

Jiří Šubr • Alemayehu Kumsa •  
Massimiliano Ruzzeddu

# Explaining Social Processes

Perspectives from Current Social Theory  
and Historical Sociology

 Springer

Jiří Šubr  
Department of Historical Sociology  
Charles University  
Prague, Czech Republic

Massimiliano Ruzzeddu  
Settore Scientifico disciplinare  
Sociologia generale  
Università degli studi Niccolò Cusano  
Rome, Roma, Italy

Alemayehu Kumsa  
Department of Human Resources Management  
Škoda auto, Vysoká škola, Mladá Boleslav  
Mladá Boleslav, Czech Republic

ISBN 978-3-030-52182-0      ISBN 978-3-030-52183-7 (eBook)  
<https://doi.org/10.1007/978-3-030-52183-7>

© The Editor(s) (if applicable) and The Author(s), under exclusive licence to Springer Nature Switzerland AG 2020

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Switzerland AG.  
The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland

## Acknowledgments

The authors of this book feel obliged to thank those who have connected them, initiated their cooperation, and supported it in its development. First of all, the World Complexity Science Academy (WCSA) deserves our gratitude, for it was its third conference in 2012 in Vienna which provided our opening opportunities for networking. The subsequent regular WCSA conferences—mainly thanks to the stimulating leadership of Prof. Andrea Pitasi—led to a deepening of these relationships of professional cooperation, which then took place at the events of the International Sociological Society (ISA) and the European Sociological Society (ESA). An important role was played by the Department of Historical Sociology in Prague at the Faculty of Humanities of Charles University, which offered space for mutual cooperation at the pedagogical level. Last but not least, we thank our language advisor Ed Everett, whose assistance was crucial for the finalization of this book.

We must express special thanks to all four reviewers for their inspiring comments on the manuscript. Two of these reviewers are known: Prof. Dr. Francesca Ieracitano from Libera Università Maria Ss. Assunta in Italy, and Prof. Dr. Andrea Pitasi from Gabriele d'Annunzio University, also in Italy. The other two reviewers rated the manuscript for Springer anonymously, and their names remain unknown to the authors.

# Contents

<b>Introduction</b> . . . . .	1
References . . . . .	3
<b>The Society of Individuals and Figurations</b> . . . . .	5
Individualism Versus Holism . . . . .	6
Elias's Concept of Figuration . . . . .	10
References . . . . .	13
<b>Rethinking the Theory of Structuration</b> . . . . .	15
Homo Duplex . . . . .	18
The Problem of Structure from the Duplex Perspective . . . . .	21
References . . . . .	23
<b>Actor or <i>Homo Sociologicus</i></b> . . . . .	25
Basic Approaches and Thematic Areas . . . . .	26
Role Playing: A Concept to Aid in Resolving the Relationship Between Individualism and Holism . . . . .	31
References . . . . .	33
<b>The Systems Theory and Functionally Differentiated Society</b> . . . . .	37
Media and Communication . . . . .	38
Resonance and Filtration . . . . .	39
Problematic Order . . . . .	40
References . . . . .	41
<b>Time as a Sociological Problem</b> . . . . .	43
Social Time . . . . .	45
Qualitative Discontinuous Time . . . . .	47
Confusing Number of Social Times . . . . .	49
Weaknesses and Questionable Assumptions . . . . .	51
Temporalized Sociology . . . . .	54
References . . . . .	56

<b>Collective Memory and Historical Consciousness</b> . . . . .	59
The Antinomies of Memory . . . . .	59
Individual Memory and Collective Memory . . . . .	59
Memory Spontaneous and Purposeful . . . . .	62
Rationality and Irrationality . . . . .	62
Spirit and Matter . . . . .	63
The Past Irrevocable and Revocable . . . . .	63
Saving and Deleting . . . . .	64
History, Myth and Science . . . . .	67
History, Memory and Identity . . . . .	68
Historical Consciousness as the Focus of Sociological Inquiry . . . . .	70
Components Shaping Historical Consciousness . . . . .	72
References . . . . .	79
<b>Identity Building: A Complex Phenomenon</b> . . . . .	83
Identity in Turbulent Times . . . . .	85
Complexity . . . . .	87
References . . . . .	89
<b>Historical Sociology as a Processual Sociology</b> . . . . .	93
The Civilising Process . . . . .	93
How to Understand Elias Today . . . . .	95
Elias's Conception of Time . . . . .	99
What Elias Did Not Deal with . . . . .	103
What Else Is Not Reflected in Elias's Work? . . . . .	105
References . . . . .	106
<b>Social Power from the Perspective of Historical Sociology</b> . . . . .	109
The Concept of Power as Central to Any Understanding of Society . . . . .	109
Forms of Social Power . . . . .	115
The Elitist School of Thought . . . . .	116
The Pluralist School of Thought . . . . .	119
One Dimensional Power . . . . .	120
Sources of Social Power . . . . .	121
Power in the Globalized World . . . . .	125
Epilogue . . . . .	128
References . . . . .	128
<b>Current Societal Processes</b> . . . . .	131
Modern Risks . . . . .	133
Problem of Interdisciplinary Communication . . . . .	135
Multicentric World . . . . .	136
The Question of Supervision . . . . .	140
The Risky Liberties of Flexible Man . . . . .	141
Searching for Social Capital . . . . .	143
The End of Ideologies: Why Did It Not Occur? . . . . .	144
References . . . . .	146

