What does deliberate ignorance reveal to us about the human psychology? A Review of "Deliberate Ignorance" edited by Ralph Hertwig and Christoph Engel, Cambridge, MA:

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Deliberate Ignorance is unlikely to be the next book you notice arrayed on custom-made cardboard display racks at the airport; but it arrives at an opportune time. The current challenges of fake news, echo chambers and conspiracy theories make it particularly urgent to understand the complex ways that people interact with information. And, if not in airport displays, this provocative set of chapters collected into one volume merits a place on the shelves of libraries and in the personal collections of social scientists with an interest in psychological, political and legal dimensions of information. The book is breathtaking in its breadth of coverage, highlighting the remarkable range of topics that are touched on by deliberate ignorance, and its close cousin, information avoidance. The range of interdisciplinarity of the book arises in part from its origin, an Ernst Strüngmann Forum held in Frankfurt in 2019, one of a series of meetings aimed to bring together leading scholars from across disciplines (and around the world) to deal with the questions of major scientific and social importance. The focus of the book is on clarifying the concept of deliberate ignorance, exploring its causes and consequences, and considering policies and laws intended to either exploit it or deal with its negative impacts.

One of the surprising features of deliberate ignorance is that it can actually help us to achieve better material outcomes. This can be true if not knowing information helps one to avoid self-destructive temptation (Woolley & Risen, 2018), maintain motivation despite present-bias (Bénabou & Tirole, 2002), or avoid projective biases, such as the curse of knowledge (Camerer et al., 1989) and hindsight bias (Fischhoff, 1975), in which knowledge biases judgments. Deliberate ignorance can also help people to achieve better outcomes in social interactions as pointed out by Hertwig and Engel (2020; first chapter). One way in which this occurs is through strategic deployment of such ignorance. Hilbe and Schmid (2020; ninth chapter) outline two mechanisms for when strategic ignorance is beneficial, either to signal to others one's willingness to cooperate (e.g., employers choosing not to scrutinize their employee's work efforts), or as a commitment device to enhance external credibility to one's actions (e.g., pledging a certain course of action that would otherwise be viewed as cheap talk if all outcomes were known; Schelling, 1960).

Deliberate ignorance can also support the application of heuristics, or mental shortcuts (e.g., Gigerenzer & Goldstein, 2011) -- 'fast and frugal' choice heuristics that require little informational input and which are more efficient, and are possibly even more effective, if one restricts information-seeking to that needed by a heuristic. Indeed, such heuristics can, as Trimmer et al. (2020; tenth chapter) argue, even benefit from selective forgetting (which can be viewed as a mechanism of deliberate ignorance). For example, the "recognition heuristic" (Goldstein & Gigerenzer, 2002) uses the cue of what can be recalled as an indicator of what the correct answer is, in which case forgetting the right content can aid in judgment. This was illustrated in a study in which German and American students were asked about which city was more populous, San Antonio or San Diego, German students, who knew less about the cities, were able to correctly guess San Diego far more than American students. This heuristic is most successful when non-recognition has predictive power; in which case ignorance itself serves as an informational cue of what the ecologically correct answer is.

A natural query, of course, concerns how typical this type of case is: for most general knowledge questions, more knowledge will tend to lead to better answers. Americans will surely be better than Germans at locating US cities on the map, guessing which city was founded earlier, or which has the higher income level. But, for the city size question, a simple 'have I

heard of it' criterion turns out to be rather effective for Germans (and less for Americans, as they'll likely to have heard of most or all of the cities mentioned). In contrast one would expect Americans to outperform Germans on the closely related problem of US 'town-sizes', for which most Germans would have heard of few of the relevant towns (e.g., is Ithaca larger or smaller than Bellingham?), so that the recognition cue would be inapplicable. By contrast, Americans may typically have heard of larger, but not smaller, towns---so the recognition heuristic may be valuable. So, ignorance (whether deliberate or not) may be useful only on rather particular questions. But why is it useful at all? Why can't Americans simply use a 'high word frequency' heuristic, to decide whether San Diego is larger or small than San Antonio? This is, surely, what the German participants are using---but in a situation in which some of the frequencies are zero. So surely richer frequency data should be a more accurate cue than mere recognition, and such data should be more available to the US participants. If these speculations are right, word frequency information should enable US participants to solve the problem, so the puzzle is why they don't use it. One answer may be that, to be confronted with 'too much' information, whether relevant or not, is to be influenced by that irrelevant information. This phenomenon shows up in other contexts, of course. For example, Olivola and Todorov (2010) asked people to guess sexual orientation or criminal history of people from no information or from a picture. With no information, they used base rates (assuming by default that people had not been arrested, for example); but when shown faces, they underplayed base-rates, presumably believing that they could 'read' faces far better than they actually can. Thus adding information -- the faces -- made performance consistently worse. Perhaps there is a broader lesson here---that if we have reliable information, it may indeed be worth remaining "deliberately ignorant" of less reliable

information, because we are simply unable successfully to take it into account, and indeed are likely to give it too much weight.

