The Good, Bad and Ugly of information (un)processing; Homo Economicus, Homo Heuristicus and Homo Ignorans

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Introduction

Why do people consistently think their ways, thoughts, and morality are better and more correct than others? Why do we think everyone who does not agree with our brilliant academic ideas is stupid or insane? A fundamental reason is arguably that we want to uphold a positive self-image and protect our identity-based beliefs. We simply want to feel good about ourselves and have an internally-consistent state of mind. This form of identity-protective cognition is the cognitive engine of the creature we call Homo Ignornas. Homo Ignorans is the unwanted sibling of Homo Economicus, and Homo Heuristicus in a family of strawmen. The defining characteristics is that (s)he avoids, neglects, and distorts information that posit a threat to one's identity. In a normative fairy tale about information processing (s)he is the Ugly in the Good, the Bad, and the Ugly. Ugly because when we choose to remain ignorant about facts in order to protect valued beliefs, this is likely to escalate societal problems related to political polarization and provide a hotbed for misinformation, distrust and pseudo-profound bullshit[1]. In this virtual special issue on Homo Ignorans we invited researchers to submit their work to increase our understanding of when and why deliberate

[1] The word bullshit may seem like profanity, however as an academic term pseudo-profound bullshit is used to describe verbal assertions that are presented as true and meaningful but are actually meaningless (Frankfurt, 2005; For empirical work on bullshit receptivity in different contexts see e.g., Kienzler, Västfjäll, & Tinghög, 2022 and Pennycook, Cheyne, Barr, Koehler & Fugelsang, 2015)

ignorance occurs.[2]

Homo Economicus, Homo Heuristicus and Homo Ignorans

Most individuals do not want to know when they will die or if they carry the gene associated with a fatal disease (Reisch, Sunstein, & Kaiser, 2021; Wiggins, et al., 1992). People also frequently avoid information about their own intelligence and looks when they suspect that this information will be disappointing (Eil & Rao, 2011) and fail to remember information that demotes a preferred choice (Lind, Visentini, Mäntylä, & Del Missier, 2017). The phenomenon of avoiding and neglecting information is not limited to unpleasant information about life-changing matters. People also avoid and neglect other, more mundane everyday information that has instrumental utility, in that it can inform better decisions (Sharot & Sunstein, 2020; Thunström, Nordström, Shogren, Ehmke, & van't Veld, 2016). For example, in a study on consumer decisions 60% reported that they did not want information about the standard fee for late payment of their credit card bill (Reisch, et al., 2021). In Dictator Games with uncertain externalities, many subjects prefer to remain in the dark about potential negative side effects following from their actions prior to choice (Dana, Cain, & Dawes, 2006; Dana, Weber, & Kuang, 2007; Feiler, 2014). Moreover, several studies have shown that people frequently distort facts to make it consistent with their valued beliefs, and reason their way to conclusions in line with what they want to believe (Druckman & McGrath, 2019; Kahan, Peters, Dawson, & Slovic, 2017; Lind, Erlandsson, Västfjäll, & Tinghög, 2018). Thus, all around us there are plenty of examples of people choosing to remain ignorant, even in situations where the potential benefits from knowing are large and the cost associated with acquiring information is negligible.

The view of humans as deliberately *neglecting*, *avoiding, and distorting* information in order to protect identity-based beliefs is what we call Homo Ignorans ("neglecting man"; Hertwig and Engel, 2016). Table 1 summarizes the defining features of Homo Ignorans and information processing in comparison to the other stylized types of information processing persona – Homo Economicus and Homo Heuristicus. A basic premise is that individuals exhibit a great deal of flexibility between these stylized types and that contextual factors (both external and internal) systematically shift what type of information processor we are

[2] This information was however interpreted very differently by many who submitted their work for consideration in this special issue.

using. Importantly, Homo Economics, Homo Heuristicus and Homo Ignorans all engage in deliberate ignorance, but for very different reasons.