<b>A Hypothesis for a Sociology of Ignorance in the Twenty-First Century</b> . . . . .	149
Sociology of Ignorance . . . . .	150
Science and Social Actors . . . . .	151
Ignorance and Ignorance Communication . . . . .	153
Ignorance and Culture . . . . .	154
Final Remarks . . . . .	155
References . . . . .	156
<b>The Dimensions of Globalization</b> . . . . .	159
Major Social Factors in the Development of Globalized Sociology . . . . .	159
What Is Globalization? . . . . .	164
The Dimension and Forms of Globalization . . . . .	168
Different Schools and Theories of Globalization . . . . .	171
World-System Theory . . . . .	173
Theories of Global Capitalism . . . . .	174
The Network Society . . . . .	176
Theories of Space, Place and Globalization . . . . .	177
Theories of Transnationality and Transnationalism . . . . .	179
Modernity, Post-modernity and Globalization . . . . .	180
Global Age: An Alternative Theory of Globalization . . . . .	181
Theories of Global Culture . . . . .	182
Major Historical Waves of Globalization . . . . .	182
Final Remark . . . . .	183
References . . . . .	184
<b>A Few Notes About the Open Future (in Place of a Conclusion)</b> . . . . .	187
References . . . . .	189

## A Hypothesis for a Sociology of Ignorance in the Twenty-First Century

Current social processes are forming new phenomena in our world which need our attention and study. One of these is ignorance. Here we will attempt to bring a sociological approach to the matter, examining the role ignorance is increasingly playing in our ever more complex society.

The simple definition of ignorance as 'lack of knowledge' implies multiple meanings. For example, Croissant (2014) identified almost forty synonyms for the word 'ignorance'. Despite this huge number of expressions, there are two main categories: lack of data (or lack of methods for collecting them), and uncertainty (i.e. lack of a robust theory for interpreting the available data). Within this framework, the opinion is common in the literature that ignorance is an essential part of any knowledge process.

In fact, ignorance and knowledge do not only coexist in the scientific field, but in all human activities. It is impossible to imagine a context where both aspects are totally absent (Gross 2010: 51). Each actor may act only according to a set of necessary information, but any data-collecting activities, no matter how accurate, are very unlikely to provide all necessary information. According to Gross,

Attempts to grasp notions such as ignorance are spurred by a well-known paradox: whenever new knowledge arises, the amount of non-knowledge may increase proportionally, since every set of newly generated knowledge opens up a wider horizon of what is not known (Gross 2010: 51).

This means that the information collected to make any decision may highlight problems, doubts, or other kinds of ignorance not yet considered. Ignorance is, in fact, functionally related to the activities of knowledge: being aware of the information missing on a given object enables us to effectively orientate the search for required data (Roberts and Armitage 2008).

The facts serve mainly to unlock ignorance. The scientist does not utilize their knowledge to defend, treat, or enrich, but rather to frame a new question. In other words, scientists concentrate not on what they know, which is considerable yet

miniscule, but rather on what they don't know (Vitek and Jackson 2008: 15). Thus, according to Hearst Witte and others: *ignorance is a dynamic force in learning and research, and its topography shifts with inquiry. There are at least six lands within the domain of ignorance: all the things we know we don't know (known unknowns); things we don't know we don't know (unknown unknowns); things we think we know but don't (errors); things we don't know we know (tacit knowns); taboos ("forbidden" knowledge); and denials* (Witte et al. 2008: 253).

