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Nothing about collective irrationalities makes sense except in the light of cooperation

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ABSTRACT

To secure cooperative opportunities people align their beliefs with the normative expectations of their social environment. These expectations are continuously managed by interactive reasoning, a process that results in dynamical pools of reasons. When people are more concerned about their social standing and reputation than truth, pools of reasons give rise to collective irrationalities. They determine what people should believe if they want to be known as a reliable group member. This account has implications for our understanding of human irrationality and how to deal with it.

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1. Introduction

In the wake of the Corona pandemic irrational beliefs such as conspiracy theories and opposition to vaccines have become increasingly visible. This raises the question how people come to adopt such misbeliefs. We generally expect people to rely on true beliefs. If not, we would not be able to navigate the world around us. If people adhere to blatantly false beliefs, we assume that their cognitive capacities have somehow derailed. On this view, irrationality is a matter of individual responsibility. Recently, however, it has been argued that people do not adopt false beliefs because their cognitive apparatus malfunctions. Instead, they adopt these beliefs based on rational considerations of higher order evidence about what beliefs the majority adopts and who are authoritative and reliable sources. People who end up with false beliefs happen to be in an epistemic bubble or echo chamber (Nguyen, 2020) where they unluckily trust the wrong people (Levy, 2021a, 2021b). Both sociology of knowledge and social epistemology have put into sharp focus how social context affects people's beliefs. Hence, it makes sense to employ the social perspective to also understand why people adopt and entertain *misbeliefs*. What the collective perspective shares with the

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individualistic approach, however, is the assumption that people's overriding concern is to find true beliefs. In their reliance on social cues, they try to solve an epistemic problem.¹

However, others have suggested that people adopt certain beliefs because they serve social purposes (Funkhouser, 2017; Mercier, 2020; Williams, 2020). For instance, they help to coordinate collaborative action, they signal group membership, or they provide justifications for actions already planned. Irrational beliefs thus deliver personal strategic benefits to the individual such as signaling group membership (Funkhouser, 2017) or providing justifications (Mercier, 2020). These accounts focus primarily on individual misbeliefs. What remains underappreciated, however, is that many such so-called "socially adaptive beliefs" (Williams, 2020) can only bring their benefits when they already circulate among and/or are deemed acceptable by the group the individual associates with. These group beliefs constitute the social ecology against which the adoption of individual beliefs makes sense. To understand why an individual adopts weird beliefs, we then must zoom out to the collective of which they are part. With this article I intend to provide such a zooming account.

Here I will thus focus on the social-collective outcome of misbeliefs and provide an analysis of the ecology to which socially adaptive beliefs adapt. More specifically, the question I aim to address is: if a) people do not adopt beliefs in isolation but in a social context, and b) the function of belief might not only be epistemic but also social, then the role of the collective will not be solely epistemic either. This implies that the collective does not straightforwardly provide accurate information, but then we can ask: what does it do? What is the nature and the function of this collective if not (only) a source of information for the individual? I will answer these questions by specifying the cognitive and communicative processes that are involved in the production and spread of socially adaptive belief based on relevance theory (Sperber & Wilson, 1995), the interactionist theory of reasoning (Mercier & Sperber, 2017), and cultural epidemiology (Scott-Phillips et al., 2018, Sperber, 1996). This account is anchored in an evolutionary approach to cooperation (see, e.g., Raihani, 2021).

When thinking about collective irrationalities, I will argue, it helps shift our focus from truth to cooperation. Cooperation affects many aspects of our lives including the ways in which we form beliefs. To secure cooperative opportunities we align our beliefs with the supposed normative expectations of our social environment. These expectations are continuously managed, stabilized, and transformed by interactive reasoning, a process that results in dynamical pools or populations of reasons. Under certain conditions, as in science, these pools can direct individuals toward accurate beliefs. However, when individuals are more concerned about their social standing and reputation than truth, the pools give rise to collective irrationalities. As

such, collective irrationalities are not epistemic bubbles or echo chambers that mislead people to adopt misbeliefs; instead, they determine what people are justified to believe if they want to be known as a reliable group member. People are thereby not misguided but actively shop for beliefs that suit their social goals.