The traditional Homo Economicus ("economic man") view of information processing, suggests that we should never avoid information that is freely available because it helps us to make better decisions (Arrow, 1973). For many, Homo Economicus is the theoretical abstraction of ideal information processing. This is because Homo Economicus is viewed as highly sophisticated when processing information and correctly updates beliefs in the light of new information to make the most accurate decision. Homo Economicus has stable preferences that is not affected by emotions and does not under- or overweigh particular information. Instead, Homo Economicus relies on analytical thinking and sees the world in numbers and employs backward-looking expectations, arising from simple extrapolation or error-correction rules. Although Homo Economicus might engage in deliberate ignorance, this only occurs when the cost of acquiring information is deemed higher than the expected gains from knowing more. That is, if we assume that Homo Economicus also has time-consistent preferences and does not suffer from present biasedness. There is a large literature showing that fully rational agents with time-inconsistent preferences can engage in deliberate ignorance for strategic reasons (Carrillo & Mariotti, 2000; Thunström, et al., 2016). For example, deliberate ignorance can be used as a self-control device preventing the self from engaging in behavior that (s)he will later regret. Thus, information ignorance may be a way to avoid such time-inconsistent behavior. The master rule used to guide decision making is to choose whatever option maximizes good outcomes, whatever the currency of these good outcomes might be.

The Homo Economicus way of processing information is, of course, not a good description of how most individuals go about making everyday decisions. Because we are constantly overwhelmed with micro-decisions in an ever-changing environment, it is often necessary to offload mental burden by using associative rules of thumb when making decisions, i.e., use heuristics. Heuristics are mental "rules of thumb" that make decisions easier by reducing the complexity of information processing. The main characteristic of Homo Heuristicus ("heuristic-using man") is that (s)he makes fast decisions based on intuitions or rules of the thumb rather than by deliberately considering all the pros and cons associated with a decision or all the deep aspects of a decision problem, in order to save mental energy and makes decisions that are good enough considering limited cognitive resources. Although Homo

Heuristicus might engage in deliberate ignorance too, this occurs when the mental cost of processing information is deemed higher than the expected gains from knowing more. A prototypical heuristic for information processing when being Homo Heuristicus is the affect heuristic[3] which can shortly be described as: ”If it feels right, it is right”.

The popular view of people as Homo Economicus and Homo Heuristicus are of course crude simplifications, but is helpful as they serve as benchmarks and point of departure for thinking about the different ways we process information when making decisions. A cognitive analogy to this dual-selves view of information processing is that humans commonly rely on two different types of systems or processes, referred to as System 1 and System 2 (Alós-Ferrer & Strack, 2014; De Neys, 2022; Epstein, 1994; Kahneman, 2011; Stanovich & West, 1998). System 1 (often also called the intuitive or heuristic system) is assumed to operate fast and effortlessly while System 2 is described as slow and analytical. However, as models of human information processing, this is insufficient when it comes to trying to understand when and why individuals deliberately choose not to know. People often choose to remain naive even though the costs associated with both gathering and processing information is deemed negligible and the potential benefit from knowing is large. Moreover, people’s cognitive route to deliberate ignorance can be both analytical and intuitive (Strömbäck, Andersson, Västfjäll, & Tinghög, 2021).

Table 1 Comparison of information processing by Homo Economicus, Homo Heuristicus and Homo Ignorans

Homo Economicus	Homo Heuristicus	Homo Ignorans
Outcome oriented	Process oriented	Identity oriented
Analytical	Intuitive	Analytical/Intuitive
Slow	Fast	Slow/Fast
Prioritize accuracy	Prioritize effort	Prioritize desirability

[3] The affect heuristic is based on the idea that people consult or refer to an “affect pool” containing all the positive and negative tags consciously or unconsciously associated with the representation of the decision problem. Individuals consult this “affect pool” when making a judgment, rather than reviewing all available information (Västfjäll & Slovic, 2013). Importantly, the affect heuristic is often used when people make evaluative judgments in that they do not consult all available information but simplify judgments by using their affective reaction to the object as a basis. People ask themselves “How do I feel about it?” and, while doing this, monitor their own feelings, even in situations where emotional input is not dominant or even relevant (Västfjäll et al., 2016).

Bayesian belief updating	Belief updating based on partial information sampling	Belief-based information updating
Master rule: Maximizing algorithms	Prototypical heuristic: Affect heuristic	Prototypical heuristic: Identity heuristic
Reason for deliberate ignorance: Cost of gathering information	Reason for deliberate ignorance: Cost of processing information	Reason for deliberate ignorance: Cost of abandoning valued beliefs (cognitive dissonance)

Homo Ignorans and identity threat

The theoretical birth of Homo Ignorans can be traced to the growing literature on *belief-based utility* (Golman, Loewenstein, Moene, & Zarri, 2016; Grant, Kajii, & Polak, 1998; Loewenstein & Molnar, 2018). These models emphasize that beliefs often fulfill important psychological needs. People hold certain beliefs partly because it makes them feel good, not because they are necessarily correct. Typical examples of such motivated beliefs include exaggerated confidence in one's abilities, moral self-esteem, hope, and anxiety reduction. In decision-making, this transcends into people making trade-offs between accuracy and desirability (Bénabou, 2015), in the sense that people (un)reason their way to conclusions that are in line with their preferences – motivated reasoning (Kunda, 1990). This also influences the way information is gathered and weighed when making decisions. Thus, people may become resistant to evidence, and engage in belief-based updating as way to uphold valued beliefs.