Besides this thorough classification, we may note that ignorance has been the object of philosophy (Socrates, Plato, Cusa etc.) and epistemology (El Kassar 2018; Gross and McGoey 2015; McGoey 2012a, b; Proctor and Schiebinger 2008).

## Sociology of Ignorance

In spite of the robustness of the analyses in the philosophical and epistemological domains, they mainly refer to scientific activities. Little has been said about the way ignorance affects social actions, especially in social contexts outside scientific communities. The so-called 'Sociology of ignorance' is meant to tackle just this field, even if existing literature mostly focuses on intentional ignorance, such as censorship, merchandise with unknown impacts, evidential rules in judicial trials etc. (McGoey 2012a: 5).

More specifically, literature on the sociology of ignorance seems to have focused on a category of phenomena that, like Goffman's studies on secrecy and information concealment, implies social actors' strategies to keep or gain strategic advantages over their neighbors. As this kind of sociology is strictly related to power (Gross and McGoey 2015: parts IV, V; Steyn 2012), it seems to have partially neglected another category of social phenomena, unintentional ignorance, which has been perhaps the most common condition of ignorance in many domains of human life where there has been a lack of necessary information and strategies.

Of course, this implies cases in everyday life, such as the need to get information to reach a destination, to pay due taxes etc. Nevertheless, from a sociological point of view, the most interesting category of phenomena relates to undesired ignorance in the domains of public policy and public opinions. This domain implies not the nature of the universe or the origin of life on earth etc., but information on issues that directly affect social life: technological innovation (e.g. Big data and Artificial Intelligence), economic and demographic flows and so on.

In this context, to properly define the mission and the scope of the sociology of ignorance, we must recall the knowledge theory of the Palo Alto School, namely, the notion of two levels of knowledge: "knowledge of things (1\* knowledge)" and "knowledge about things (2\* knowledge)"<sup>1</sup> We can adapt those notions to the needs

<sup>1</sup>In this context, it is necessary just to mention that the authors state the existence of a third level of knowledge, consisting of the general criteria to make sense of empirical information (Watzlawick

of the sociology of ignorance, and talk about "ignorance of things" when there is scant information on a subject and social actors do not actually know what is missing; the other side we shall call "knowledge (or ignorance) about ignorance", the condition where there is a clear idea of the information necessary to achieve better knowledge on a subject (but this information is lacking). More specifically, "knowledge about ignorance" can include formulating cognitive-epistemic strategies for understanding if, given a subject with unknown features, it is possible to achieve a deeper knowledge, or if ignorance is unavoidable. In the first case, actors will need to achieve the greatest information possible on the subject, and reduce the amount of data lacking. Traditionally, classical scientific practice performs this function.

In the second case, there are two possible strategies of ignorance management. On one side, ignorance may be insurmountable, no matter how large the amount of information collected. Chaotic phenomena, for example, fall into this category. In such phenomena, the persistence of ignorance depends on the impossibility of interpreting data according to theoretical models which produce reliable descriptions and predictions of future states, as in the case of the (rather over-cited) butterfly effect phenomenon.

On the other hand, ignorance can depend on the observer's limits, such as the inability to deal with a high number of variables, or to grasp the data bias caused by observer subjectivity (Prigogine and Stengers 1984).

In other words, "knowledge about ignorance" consists of the ability to recognize the nature of any possible case of ignorance, and to develop a management strategy. As we shall see, the ability to cope with ignorance is related to social and cultural contexts and is functionally crucial to the social system.

Put briefly, the notion of a double level of ignorance is a theoretical framework for comprehending the ignorance management strategies that all social actors carry out when they are in a condition of ignorance. Those strategies imply a basic decision: assessing if a condition of ignorance is permanent or temporary, which implies social actions respectively aiming at either collecting the information to overcome ignorance, or tackling the uncertainty related to ignorance. The strategies that social actors carry out to tackle ignorance are the subject of the sociology of (unintentional) ignorance.

## Science and Social Actors

Within this framework, problems of ignorance management can arise at every level of sociological observation: micro (individuals), meso (institutions) and macro (national and supranational societies). Elsewhere, strategies of ignorance management at a micro-level are described (Ruzzeddu 2017); in this work I will focus on the

et al. 1967: 262). This level of knowledge also contains cultural assessments of what knowledge is and what parts of reality are worth exploring.

meso-macro levels, because at these levels occur the phenomena of ignorance that are crucial for the future of global societies.