The idea that we sometimes adopt beliefs for non-epistemic purposes might lead us to reconsider the traditional conception of belief. Beliefs are thought to aim at truth (Velleman, 2000) or to be regarded as true (Schwitzgebel & Zalta, 2019). To denote the attitudes that do not seem to serve this function, some have argued to use different terms such as “credence” or “acceptance” instead of belief (Schwitzgebel & Zalta, 2019; Van Leeuwen, 2014). However, I will use the term “belief” for the mental states or attitudes that people commonly (either rightly or wrongly) label as “beliefs”. To that end, I will build on the distinction between intuitive and reflective beliefs introduced by Dan Sperber (1997). Whereas we adopt the former type of beliefs spontaneously and largely unreflectively, we endorse the latter because of their “validating context”, that is if we can find some justification to accept them. As will become clear below, the validation or justification does not simply depend on these beliefs being true. Moreover, reflective beliefs come in degree and might be quite shallow, even to the extent that we might question whether people really believe them.²

The paper has the following structure. I will first discuss human irrationality at the individual and the collective level (section 2). Second, I will discuss the non-epistemic functions of belief (section 3). Third, I will explain how interactive reasoning sometimes results in collective rationalities (section 4) and, fourth, how pools of reasons lead people to adopt “right” beliefs, the beliefs that the community finds acceptable but are not necessarily true (section 5). I then provide evidence in support of my view (section 6) and discuss the implications of my account for our understanding of human irrationality and how to deal with it (section 7).

2. Individual and collective irrationality

What are beliefs? One common answer is that beliefs function as maps that enable us to navigate and interact with the world around us. For instance, if I want to survive traffic, I better have a good idea of where the heavy and thus potentially lethal vehicles are. And if you want to avoid infection you better know whether the water is drinkable or not. This conception of beliefs as maps is central, for instance, to pragmatism which builds on the idea that beliefs are to act upon. As Peirce (1877) suggested, we must fix our beliefs if we want to act appropriately in response to the challenges that we are faced with. Evolutionary considerations underline this pragmatic approach. We can expect natural selection to have weeded out brains that systematically

generate misrepresentations of the world and thus favor brains that do a good job of representing the world (Boudry & Vlerick, 2014; McKay & Dennett, 2009).

From the perspective that beliefs should provide accurate representations of the world it is remarkable how vulnerable people are to misbeliefs. Explanations are usually sought in the conditions under which we can expect human cognition to err. One is that evolution has not endowed us with a brain that provides us with a scientifically accurate model of the world, but a model that is accurately enough to allow us to interact effectively with our surroundings. Too much or too detailed information only brings marginal benefits and thus becomes too costly. Furthermore, it might make us perplexed and hence incapable to act. The fact that people in modern times adopt misbeliefs is results from an evolutionary cost-and-benefit analysis (Gigerenzer et al., 1999). Another account, based on error management theory, emphasizes that some mental mechanisms adopt a better safe than sorry strategy, thus resulting in systematic errors that deliver adaptive benefits (Haselton et al., 2005). For instance, mechanisms for pathogen detection such as the emotion of disgust make us oversensitive to the presence of possible sources of infection (Kelly, 2011). The reason is that to miss out on such a source is far more costly than to seeing one too many. It has also been argued that misbeliefs tend to be intuitively appealing (Boudry et al., 2015). As they tap into our evolved cognition, misbeliefs cohere well with our intuitive expectations about the world and thus result in a biased perception of the world. Creationism, for instance, might piggy-back on our predilections for essentialist and teleological thinking (Blancke et al., 2013).

What these accounts have in common is that they focus strongly on individual cognition. Individual minds are arranged in such a way that they are prone to misbeliefs. To avoid ending up with irrational beliefs, people should be aware of their proneness to biases and errors and correct for their mistakes by applying rational thinking (Kahneman, 2011). The responsibility for being rational thus lies with the individual reasoner. In recent decades, however, research in sociology of knowledge and social epistemology has made clear that people acquire many of their beliefs and their knowledge from others (Goldman, 1999; Hardwig, 1991; Shapin, 1994). This social approach puts a new perspective on how people come to hold *misbeliefs* as well. The reason is not that they are gullible and thus are ready to believe anything they hear. Instead, people are epistemically vigilant and rely on a range of cues to gauge what type of information is trustworthy, such as the competence, benevolence, and reputation of the source and how common the belief is (Mercier, 2020; Sperber et al., 2010). Others have argued that people rely on heuristics such as the prestige and conformity bias to sort out such higher order evidence of what information

to trust (Henrich & Gil-White, 2001; Richerson & Boyd, 2005). However, these heuristics are not fool proof so when allegedly reliable sources and/or the majority hold misbeliefs, then the individual ends up trusting the wrong sources and thus ends up with false beliefs. In this scenario, individuals are not fully accountable for their misbeliefs as they are unlucky to be in the wrong social environment. Irrationality then is not a matter of individual failure, but of the environment the individual is situated in (Levy, 2021a, 2021b).

The shift in focus from the individual to the collective brings an important correction to the traditional picture of human irrationality. The collective account, however, still shares a central assumption with the individual approach, which is that in adopting beliefs people are primarily motivated to find accurate beliefs. Considering recent developments in philosophy and psychology we might have to correct for this assumption as well.