According to the view of Homo Ignorans that we propose, identity plays a crucial role for when and why people strategically choose to neglect, avoid, and distort information. Our view is inspired by the amounting evidence that identity-based cognition is central for understanding many behaviors (Akerlof & Kranton, 2010; Jost, 2021; Kahan, 2017). The general idea is that people turn to Homo Ignorans as their preferred mode of information processing when their identity is under threat and the cost of abandoning valued beliefs is too high (Sharot, Rollwage, Sunstein, & Fleming). Identity should be understood as a cognitive structure, which provides a personal frame of reference for interpreting self-relevant information, solving problems, and making decisions (Berzonsky, 2011). Moreover, an identity typically refers to either (a) a social "tribe", defined by membership rules and characteristic attributes or expected behaviors, or (b) socially distinguishing features that a person takes a special pride in (Fearon, 1999). Homo Ignorans often has a tribal mind, in that (s)he employs cultural cognition and norms as a way to organize the world based on his /her "tribal mind". However, which tribe we belong to and what constitutes the core of our self-identity is likely to vary with context. New information can in many contexts be interpreted from the perspective of the identity, where people place loyalty to the tribe and identity over the truth (Kahan, 2017). Thus, we propose that a prototypical heuristic for information processing when being Homo Ignorans is the identity heuristic, which, in many situations, can be described as: ”If it is not like me, it is wrong."

Identity threat can be elicited by a number of factors (Kahan, 2017; Van Bavel & Pereira, 2018). Anything that produces cognitive dissonance and makes us question group belonging, our worldview, or reveals that we act inconsistently can induce identity threat. Thus, identity threat may be prevalent for both primarily individual (e.g., financial) and social (e.g., partisan voting) decisions. Any information processing under such threats will be infused with emotions with the ultimate goal of reducing that threat. Emotion is in itself information helping individuals to approach or avoid threats (Västfjäll & Slovic, 2013).

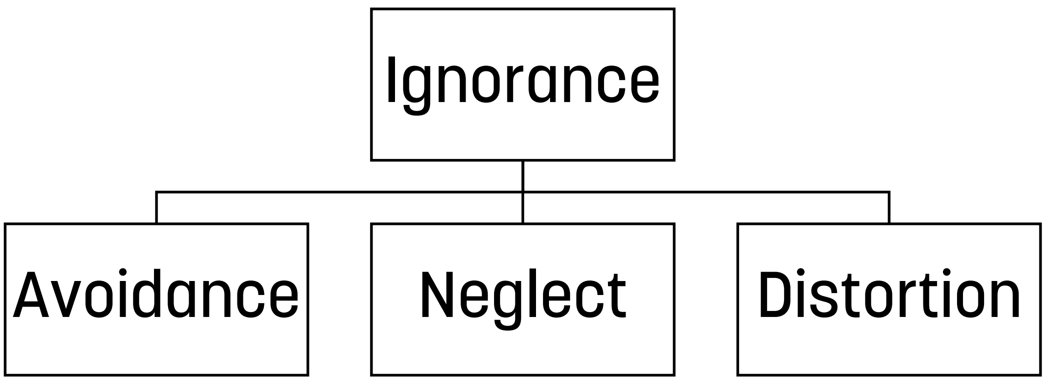

Figure 1 Typology of deliberate Ignorance

Figure 1 shows a proposed typology of deliberate ignorance (Barrafrem, Västfjäll, & Tinghög, 2020). In this tentative framework, we posit that information processing by Homo Ignorans is characterized by at least three related, but distinct forms of information ignorance;

1) information avoidance, 2) information neglect, and 3) information distortion. Although previous research on deliberate ignorance typically has focused only on one of these types of information ignorance at the time, we would argue that a better understanding of deliberate ignorance requires a more joint focus on all three forms of information ignorance.

