome it. And, in that respect, cultivating epistemic virtues and being convinced of one's epistemic rights may be the first crucial step.

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1 The evaluation of the truth of a statement can count on five criteria: 1) general acceptance by other people; 2) gauging of the available evidence; 3) compatibility of the other beliefs; 4) general coherence of the statement; 5) credibility of the source (Schwarz et al. 2016). In case of belief by testimony, criterion (2) does not apply, but all other four are actually available.

2 I shall refer to heuristic and implicit modes of belief acquisition without taking side in the controversy over the dual process of reasoning or the unified process of reasoning. The supporters of the dual process envisage two different strategy of learning, one based on intuition, making use of heuristics, fast and often unreliable; the second, based on analytical thinking, much slower, but under control, and epistemically adequate (Alter et al. 2007; Schwarz et al. 2016). The supporters of a unified process of learning think of a continuum of different strategies in knowledge acquisition and retrieval, some of which are implicit and quick, some other are slower and explicit, and some are automated after many repetition (Osman 2004). For the purpose of this paper, the relevant fact is the supports of either theory acknowledge that acquisition and retrieval of knowledge can proceed by implicit or automated processed, below the radar of awareness, and by explicit analytical thinking modules.

3 Precommitment has been analyzed by Jon Elster (1979), as the strategy to counter weakness of the will by binding oneself at a time $t^1$, in condition of cognitive lucidity, to avoid at time $t^2$, under emotional pressure, to fall prey of a behavior against one's better judgment. Pre-commitment is symbolized in the sory of Ulysses who made himself bound to the ship mast before being exposed to the sirens 's fatal singing, hence avoiding to jump off the board.