3. Non-epistemic functions of belief

How can irrational beliefs circulate within certain groups? Don't the members of a group benefit from holding more or less accurate beliefs? Not necessarily. People do not only have to navigate the natural but also their social environment. When adopting beliefs individuals therefore do not only have epistemic concerns. They come to accept what others tell them based on considerations of relevance, i.e., what the related content can do for them in a particular situation or context (Sperber & Wilson, 1995). When evaluating relevance, truth is an important but not the only consideration. Sometimes it can be more socially useful for an individual to adopt a false belief. The individual can then communicate or express the belief to exert a specific effect on the hearer's mind namely to install a positive image of the sender as a reliable group member. Particularly, if beliefs enable cooperation, we can expect at least two other interconnected forms of motivation to play a role. The first type consists of coalitional concerns about what beliefs help to align oneself with one's in-group and to oppose the outgroup. The second type of motivation consists of reputational concerns, i.e., concerns about one's standing in the group. Having a good reputation is crucial in a human cooperative context (Barclay, 2013; Raihani, 2021). It determines whether the relevant people in your surroundings assume you are a trustworthy person and thus want to collaborate with you or not. If you have a bad reputation your social peers might even expel you from the group, which has detrimental consequences for your well-being. Hence, it is crucial for an individual to manage one's reputation. One can do so by adopting the kind of beliefs that make you look good in the eyes of one's community. Note that people are not necessarily consciously aware of their non-epistemic motivations. They might still adopt a belief thinking

that it is true while their social motives remain hidden, which is not uncommon in human affairs in general (Kurzban, 2010; Simler & Hanson, 2018). As such, they are still beliefs in the traditional sense of being aimed at truth (Velleman, 2000) or regarded as true (Schwitzgebel, 2019).

Coalitional and reputational motivations to adopt belief help to explain the non-epistemic functions mentioned above in section 2. These effects can be strongly connected but for our analytical purposes to disambiguate the two. Coalitional concerns drive people to adopt beliefs for signaling purposes as to indicate where one's allegiance lies (Funkhouser, 2017, 2022). Kahan's work on cultural identity cognition strongly suggests that indeed people's orientation predicts what views people will have on controversial issues such as genetic modification and global warming (Kahan, 2017). That beliefs are false is not a problem from this perspective. In fact, for the purpose of signaling it might be even more effective to adopt false beliefs because it more clearly marks the ingroup from the outgroup, thereby explicitly rejecting the latter's standards. As such, adopting misbeliefs is a strong signal that one is prepared to put one's reputation on the line to belong to the group of one's preference (Mercier, 2020). Coalitional concerns also lead people to adopt beliefs for coordination. Conspiracy theories, for instance, help people to coordinate their actions and demonstrate their willingness and commitment to take action that is deemed inappropriate by outsiders without alerting them.

Reputational concerns then make people adopt beliefs for justificatory purposes (Mercier, 2020; Williams, 2022). The literature on motivated reasoning shows that people readily invoke rationalizations for their choices and behavior on the spot (Bergamaschi Ganapini, 2020; Chater, 2017; Haidt, 2001; Kurzban, 2010). Since we have no direct access to the causes of our actions, we fabricate a causal story about the motivations and intentions underlying our behavior. That is, we explain our reasons for acting and choosing in such and such a way. These reasons are not accurate descriptions of our psychology; rather, they serve as tools for reputation management, expressing our commitment to standards implied by those reasons (Mercier & Sperber, 2017). For instance, if Martin claims to drive more slowly on the highway because of climate change, then he presents his concern for the climate as a reason for his behavior. As a public relations officer or lawyer, we spin a story of which we assume meet the standards of our group. Misbeliefs often serve this justificatory function. For instance, anti-vaxxers invoke all sorts of conspiracy theories to account for why they refuse to take the vaccine against Covid. Or Putin who states that he had invaded Ukraine to "de-nazify" the country. None of the beliefs make sense from an epistemic perspective; but their justificatory function explains why people entertain these beliefs, nonetheless.

In sum, people adopt beliefs not because they are true, but because they are helpful tools for social interaction and to facilitate cooperation. These beliefs help to navigate the social rather than the natural environment. Or, as Williams put it, they are “socially adaptive”. As such, we adjusted the traditional individual epistemic view on irrationality in two ways. First, irrationality is a matter of the collective the individual is part of (e.g., Levy, 2021a). Second, beliefs do not always serve epistemic but social purposes (Funkhouser, 2017, 2022; Kahan, 2017; Mercier, 2020; Williams, 2020). However, these two perspectives have not been properly integrated. The collective approach still assumes that beliefs serve epistemic purposes, whereas the socially adapted belief approach focus on the individual. It is time to combine the two and to investigate what environment exactly the beliefs adapt to.