Information avoidance is the tendency to actively avoid information that potentially could threaten identity (Golman, Hagmann, & Loewenstein, 2017). But it is also useful to delineate, at least, two forms of information avoidance depending on whether information is avoided before a decision (prospective) or after the decision is made (retrospective). Prospective information avoidance can, for example, be the active avoidance (avoid situations, do not open information boxes) of relevant and non-costly information that could benefit us, but that are deemed as threatening (Golmann et al., 2017). Retrospective information avoidance may be the active avoidance of information after a decision has been made (e.g., not watching ads after buying a TV on sale based on the fear that the TV now is even cheaper (Bjälkebring, Västfjäll, Svenson, & Slovic, 2016) or taking a DNA paternity test but actively avoid to learn the result) or even willful forgetting where a threatening memory is avoided to spare the self (an extreme example of this is suppression of traumatic memories, but there are many more mundane versions of this, such as our unwillingness to think about an embarrassing memory; Williams & Moulds, 2007).

Information neglect is the passive underweighting of information that, if attended to or properly weighted, either could improve decision making or better align our decision with our stated values. Information neglect may stem from simple inattention to available information. In a decision-analytical context it may manifest itself as inattention to certain decision attributes, salience of competing attributes, and non-compensatory thinking where attributes are not traded-off. Prospective information neglect is likely very prevalent where information that either normatively, or by standard of own expressed values, often are underweighted, or inadequately integrated, when making decisions. Examples of this is the prominence effect – an overweighting of more justifiable (i.e., prominent) attributes in choice causing a preference reversal between stated values and expressed choice (Slovic, 1975) and taboo-tradeoffs where people are unwilling to trade-off between potentially sacred (e.g., human life) and secular (e.g., money) attributes (Tetlock, 2003; Tinghög & Västfjäll, 2018). Similarly, due to limitations in cognitive capacity and memory, retrospective information neglect is very prevalent where we quickly, after a decision, forget the information that was used when making that decision or fail to have memory representation of what information actually was used and how it was weighted.

Information distortion is selective sampling of information consistent with identity and active manipulation of information with the goal to minimizing perceived and felt threat. Examples of prospective information distortion is selective sampling of information and evidence in favor of an identity consistent option before a choice is made (Svenson, 2003). Retrospective information distortion can for example be choice supportive memory which is the tendency to ascribe positive attributes to an option one has selected and/or to demote the forgone options (Lind, et al., 2017). It should be noted that what we mean with information distortion is not the same as confirmation bias. The crucial difference is that information distortion is about protecting ideological beliefs by selectivity (dis)credit facts to fit the identity-defining groups position on the matter, while confirmation bias merely is about selectivity (dis)credit facts to fit prior beliefs. Given that valued beliefs and prior beliefs often correlate it is easy to incorrectly conflate them, but not all prior beliefs are valued beliefs. Thus, information distortion is more like myside bias (Stanovich, West, & Toplak, 2013) than confirmation bias in the process of assessing and gathering information.

The normative status of Homo Ignorans

What is the normative status of Homo Ignorans in decision making? While strong arguments can be put forward for Homo Economicus and Homo Heuristic in decision making[4], few carry the banner of "more ignorant behavior!". Homo Economicus, Homo Heuristicus and Homo Ignorance sometimes choose to remain in the dark simply because the cost of knowing (for different reasons) outweigh the benefits. It is important not to fall in the trap to use the prescriptive term irrational when describing Homo Ignorans. From the perspective of the individual it is often beneficial to protect false beliefs simply because of the emotional cost of abandoning a valued belief is deemed too high (Abelson, 1986; Molnar & Loewenstein, 2022). As pointed out by Abelson (1986) people commonly seek to increase the value of their beliefs and ideologies by adopting lifestyles and manners that is consistent with their beliefs. For an individual who has preference for belief consonance, abandoning valued beliefs mean that other valued beliefs need to be re-examined, and that own private and social behaviors

[4] As illustrated by the heuristics-and-biases framework (Kahneman 2003) and the fast-and-frugal heuristics approach (Gigerenzer and Gaissmaier 2011).

need to be re-evaluated. Thus, it is easy to see why we all are Homo Ignorans to some extent. At the individual level the effects of being Homo Ignorans can often be kept within a tolerable or even comfortable bounds. At the aggregate or societal level, the effects of being Homo Ignorans is likely to become more problematic. Processing information in an identity protective way has the potential to fuel harmful social dynamic that can lead to persistent collective delusions. When people choose to deliberate ignore information to favor of their valued beliefs, changing someone's mind will be difficult, even in cases where hard, objective facts exist. Furthermore, interest groups, political parties, and policy-makers may take advantage of people's tendency to engage identity-protective cognition and actively amplify such tendencies among groups, leading to increased societal fractionalization (see Hagmann & Loewenstein, 2017).