Another motive for deliberate ignorance is to use it to garner fairer outcomes for ourselves and others. Indeed, in political philosophy, a popular conception of fairness is that which would be agreed upon were people shrouded in a "veil of ignorance" so that each is unaware of their own identity, and hence not liable to make self-serving arguments (Rawls, 1999). If this viewpoint is right, then assessing fairness involves attempting to imagine what we would collectively agree if we were shielded from information about our own, and others' interests---a perspective that lies at the heart of contractarian view of ethics (e.g., Scanlon, 1982) and that may play a key role in moral psychology (Chater et al., 2019).

Fairness, not mere self-interest, seems to be very important in shaping many of our decisions. For example, in a striking departure from the standard model of economic rationality, people often seek to equalize payoffs between themselves and others, rather than maximizing their own payoff (Bolton & Ockenfels, 2000; Fehr & Schmidt, 1999; Loewenstein et al., 1989). A wealth of literature in the social sciences demonstrates, moreover, that humans are concerned with not just fairness of outcome, but *procedural* fairness: the fairness of the process through which resources are allocated (e.g., Brockner, 2002; Karni & Safra, 2002). Maintaining a "veil of ignorance" through deliberate ignorance may be crucial to ensuring that processes are both fair, and/or perceived to be fair. Thus, there are many instances where deliberate ignorance is imposed by institutions, organizations, and governments to the ordinary citizen.

For example, as Zamir and Yair (2020; sixteenth chapter) describe, one way the legal institution deploys deliberate ignorance is in eyewitness identification. Given that eyewitness identification is often unreliable and susceptible to cues given by the lineup administrator, a

recent practice has been to double-blind the lineups so that the administrator does not know the identity of the suspect (Wells et al., 1998). In keeping both the administrator and the witness in the dark, the identification process is scrubbed of potential sources of responder bias. In the case of blind auditioning, a musician plays behind a screen so that the interviewing committee cannot weigh extraneous and irrelevant cues such as gender and race (MacCoun, 2020; fourth chapter). Doing so can facilitate allocative fairness, or how resources are divided (in this case, giving talented but "non-stereotypical" musicians a greater chance of being selected than if auditioning was not blinded). Moreover, deploying deliberate ignorance can be crucial in conducting science. So as not to compromise the validity of scientific results, many experimental paradigms choose to blind participants to what experimental condition to which they are assigned (MacCoun, 2020; fourth chapter); and many journals and conferences use blind reviews.

The need to impose deliberate ignorance is often viewed as stemming from doubts about human motives (and indeed, deliberate ignorance can reduce the possibility of self-interest and corruption). But, we suggest that it may have a more fundamental source: the mind seems to have an inexorable tendency to draw on any information that is perceived to be relevant. Thus, even with the best of intentions, jurors and interview panels cannot simply ignore information that is deemed irrelevant or inadmissible. What we don't know, can't influence our judgments; and, despite our best intentions, what we do know almost certainly will. Thus, a fair process needs to block the information from getting through in the first place: that is to say, a fair process may therefore often need to embody deliberate ignorance. In a similar vein, Bierbrauer (2020; eleventh chapter) argues that welfare economics should deliberately ignore some kinds of social preferences to prevent repugnant policy choices, such as selling one's own kidney.

Yet sometimes people want only the appearance of fairness, both to themselves and others (e.g., self- and other-signaling; Bénabou & Tirole, 2016), and in such situations ignorance can act in the service of selfish rather than moral outcomes. People prefer a benevolent and moral self-image, and may therefore attempt to maintain such an image, even when pursuing their own self-interest. For example, Dana et al. (2007) showed how people can choose deliberately to remain ignorant of key information, to allow them the "moral wiggle room" to act selfishly. They found that participants acted fairly when the outcomes were transparent. But, when the default was for the other person's outcomes to be obscured, so that the chooser had to proactively seek out information to determine whether the option in their own interest was fair to the other or not, the chooser often refrained from learning the other's outcomes (which could be done without cost), and simply chose the option in their own best interests. In their essay, Auster and Dana (2020; third chapter) note that it is precisely these moral image constraints that cause people to rely on ignorance so they do not have to play fair. In doing so, participants remained selectively ignorant so to maximize monetary outcomes whilst still maintaining a positive and affirmative view of oneself as ethical, moral, and rational. Here deliberate ignorance serves not to ensure fairness, but to cloak self-interest with the appearance of fairness.