4. Reasons and rationalities

To understand the social environment beliefs adapt to, we first need a better idea of what types of beliefs allow for such an adaption. Cooperation requires that individuals share a common belief about what is the case and what needs to be done (Tomasello, 2014). They can only arrive at such a common belief if they align their beliefs with the beliefs of others (Norman, 2016). This in turn requires cognitive capacities to evaluate their beliefs and those of others and assess which belief they find acceptable. These are metarepresentational capacities that allow individuals to not straightforwardly accept and act upon a belief as they would, perhaps, in the case of perception. One sort of output these metarepresentational capacities produce are reflective beliefs that can be distinguished from intuitive beliefs (Sperber, 1997). Intuitive beliefs are beliefs that we spontaneously acquire through perception and intuitive inference and that we spontaneously act upon. For instance, when you see a fast car driving toward you, you will immediately form the appropriate belief and jump out of the way. Reflective beliefs are beliefs that we come to accept because of what Sperber calls their “validating context”, that is when we have good reason to accept them. When we do believe them, they do not necessarily direct our behavior. Examples of such beliefs are religious and scientific ideas. A Catholic might cherish the idea that Mary is the mother of God but nothing much practical follows from that; a student might believe that quantum theory is true, but this will not affect their daily affairs. The validation of a reflective belief can either come from the trust that we put in the source of information (“I accept evolutionary theory because the teacher taught me”) and/or because of the reasons that support the belief (“I accept evolutionary theory because of the evidence including fossils, biogeographical data, embryology, genetics, etc.”). In both cases, we come to

accept a reflective belief when we have a proper justification for doing so. Either we can point to the reliability of the source or to the reasonableness of the content (Sperber et al., 2010).

If we accept beliefs because of their validating context, then these beliefs have managed to overcome our epistemic or open vigilance which functions as a defense mechanism against misinformation. The reason why we have such a defense mechanism is that the costs of misinformation are high. If we would not be able to distinguish true from false information we could easily be deceived and manipulated into doing things that go against our own interests and exclusively serve those of others. Hence, we will not simply believe everything we are being told. Despite widespread concerns and worrying news about propaganda, advertisement and fake news, people are not as gullible as often assumed (Mercier, 2017). In fact, it turns out to be quite difficult to convince someone of a belief if that person does not trust you. An important means to change someone else's mind are reasons. According to the interactionist theory of reasoning this is one of the functions of reasons, i.e., to be used as arguments to convince others (Mercier & Sperber, 2011, 2017). When provided with a good reason people are willing to change their mind. For instance, when confronted with the ball and bat puzzle, people are often mistaken at first. However, when explained why their answer is wrong and provided with a reason for the correct answer most people adopt the right answer. The process of providing and evaluating reasons seems to result in more accurate beliefs.

Reasons change people's minds, but what is their impact at the group level? We must somehow zoom out from the small-scale communicative interactions of giving and evaluating reasons and analyze their effect on the collective. We find such a zoom in cultural epidemiology or cultural attraction theory (Heintz et al., 2018; Scott-Phillips et al., 2018; Sperber, 1996). This theory holds that cultural phenomena such as religion or institutions result from chains of social transmission which consist of alternating mental and public representations. For instance, a teacher first thinks about what she will say in class (mental representation) and then teaches her students (public representation) in the hope to produce in their minds a somewhat similar mental representation. However, as any teacher can attest, this process is highly distortive. Each of the students will interpret the lecture in their own way, selecting, omitting, and transforming the information they receive so that each end up with their own version of the lecture.

Since communication is unstable, the question arises how social transmission can result in cultural stability. The answer lies in shared factors of attraction which lead people to reconstruct representations in similar ways (Scott-Phillips et al., 2018; Sperber, 1996). The evolved architecture of the mind constitutes an important psychological factor, artifacts and other people's utterings are ecological ones. In the epidemiology of beliefs reasons

are important factors of attraction. They induce people to reconstruct representations in ways supported by what are considered good reasons. For instance, when a teacher gives a class about evolution, she might be confronted with the common misunderstanding that organisms evolved by inheriting acquired traits. However, the teacher then presents the evidence that this view is mistaken because what happens to the body does not affect the reproductive cells. The students might then come to hold a representation of evolution that is closer to the consensus in evolutionary biology. To the point that all or at least most of the students now represent evolution in scientifically acceptable ways, we could say that the class constitutes a small collective rationality. The students now share beliefs supported by scientific reasons.

In science we can observe the same process at a larger scale. If a scientist wants her beliefs to be recognized as scientific knowledge, she will have to convince her peers that her view is supported by good reasons (e.g., Grinnell, 2009; Longino, 2002; Oreskes, 2019; Ziman, 1968). To the extent that she manages to win over a majority in her scientific community her views become part of the scientific consensus. At least most of her peers now share her beliefs because they all assume that these are the ones that are the best justified and that all other available options are not or less so. Here again, as in the classroom, reasons lead scientists to converge around beliefs they think are the most rational to adopt. Scientific communities thus constitute collective rationalities.