How to identify and characterize deliberate ignorance is not trivial. The perspective that we present here is a mere tentative framework aimed at stimulating new research that integrates different perspectives and theories. The title of this editorial makes reference to the classical spaghetti western *The Good, the Bad and the Ugly*. Just as in the movie, the labels given to Homo Economicus, Homo Heuristicus and Homo Ignorans may not be as fitting as they first seem. In the movie the Good is not so morally good, the Bad is not so morally bad (only slightly more liberal about killing), and the Ugly isn't that morally mean and ugly. In the normative fairytale about optimal information processing and information use, Homo Economicus (the Good) is not so informationally optimal, Homo Heuristicus (the Bad) is not informationally suboptional (only slightly more liberal about how information is processed), and Homo Ignorans (the ugly) isn't that mean and ugly to all information (only slightly more conservative about what information is processed). They all engage in deliberate ignorance, but for very different reasons. Homo Economicus do so when the cost of gathering information is too high. Homo Heuristicus do so when the cost of processing information is too high. Homo Ignorans do so when the cost of abandoning valued beliefs is too high. In real life it can be difficult to separate different underlying motives for deliberate ignorance. This is why it is important with better frameworks and theories to study the many facets of information ignorance. We live in a world where information about everything is all around, and importance of identity and valued belief is a stronger force than ever when it comes to defining the political and social climate. The topic of deliberate ignorance is thus a very timely topic and the articles in this virtual special issue represents different perspective on deliberate ignorance across decision making domains. It is our hope that these articles will stimulate further thinking and research on the when, why, and how of deliberative ignorance.

This special issue

All the contributions in this special issue on Homo Ignorans shed light on the psychological mechanisms and economic consequences of deliberate ignorance in decision making. We received 20 submissions, and are grateful to the many researchers who helped us with refereeing. We are particularly happy to have contributions from such a wide range of different areas. We have contributions exploring deliberate ignorance in moral decision making (Mata, Vaz, & Mendonça, 2022), (dis)honest behavior (Steinel, et al., 2022), legal judgments (Mischkowski, Glöckner, & Lewisch, 2021), financial decision making (Hilbert, Noordewier, & van Dijk, 2022), consumer choice and sustainability (Momsen & Ohndorf, 2022), and belief updating regarding economic policies (Brandts, Busom, Lopez-Mayan, & Panadés, 2022). Here is a brief description of the six papers in the special issue.

In four studies Mischkowski et al. (2022) explore information search and evaluation in legal judgements. Their findings show that even though people search for disconfirmatory information, they interpret this information in a way that fits their emerging judgment.

In a lab and field experiment Brandts et al. (2022) explore if a refutation text has a positive impact on the misconception about the effect of rent controls. In the field experiment with economics students, the text is more effective than teaching. Still, most people stick to their beliefs after reading the refutation text, suggesting that they ignore counter-belief statements.

Momsen and Ohndorf (2022) investigate information avoidance in the context of sustainable consumption. In line with their model prediction, they find that information avoidance occurs primarily when it is deemed as a viable strategy to resolve the conflict between material interest and self-perception.

Similarly, Mata et al. (2022) investigate and establish deliberate ignorance in moral judgment. Participants made judgments about trolley-type sacrificial dilemmas. After judgments participants were asked whether they would like to know some missing information about the dilemma, which potentially could make judgments less defensible.

After receiving this information participants where then asked to make a new judgment. The results show that a large proportion of responders choose to remain ignorant about consequences in order to protect their judgment.

In a longitudinal study, Hilbert et al. (2022) showed that financial scarcity was positively related with an increase in subsequent financial neglect, i.e., the tendency to neglect dealing with financial issues. These findings that suggest that financial scarcity and financial avoidance form a temporally dynamic and increasing relationship which could lead to a poverty trap.

Finally, Steinel et al (2022) examine dishonest behavior in the face of potential uncertain gains and losses in a series of studies. Their results show that participants used major lies to decrease losses while more modest lies to increase the likelihood of an equivalent gain.

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