Just as deliberate ignorance can both promote and undermine fairness, so interaction of deliberate ignorance and sense-making has both positive and negative consequences. As Brown and Walsek (2020; eighth chapter) point out, deliberate ignorance can be beneficial when it affirms the consistency of our beliefs and sense of identity. Humans appear to have a deep need for sense-making (Brown & Walasek, 2020, eighth chapter; see also Chater & Loewenstein, 2016), including the formulation of a coherent personal narrative (Bruner, 2004). And, people typically want a narrative which is not only orderly, but is positive and/or paints us in a favorable

light. Thus, the tendency for sense-making provides another motive underlying deliberate ignorance--that we may avoid sources of information that might disturb our currently coherent, and positive, perspective. The motivation to do so can be remarkably intense, as highlighted by Ellerbrock and Hertwig's (2020; second chapter) discussion of the difficult decision many Germans had to make after 1989, of whether to access Stasi documents that had a high likelihood of identifying family and friends who had betrayed them. Rather than finding out that their closest friend, or even their spouse, had betrayed them, many chose to remain deliberately ignorant. While this may be in part to protect those relationships, this choice may perhaps also be to protect the benign view they had of the world. Once the information has been encountered and digested the damage, to some extent, has been done; although Schooler (2020; sixth chapter) discusses how conscious efforts to forget can also serve the function of putting aside information that may be emotionally salient but unpleasant.

What are the consequences of ignoring such information? In his article, Berkman (2020; twelfth chapter) discusses and questions the ethicality of refusing such information. Just as people have the right to decline live-saving health care, Berkman (2020; twelfth chapter) suggests that people may sometimes have a right *not* to know some kinds of information. This is a proposition with complex consequences and ethical implications. In the case of a non-contagious illness, for example, the choice to remain ignorant has consequences primarily for oneself. However, in the case of contagious illnesses, the choice to remain deliberately ignorant can harm others (by, for example, preventing them from seeking timely medical treatment). More broadly, we may not always want to perturb our orderly universe with the provocation of insight (e.g., regarding religious faith or political values), lest our carefully constructed beliefs collapse like a house of cards.

At its most extreme, as Lewandowsky (2020; seventh chapter) points out, these forces may lead people to systematically bias the information they see in order to build and maintain belief systems that give them a sense of meaning and importance, but which from an outsider perspective seem bizarre (e.g., conspiracy theories, creationism, and the like). This is perhaps not merely deliberate ignorance, but willful blindness (Heffernan, 2012). The form that such willful blindness takes is itself revealing about how our minds operate. The formation of beliefs and attitudes is, it appears, lies outside of the range of deliberate conscious influence. None of us can look at poor teaching ratings and mentally convert them into enthusiastic praise mainly by conscious effort, nor can we believe a paper accepted by a top journal purely by force of will. Indeed, it is surely important that our senses and memories are not subject to direct interference by our desires, or we would be happy fools destined to perish in a dangerous world. But, as this book illustrates, we can manipulate our own minds in more subtle ways---- and one of the most important of these is by the exercise of deliberate ignorance: not exposing our minds to sources of information that might wake us from our happy dreams.

Whether ignorance is cast in a positive or negative light, the connection between ignorance and welfare, whether at the individual or societal level, is a persistent theme that runs through the diverse chapters of the book (Kornhauser, 2020; Krueger et al., 2020; Teichman et al., 2020; chapters thirteen through fifteen). The conditions under which deliberate ignorance either creates more equitable outcomes, or perpetuates inequalities, is a nuanced question worthy of further exploration. As this book illustrates, deliberate ignorance plays a crucial role not just in our choices (and our perceptions of the fairness of those choices), but also in understanding of our own lives and our wider environment. Schwartz et al. (2020; fifth chapter) point out that this is domain-specific: we may seek information in one area, such as personal finance, but avoid wanting to obtain a genetic test (Ho et al., 2020).

Deliberate ignorance can, thus, serve as a powerful tool for ensuring fairness and justice in society. Yet, it can also serve less savory functions, such as providing the means whereby we can manipulate our own minds----whether it is by giving ourselves enough moral wiggle room to pursue self-interest with a clear conscience, or by shaping our information environment in a way that supports pleasant but socially destructive delusions. This broad and thought-provoking collection of essays provides a rich and varied analysis of these, and many other, faces of deliberate ignorance. This is a book, and an issue, that definitely should not be deliberately ignored.

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