The epidemiological approach, however, does not only apply to scientific beliefs but also to the reasons that support them. To the extent that scientists are convinced by a particular belief they will also adopt its justifications and perhaps subsequently use them as arguments to persuade others. If they are successful, others too will adopt their beliefs and, again, the reasons for them, and so on. It is therefore not just the beliefs that spread but also the reasons that scientists reliably invoke as justifications and arguments. The reasons that spread determine which beliefs are acceptable to scientists and which ones are not. Taken together they form a population of reasons that puts a strong selective pressure on beliefs: they weed out the irrational and favor the rational ones.

In the case of science, and to a lesser extent in science education the selection pressure from the population of reasons results in beliefs of which we have the best possible reason to think that they are true. However, in many communities and cultures, reasons do not appear to exert this effect and irrational beliefs abound, which makes science seem to be the exception rather than the rule. The question then is why don't populations of reasons tend to resist and eliminate misbeliefs? Are they too weak? Or, in the case of collective irrationalities, do they even exist?

5. The moral evaluation of misbeliefs

Science is exceptional because cooperation does not necessarily induce people to hold true beliefs (Funkhouser, 2022). Instead, as suggested above, they will consider and employ other standards than mere epistemic ones to assess what beliefs to adopt. However, individuals do not merely determine these standards by themselves. Instead, they will tend to attune their beliefs to the standards that they think are common within their relevant social surroundings. Only then can their beliefs have their desired social effect. For instance, if Amy justifies her reluctance to follow the Covid restrictions by invoking a government conspiracy, then her expectation is that her reason will fall well within the community she associates with and rather badly with the one she opposes. She knows what standards the ingroup and the outgroup will bring to the evaluation of her belief. In other words, the standards by which she evaluates beliefs are not individual but culturally shared. They provide the validating context of her reflective belief.

Indeed, socially adaptive beliefs tend to be reflective beliefs. That is, they are the result of cognitive capacities of which the proper or evolved function is to produce meta-representations that enable the successful navigation of social life and make the most out of cooperation (for a discussion of proper function, see Millikan, 1987). More precisely, these capacities enable us to adjust our beliefs to the standards for proper belief circulating in our community. How do the shared standards that allow irrational beliefs such as conspiracy theories to flourish emerge? Again, we can rely on a combination of the interactive theory of reasoning and cultural epidemiology. People want to be justified because of reputational concerns and will provide reasons as justifications for their choices and behavior. Some of these reasons will suit people more than others and consequently become widely spread within a community. As people will not only have epistemic concerns, the reasons that become popular do not necessarily spread because they support true beliefs. Imagine Amy with her reluctance to follow the Covid restrictions to be a in a band of brothers and sisters who have found one another because of their anti-government attitudes. In such an environment, Amy's reason for noncompliance with the Covid restrictions that there might be a conspiracy behind them will be acceptable because it recruits anti-government sentiments shared by the group members. Within such a social (or perhaps we should say "anti-social") context, the conspiracy theory (and other misbeliefs) can thrive because it fulfills the social function of beliefs (i.e., building coalitions and reputation management) identified by philosophers and psychologists³:

- (a) Justification: The misbelief provides a rationalization for the group's anti-establishment or anti-government views making the members feel justified in their view and actions.
- (b) Identity marker: The misbelief becomes a hall mark of the group by which it signifies that it condones beliefs and actions that oppose the Covid restrictions and other government regulations.
- (c) Coordination: As such, the misbelief can facilitate cooperation by coordinating action, namely aligning the members of the anti-government community to take joint action against government interference in their lives.
- (d) Signaling: This means that any individual who wishes to associate with the group should adopt the misbelief to signal that one is willing to be part of the group.
- (e) Ingroup/outgroup distinction: In the same vein, the misbelief also enables the group members to distinguish oneself from the mainstream culture who has no need and even refuses to take the conspiracy theory seriously. Because the conspiracy theory supports practices and choices that go against the interests of the mainstream, we can expect the latter to regard the conspiracy theory as irrational.

This simple scenario shows how individual concerns about one's reputation and affiliation shape collectively shared or cultural standards that do not result in true beliefs. Interactive reasoning here also generates pools of reasons. These pools of reasons, however, do not weed out false beliefs and promote true ones. Their winnowing function is not so much epistemic, but moral. They are not epistemic bubbles or echo chambers that misguide people. Instead, they determine what people should believe if they want to build a reputation as reliable members of their community. If one wants to become a member of Amy's group, one must believe in the conspiracy theory because that allows for anti-government actions and beliefs. This makes the belief socially adaptive. It adapts to what the relevant community think of as acceptable.