From this point of view, it must be noted that issues concerning ignorance obviously relate to science. As a matter of fact, science, as a social institution, represents the social capabilities of global societies to gain knowledge and reduce ignorance. In other words, science states what society knows and what it ignores. Put another way, science is the institution legitimized to separate knowledge from ignorance. What science knows is what a society knows, and social actors cannot legitimately ignore; if social actors ignore what science knows, they face problems of prestige.

The crucial point, for sociology, is that scientific knowledge and ignorance are not equally distributed in the social system. Not only is disseminated knowledge unavoidably less complex and accurate than original findings—not all social groups have the same access to the most complex aspects of scientific knowledge. In other words, even if scientific knowledge, as a matter of principle, were open and accessible to everybody, the nature of most findings makes it impossible for the public to have both direct experience and comprehension of realities that only take place in laboratories or computer simulations. This situation also affects the social sciences: in a world that lives more and more “at the edge of chaos”, quick and effective decision-making processes call for an adequate and immediate flow of pertinent, reliable information. The public do not have the level of access to information and data of scientific communities, so their knowledge about social phenomena must rely on the system expert’s narrative. As Giddens (1991: 84) states:

No one can completely opt out of the abstract systems involved in modern institutions. This is most obviously the case in respect of such phenomena as the risk of nuclear war or of ecological catastrophe. But it is true in a more thoroughgoing way of large tracts of day-to-day life as it is lived by most of the population. Individuals in premodern settings, in principle and in practice, could ignore the pronouncements of priests, sages, and sorcerers and get on with the routines of daily activity. But this is not the case in the modern world, in respect of expert knowledge.

A typical example is renewable energies: the financial and scientific investments are large, and the mass media both traditional and online are paying serious attention to this subject. Within this framework, political authorities, investors, and citizens need to evaluate the performance of the existing technologies for renewable energies; to decide, through laws, investments and votes respectively, if the moment is right to ‘drop’ fossil fuels. The problem is that only a few social actors seem to have developed the skills to understand how reliable the available information is. Big companies and stakeholders have developed strategies to calculate the rate of risk related to any investment; if the information that they have shown an acceptable level of risk, they make investment decisions accordingly.

It is impossible any longer for a non-expert observer to assess such questions as whether a 100% renewable energy system is feasible, or if fossil fuels are still technically essential for contemporary civilization. Furthermore, science and technology progress so quickly that it is even difficult to judge which renewable energy will most likely predominate on the global scale: solar, wind, bio-fuels, or something

else. Even other social subsystems like politics or civil society are generally much less able to assess the risk level of any decision and, above all, can only tolerate very low levels of risk. Policy decisions on energy, for example, need more reliable information than a financial investor might. A wrong choice about energy sources or environmental protection might result in unsustainable, long-term social and political costs, in the form of poor economic performance, hostile public opinion etc.

Generally speaking, political decision-makers are supposed to be able to manage areas of social life that in fact are turning more and more fluid, causing unforeseeable phenomena such as humanitarian emergencies and wars. Emergencies such as the refugees in the Mediterranean are accompanied by great uncertainty. Consequently, decision-makers claim that they can hardly obtain the data necessary to manage events to an acceptable degree (Bhatasara 2015).<sup>2</sup>

## Ignorance and Ignorance Communication

Turning to instances of the gap between science and social actors, science offers the following insight:

Our use of probabilistic terms to describe the outcome of events in everyday life is therefore a reflection not of the intrinsic nature of the process but only of the ignorance of certain aspects of it. Probabilities in quantum theory are different. They reflect a fundamental randomness in nature. (Hawking and Mlodinow 2010: 118).

Such declarations of ignorance, which can refer both to the scientific world and everyday life, not only do not cause any social stigma but, on the contrary, are evidence of prestige and intellectual authority.

It is impossible to understand ignorance clearly if one ignores what society actually knows. We do not know yet what dark matter is, but in order to grasp this we need to know how the community of physicists has arrived at a stage where it can postulate the existence of a new category of matter.

To take another example, the sentence: “*We do not know how to heal Alzheimers,*” when uttered by an eminent neurologist, reflects the awareness that we are, today, still unable to treat this illness, but that progress has been made in understanding its causes. Furthermore, the neurologist will know what information is still lacking and how the scientific community hopes to discover it. Likewise, saying that we have not yet found any evidence of life on Mars implies awareness of

<sup>2</sup>It might be questioned whether the issue is one of genuine ignorance due to factors beyond control, or strategic ignorance due to broader political priorities (e.g. Germany’s need for workers or the EU’s good relations with Turkey) but in general the processes in question are faster, more dynamic, and harder to control than previously—as Bauman puts it, they are more ‘liquid’. Nevertheless, Mcgoey (2012b: 555) points out that ‘*cultivating ignorance is often more advantageous, both institutionally and personally, than cultivating knowledge*’.

the data accumulated since 1973 by probes sent to that planet and an understanding of the models of planetary evolution that astrophysicists have developed.

