



# Introduction: knowing the Unknown

## Philosophical Perspectives on Ignorance

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Published online: 8 June 2020  
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Ignorance is a spooky word in philosophy. At first, it appears vague, almost too broad. On second thought, it suggests more concrete and familiar notions, such as false belief (Hogrefe et al. 1986), error (Woods 2013), absence of knowledge (Le Morvan 2010), lack of true beliefs (Peels 2011), doubt (Shepherd et al. 2007), and misinformation (Bessi et al. 2014). The list might go on for quite some time, since, notwithstanding its spookiness, ignorance is a concept that is acquiring a growing importance in the philosophical literature (Sullivan and Tuana 2007; Peels 2017; Arfini 2019). Indeed, recently, some authors have tried to come up with a specific description for it,<sup>1</sup> or to list a well defined taxonomy of its instantiations,<sup>2</sup> but, so far, no concluding verdict has been reached. For now ignorance remains an umbrella term, which refers to different kinds of cognitive and epistemological phenomena. Given its comprehensive nature, ignorance still represents a rich concept in philosophy, logic and cognitive science, which gives reason to pursue a deeper and more focused analysis of it.

Hence, this collective volume aims at approaching a more centered discussion on limits, potentialities, and unexpected qualities of the notion of ignorance. The contributions to this collection show very well how the study of ignorance can animate the debate on a broad spectrum of issues in philosophy, epistemology, cognitive science, and logic. In particular, we have considered three general areas of research: logic and philosophy of science; cognitive science and the philosophical investigations of cognition; social and pragmatical issues in epistemology.

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<sup>1</sup> The most relevant debate on the definition of ignorance has been provided by Peels (2010, 2011) and Le Morvan (2010, 2011).

<sup>2</sup> To mention some of the most significant taxonomies for ignorance, cf. Smithson (1988), Tuana (2006) and Haas and Vogt (2015).

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In this socio-cultural moment, in which scientific results are sometimes politically and socially contested, and critical reasoning is rarely considered an urgent priority of standard educational plans, we believe that philosophy of science, epistemology, cognitive science, and logic could play a fundamental role in the development of a theoretically productive and pragmatically useful investigation of ignorance. By acknowledging this potential role of philosophy, this volume also aims at cross-examining theoretical and pragmatic perspectives on the analysis of ignorance, and at making it possible to redefine the concept in new cognitive, epistemological, and socio-psychological terms.

In the following sections, we give a brief description of the goals and theoretical arguments of every contribution that models and enriches this collection.

## 1 Ignorance in logic, philosophy of science and technology

As Firestein (2012) contended, ignorance takes many forms in the scientific progress and in the development of scientific practice. Hence, it is only reasonable that both philosophy of science and logic aim at understanding which shapes ignorance takes and how it can be approached, analyzed, and represented.

For this reason, we have collected articles that help provide *logical and accurate formalizations for particular descriptions of ignorance*. Fano and Graziani's paper focuses on the invisible nature of ignorance (the subject's *unknown unknowns*), by adopting and logically approaching the concept of *disbelief* or, as they call it, of *radical ignorance*. Carrara, Chiffi, De Florio and Pietarinen embrace the pragmatic logic of assertions to establish a connection between ignorance and informal decidability, also showing how to formulate some pragmatic versions of second-order ignorance. Kubyshkina and Petrolo offer a formal setting to represent the notion of *factive ignorance* after an in-depth analysis of the debate between the New View and the Standard View on ignorance. The debate around the Standard View and the New View on ignorance is an ongoing feud in analytical epistemology. The Standard View on Ignorance usually refers to the definition of ignorance as absence or lack of knowledge, while the New View describes ignorance as the absence or the lack of true beliefs (so deeming cases of not justified beliefs in true statements as not belonging to the ignorance category).<sup>3</sup> The Standard View of ignorance is discussed also by Kyle: he argues that it should be modified since, according to this View, knowledge does not entail truth. Thus, he discusses a version of the Standard View with a truth requirement, but maintains that the best argument for the original Standard View fails to support also this modified view.

It is from the perspective of the philosophy of science that Ordaz approaches the theme. She analyzes how inconsistencies emerge and how various forms of ignorance are often tolerated in the scientific framework and indeed affect scientists' work and research. An original turn has also been taken by Magnani, who considers, in his theory of eco-cognitive computationalism, the notion of *ignorant entities*, which are tools or instruments *devoid of cognitive capacities* that can become bearers of information,

<sup>3</sup> To read a detailed review of the debate cf. Le Morvan and Peels (2016).

knowledge, and computation, since the birth of both Turing’s (Universal) Logical Computing Machines and the (Universal) Practical Computing Machines.

## 2 Ignorance and cognition: belief system analysis, ecological reasoning, and forms of collective ignorance

Being ignorant of something affects the subject’s beliefs, intentions, and cognitive activities as much as his/her knowledge: hence, we collected articles that indicate the necessity of an analysis of ignorance in a rich cognitive perspective, which poses theoretical and pragmatic challenges to the philosophical reflection.

To acknowledge the cognitive value of the term, some authors propose a *redefinition of some specific instantiations of ignorance*. For example, Dellantonio and Pastore examine cases of *factual ignorance*, in particular *misconceptions*, which allow them to consider the substantial effect that ignorance has on one’s system of beliefs and the potential significant effort that has to be exerted to recalibrate it. Bortolotti and Sullivan–Bissett analyze, instead, the phenomenon of *choice-blindness*—a case in which the agent gives reasons for making the choice B after making the choice A—discussing whether it can be rightfully defined as a case of *self-ignorance* or not.