Here is another example showing that even when a group of people intends to solve an urgent practical problem such as climate change, and hence can be expected to be in search of true beliefs to guide their actions, they end up endorsing misbeliefs because of concerns relating to cooperation. Indeed, environmentalists often oppose technologies such as nuclear energy and genetic modification of crops even though scientific evidence clearly shows that they contribute to sustainable energy and agriculture with little risk (Blancke et al., 2015; Friederich & Boudry, 2022). Even though their cooperative efforts would be much more effective if they would act on the available evidence, a cooperative perspective helps to shed light why they nevertheless stick to their misbeliefs about these technologies. Any

individual who wishes to be recognized as a committed environmentalist is supposed to bring their beliefs in line with the normative expectations of the group they wish to associate with. Only then can they maintain their reputation as a reliable group member. These expectations emerge through what the group finds defensible by reasons and hence justified. Nuclear energy and genetic modification are considered dangerous for a variety of safety, socio-economic, and environmental reasons. Furthermore, the scientific evidence is made suspect by allegations of financial or industrial interests of the scientists involved. The human need to bring one's beliefs in line with the normative expectations of the community distracts people from endorsing evidence-based beliefs about what is the case and what to do even when people are genuinely concerned about the issue of climate change. Instead, they will adopt beliefs to signal their group membership, therefore maintaining their reputation and contributing to the function of the belief as an identity marker, to coordinate their actions, and to distinguish themselves from the outgroup.

6. The case for the role of cooperation in collective irrationalities

So far, I have presented a theoretical framework that makes sense of collective irrationalities not in terms of misguided or erring epistemic processes but of cognitive and communicative processes that are geared at cooperation. We have thereby moved from an individual to a collective perspective on irrationality and from the idea in adopting beliefs people are always on the search and are wise to adopt true beliefs. Instead, they will also endorse beliefs that are not true but that allow them to successfully navigate their social life. These beliefs are socially adaptive. Based on a combination of these two shifts of perspective I then developed a view of the social environment these misbeliefs adapt to. I argued that such an environment is constituted by a community's pool of justificatory reasons that emerges through interactive reasoning and that determines what member are allowed to believe when they want to be known as a reliable collaborator. People will conform to this pool because such a reputation is crucial for their cooperative opportunities. This explains why individuals employ misbeliefs to justify their views and actions, to signal group membership and resentment of the outgroup, and coordinate collaborative action. They do what they are expected to do. In sum, collective irrationalities thus come about through concerns about affiliation and reputation linked to cooperation rather than epistemic concerns linked to a search for truth.

My proposal already has some support. First, it builds on a coherent framework based on recent (and admittedly still somewhat controversial) theories of cooperation, reasoning, culture, and belief. Second, the framework allows us to make sense of why and how individuals adopt socially

adaptive belief just as I intended. It explains what social environment the beliefs adapt to. Nevertheless, the view that collective irrationalities only arise because of malfunctioning and/or misguided epistemic processes still stands. On the face of it, it can perfectly account for collective irrationalities. And my theoretical framework might not be as stable as I would like to think. So, the question arises: What do we gain then by assuming that collective irrationalities emerge from concerns relating to cooperation rather than concerns about truth? What can the former theory explain what the latter cannot, or at least not as well? How can we empirically disambiguate the two?

There are, I think, at least four facts or phenomena that speak in favor of my account:

First, research suggests that the adoption of misbeliefs such as conspiracy theories is associated with moral identity and morality-as-cooperation. As the authors of a recent article wrote “conspiracy beliefs as well as adoption of and support of policy measures [relating to Covid] reveal a deeper moral stance regarding what is right and wrong and who is to blame for the situation (e.g., the science, government, interest social groups etc.)” (Gkinopoulos et al., 2022, p. 12) People’s beliefs are not (merely) the result of “cognitive biases or failures” but have to do with the moral norms and groups they want or do not want to be associated with. This suggests that in adopting beliefs more is at stake than merely finding out about the truth.

Second, people are emotionally invested in their misbeliefs and in what others believe. In particular, people tend to feel quite defensive about their beliefs when these are questioned or attacked. They also feel shame when they have been shown to be wrong and angered when other refuse to see things their way. This has since long been recognized. The ancient Greek, for instance, had a word for being shown to hold unjustified beliefs (“elenchus”) that was also associated with shame (Dutilh Novaes, 2021, pp. 101–104). Interestingly, these emotions are also at play in cooperation. People are defensive about their moral behavior when they assume it is justified and feel shame when it turns out it is not and hence risk social devaluation (Sznycer et al., 2016). Moreover, if people do not behave like you expect them to, they display uncooperative behavior. Anger motivates you to make them behave your way (Sell et al., 2009). Why people have emotions about misbeliefs and particular emotions that are typically associated with the perils and opportunities of cooperation is hard to explain from the perspective that misbeliefs arise because of malfunctioning cognitive mechanisms.

Third, the emotion of anger shows that people are not merely upset about what other people think but that they also want to change and thus regulate what they think. Anger is but one way of belief regulation, punishment is another one. For instance, people who no longer adhere to the cherished

misbeliefs of the group runs a serious risk of being ostracized. In the United States, for instance, members of fundamentalist Christian communities are often expelled when they adopt more progressive theistic views or become atheist. If one does not think the beliefs one is expected to then one cannot longer be a reliable collaborative partner. Again, if misbeliefs are merely about the truth why would people be so harsh toward people who have a change of heart? It does if one understands that misbeliefs circulate and become widespread because they perform functions relating to cooperation.

Fourth, misbeliefs play an important role in group identity, both in a positive and negative way (“by believing this I belong to this but not that group”). The resulting ingroup-outgroup dynamics make sense from the view of cooperation: people who hold the same beliefs as you are the ones you can trust to work with, those that don’t are not. The latter hold views that are not supported by the community’s pool of reasons and hence are unjustified. Since they are unjustified, the other group seems to be entirely unreasonable which warrants your distrust. If you want to belong to the group, you therefore must endorse these misbeliefs and not others (even if these other beliefs are, from an objective point of view, more accurate).

I do not intend this list to be exhaustive. There might be other evidence that I am overlooking at this point. However, I do think that the phenomena described above are better explained by an understanding of collective irrationalities in terms of cooperation than of malfunctioning or misguided epistemic processes. I, therefore, think that there is at least some evidence in favor of my view. I leave it to the reader to assess whether my account is worthy of serious consideration. For now, I rest my case.

7. Discussion

Reasoning is a human activity that is not only reserved for the more rationally inclined among us. When asked why they hold a particular irrational belief, they will easily provide you with one. Billie does not want to have the Covid vaccine because she thinks that Bill Gates puts microchips in them which can track your every move. John believes that God created the earth and all life on it because the Bible says so. Esther is convinced that alien exists because a friend of a friend was abducted and underwent torturous experiments. However, these reasons serve different functions. They set standards that allow people to use beliefs as social tools; not to say true things, but the right things. Of course, from an epistemic perspective, these standards will not do because they do not lead people to reject irrational beliefs. Metz et al. (2018), for instance, found that creationists do not only invoke the Bible and religious authority but also wisdom of the heart to justify their beliefs. McPhetres and Zuckerman (2017) found that religious people rely on lower standards of evidence when evaluating claims

about the efficacy of prayer. The reasons that are acceptable to and circulate within their social group allow them to entertain beliefs that would be rejected as irrational when checked by the standards of science (Blancke et al., 2019).

What transpires from this account is that people who partake in collective irrationalities are not passive consumers of misinformation or misguided in the people they trust. They are active participants who adopt beliefs and trust sources in socially strategic ways (Contessa, 2022; Williams, 2022). This has important consequences for thinking about strategies to combat misbeliefs. Merely providing correct information will not suffice. Little to no social benefit is gained for members of collective irrationalities to change their minds. In fact, if they would let go of their irrational beliefs, this could have – and often has – dramatic consequences. For instance, children from fundamentalist homes are often expelled from their communities when they come to accept an evolutionary account of the origins of life. What is more effective is to address the specific reasons that people invoke in support of their misbeliefs. For instance, people who have a negative stance toward GMOs will often argue that GMOs make people ill or that they have detrimental effects on the environment. If one can then explain that the technology of genetic modification and its current applications are safe and that they constitute a useful tool for the development of a sustainable type of agriculture, then people might realize their beliefs about GMOs are unjustified (Altay et al., 2022; Blancke et al., 2015). Since people want to be justified, they are likely to change their beliefs accordingly. However, this might only work when people are not overly invested in their misbeliefs and/or when they do not associate with a collective irrationality. In such cases, there might be not much at stake socially. Furthermore, people might hold or claim to hold beliefs in one social setting (the mainstream) and contradicting beliefs in another (their social group) depending on what they intuit to be justifiable. Sometimes, of course, people do give up their cherished misbeliefs and face the social consequences.