Then, also *ignorance in a more distributed perspective* is considered. Ranalli and van Woudenberg, indeed, adopt the notion of *collective ignorance* to discuss how, no matter our efforts, we have epistemic limitations that derive from our particular *informational insensitivity*: in few words, even when we are capable of picking up information, there is information that we do not pick up, sometimes we lack the capacity to pick up any information whatsoever, and we do not know whether the faculties and cognitive abilities we are endowed with process all the information that they pick up. Another article, written by Ervas, instead focuses on ignorance considered as the ground for metaphorical reasoning, given the fact that metaphors allow us to understand an unknown conceptual domain in terms of another known conceptual domain. Finally a logico-cognitive perspective is adopted by Woods, who distinguishes four grades of ignorance based on the types of *epistemic involvement* that humans exploit in their cognitive economy. From this point of view, ignorance is a conceptual *parasite* of knowledge, but it also becomes intelligible and comprehensible as such.

Another approach that brought various authors together focuses on *the relevance of ignorance in the eco-cognitive environment of the agent*. Mays argues that ignorance is a compensatory epistemic adaptation of complex rhetoric systems: in other words, it is a way of dealing with information that runs counter to one’s beliefs, which could be productive as far as it produces new knowledge, and which works to make rhetoric systems more resistant to potential destabilization. Werner sets forth the interesting notion of cognitive confinement in cognitive niches, which is a contingent, yet relatively stable, state of being structurally or systematically unable to gain information from an environment, determined by patterns of interaction between the subject and the world. Focusing on how, instead, ignorance can spread in cognitive niches, Arfini writes about how ignorance can be analyzed as *extended, distributed, and situated*

in the cognitive environments of the agent (in particular as *misinformation*, *cognitive bubbles*, and *taboos*).

### 3 Social and pragmatical issues in the epistemology of ignorance

The third area of research, dedicated to the social and pragmatical epistemology of ignorance, is the most varied in terms of contributions. Indeed, at the core of this collection is the assumption that a philosophical analysis of ignorance can provide hints and suggestions to its spotting, addressing, and confrontation outside of the academic environment. Indeed, we received various articles with this core assumption.

Williams offers an examination of cases of *rational motivated ignorance*—in brief, when the costs of acquiring knowledge outweigh the benefits of possessing it—and he drew on evidence from the social sciences to argue that this phenomenon plays an important role in one of the most socially harmful forms of ignorance today: voters' ignorance of societal risks. On a similar note, Parviainen and Lahikainen present a paper motivated by the need to respond to the spread of influential misinformation and manufactured ignorance, discussing the conditions required for expert testimony to evolve to a reconceptualisation of negative capability as a new form of epistemic humility. Also Tommasi, Petricca, Cozzolino, and Casadio examine a near problem: they investigate the relationships between scientific ignorance and several individual attitudes, personality traits and cultural behaviors. Their study illustrates that people which show specific personality traits have higher positive attitude and interest toward science, while other traits are more related to superstitious beliefs.

Relating instead to issues pertaining to the philosophy of law, Ciuni and Tuzet discuss the notion of *inevitable ignorance* that the Italian Constitutional Court has introduced in justifying restriction of the legal maxim *Ignorantia legis non excusat*. In particular, they offer an epistemic analysis of the notion that is based both on the legal-theoretical framework defined by the justification of the restriction of the maxim, and on a discussion of some paradigmatic Italian cases where the standard of excusability involving inevitable ignorance is applied. Rääkkä puts forward a discussion around ignorance in the framework of distributive justice, where he argues that a precondition of the applicability of the presumption of equality is ignorance, but not ignorance in the sense of *not having a proper justification*. Zubčić offers an analysis of the concept of ignorance in Hayekian philosophy and pointed out its central role in institutional epistemology, arguing that individuals involved in the search for knowledge are constitutionally ignorant and guided by norms.

Finally, we also received a contribution that pertains to philosophy of education: Peels and Pritchard argue that, a broadly conceived education should not only aim at positive epistemic standings, like knowledge, insight, and understanding, but should also aim at cultivating ignorance, in terms that, for example, educators should present students with defeaters for their knowledge, so that they lack knowledge, at least temporarily.

**Acknowledgements** We are grateful to Otávio Bueno, editor-in-chief of *Synthese*, for his constant help, careful attention, and patience during the editorial process related to the preparation of this collection

of articles. We would also like to thank all the reviewers who have provided constructive comments and feedbacks. We also need to express our thanks to John Woods, Sara Dellantonio, Luigi Pastore, Juha Räikkä, Tommaso Bertolotti, Marco Buzzoni, Lisa Bortolotti, Maria Martinez Ordaz, Christopher Mays, Anne Meylan, Woosuk Park, Rik Peels, Paolo Petricca, and Carlin Romano for helpful advice during the whole process. Last but not least, we are grateful to the contributors to this volume. The research related to this volume was supported by Blue Sky Research 2017 (Grant No. BSR1780130)—University of Pavia, Pavia, Italy. The preparation of the volume would not have been possible without the contribution of resources and facilities of the Computational Philosophy Laboratory (Department of Humanities—Philosophy Section, University of Pavia, Pavia, Italy).

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