These solutions are still epistemic in the sense that they are aimed at making people's beliefs rational. Misbeliefs, however, do not come about simply because people are misguided in their search for truth, but also because they are evaluated by non-epistemic but social criteria. As such, misbeliefs function as canaries in the mine. Just as these birds were used to alert the miners to the presence of gases, these beliefs and the reasons in their support suggest the presence of underlying issues of collective distrust with the mainstream. Christian fundamentalists endorse a literal reading of the Book of Genesis because it serves their conservative morality which does not sit well with modern society; conspiracy theories are popular among those who feel excluded by society; and adepts of alternative therapies dislike the way modern medicine deals with health issues. From this

perspective, the main problem with collective irrationalities is not the misbeliefs that circulate within them, but the lack of trust that these misbeliefs reflect. Tackling misinformation is a strategy that only focuses on the symptom; what needs to be done in the first place is to restore trust (Mercier, 2020; Miton & Mercier, 2015).

This makes things more complicated, but not impossible. If one manages to create a common ground, members of collective irrationalities might have a change of heart. For instance, if one can explain to an environmentalist who is skeptical about GMOs that one shares his concern about sustainable agriculture but also, for instance, about the role of multinationals, then this might make him more willing to take your arguments into account – depending on how deeply invested the person is in holding the belief (Blancke et al., 2017). To the extent that this strategy can be applied at a larger scale, then the group of environmentalists might be turned because they come to realize their anti GMO opposition is unjustified. The collective irrationality has become rational so that it becomes improper to oppose GMOs. However, this approach might take a long time and might at times not even work at all – how do you create common ground with a hell-fearing creationist? But when it works it might be the most effective way to deal with collective irrationalities.

I want to close this paper by pointing out that the branding of a collective as irrational is always done from outside the collective (which, by the way, does not imply that we cannot rightly make the distinction between collective rationalities and irrationalities (Blancke & Boudry, 2021)). Even if one community maintains that dogs can fly but cats not and the other that cats fly and dogs cannot, then they will seem irrational in one another's eyes whereas each community thinks of itself as rational. This entails that the cooperative analysis of misbeliefs suggested here does not only apply to collective irrationalities but also rationalities. Look at the example just provided. When a group of environmentalists adopt more positive views about GMOS, it becomes improper for the members of that group to oppose the technology. This would mean that collective rationalities also include prescriptions on what people can believe and do. This also goes for science. Here too we see that individuals are expected to behave and think in specific ways if they want to be known as reputable members of the scientific community. An evolutionary biologist who suddenly maintains that life on earth is not older than ten thousand years, will not long be considered as a fellow scientist. A psychologist who supports her hypothesis by claiming that it feels right, will soon be set straight, or ostracized. The evaluation in collective rationalities is not just epistemic but also moral. What this moral dimension entails for our understanding of the workings of science, however, I discuss in another paper (Blancke, 2022).

8. Conclusion

Collective irrationalities pose a puzzle. How is it that groups of people hold on to misbeliefs? How can so many people be so wrong at the same time? Would they not be better off if they endorsed true beliefs? Perhaps, but if my account is on to something, then we might be asking the wrong kind of questions. Collective irrationalities do not so much result from a collective breakdown of cognitive mechanisms geared at producing reliable beliefs about the world. They exist and persist because people are not only interested in truth. They adjust their beliefs to the normative expectations of their social surroundings to make the most out of cooperation. If that means endorsing misbeliefs, then this is what they will do. As a result, people help to sustain collective irrationalities. This shift in perspective sheds light on typical features of collective irrationalities that otherwise remain unexplained. Hence, collective irrationalities do make sense in the light of cooperation.

Notes

1. In an earlier draft I used the word “cognitive” instead of “epistemic”. However, “cognitive” means different things in philosophy (“relating to knowledge”) and psychology (“relating to mental mechanisms”). To avoid confusion, I will therefore use “cognitive” only in the second sense and use “epistemic” instead of “cognitive” in the first sense. I thank an anonymous reviewer for pointing out this ambiguity.
2. Some scholars investigating the social function of fake news have focused on stories and narratives rather than beliefs (e.g., Bergamaschi Ganapini, 2021; Polletta & Callahan, 2017; Polletta et al., 2011). Perhaps reflective beliefs open the way to integrate these accounts with accounts in terms of beliefs. At first, these beliefs might be shallow, only entertained to be communicated in the proper context. However, to the extent that the validating context provides justification and that people commit to them, reflective beliefs might become more and more ingrained and even intuitive. However, I will leave further discussion for another time.
3. It might be unclear whether one can talk about the function of beliefs. From an evolutionary perspective, functions befall on the belief-producing mechanisms, not on the beliefs, as the former and not the latter have been shaped by natural selection. Nonetheless, I think it still makes sense to talk of the function of beliefs to the extent that they function as meta-representations that enable people to seize upon cooperative opportunities (the production of which is, as I suggest, the proper function of our meta-representational capacities). Similarly, one can talk about the function of adaptive behavior (e.g., spiders weave webs to catch spiders) even though it is the cognitive and physiological mechanisms that generate such behavior that have been shaped and molded by natural selection.

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