According to this epistemic framework, one line of investigation may be to comprehend under what conditions and in what cases a declaration of ignorance can be a cause either for approval or stigmatization. One scenario is that an admission of ignorance itself may be a cause of prestige, or that some given affirmations of ignorance are sources of prestige through demonstrating an awareness of the state-of-the-art knowledge of a whole group (Gaudet 2013; Gaudet and Czub 2012). Another interpretation is that the speaker's prestige affects the reception of their ignorance. If another person than Hawking had made the statements quoted above, they might not have received the same reaction. Considering the position of ignorance in contemporary societies, it is necessary to investigate the level of prestige that science currently receives, which often seems to be very low.

## Ignorance and Culture

This lack of prestige may arise for two essential reasons. The first is that most societies still hold a positivistic expectation of science, so that problems like illness, shortages of food or water etc., are interpreted as the surrender of scientific communities to obscure political or economic interests.<sup>3</sup>

The other cause relates to society's cultural structure. It is known that culture consists not only of visible habits and artifacts, but also of deep level, unconscious assumptions (Schein 2004: 85). These assumptions concern the "nature of truth, time, space, human nature, and human relationships". In a given social context, the idea of time affects social representations of evolution and progress. If this idea depicts change as a negative trend, any innovation, no matter how technological or social, will encounter distrust and hostility. In light of this, it is easy to understand the sometimes low prestige of science and expert systems.

This scenario might also help to shed light on contemporary political reality: the electoral success of parties—of either left or right—who have campaigned against migration, global trade, and international institutions in the name of national or local sovereignty, can be interpreted as evidence that larger and larger social groups lack instruments to cope with the ignorance and uncertainty related to phenomena like financial trends, diverse migrant backgrounds etc.; these parties' voters are mainly demanding more familiar cultural references, often through emotionally charged behavior. In other words, large parts of contemporary societies still cling to

<sup>3</sup>The project of Scientific Citizenship (Nowotny 2008; Nowotny et al. 2001; Pitasi 2014; Pitasi and Angrisani 2013) aims at bridging this gap by making stronger alliances between hard and social sciences. This would trigger a wider diffusion of scientific knowledge both among academics from different domains and with institutional policymakers. This virtuous alliance would also benefit civil society and the general public, as the more effective the dissemination strategies are, the more science-based the decision-making processes are at any level of society.

traditional representations of reality, expecting expert systems to produce reliable knowledge on the world.

The possibly unavoidable limits of science and political planning are causing the revival of more traditional cognitive frameworks like ethnic roots, cultural traditions, and religious fanaticism, among those social categories that have problems dealing with globalization. This is the cause of an interesting paradox: certain groups openly declare that they are not able to understand scientific communities', intellectuals', or public institutions' cultural products; these groups, being "ignorant" (and having no intention of overcoming this condition), fall back on simplistic cultural references that offer a strong sense of certainty. In other words, because science manifests high degrees of ignorance, other social actors claim a kind of 'right to ignorance', i.e. to openly reject knowledge that science has provided.

In sum, ignorance, which can be wielded as an instrument of domination, has turned into a distinctive feature of given categories of social actors, no matter whether they are specialized communities (Alcoff 2007: 44; McGoey 2012a) or not (Davies 2011: 409; McGoey 2012a, b). The condition of uncertainty, or worse, of ignorance about ignorance, has become characteristic of most parts of social life, and has been the cause of systemic dysfunctions in terms of a lack of reliable social action patterns.

## Final Remarks

In this chapter, we have seen that studying ignorance entails two main areas of investigation: intentional ignorance and unintentional ignorance. While the literature about intentional ignorance is quite broad, even among the main classical sociological authors (especially Goffman's school: secret, intimacy etc.) unintentional ignorance is a less explored territory.

Unintentional ignorance implies not only describing all those situations where social actors lack important information, but especially the strategies they enact for managing this lack of information, which means either looking for more data or interpreting the world without that information.

The main theoretical conclusion of this work, is that the strategies of ignorance management that social actors carry out are related to their position in the social space, i.e. their social prestige. This relation is biunivocal: in given contexts, the prestige held by social actors will deeply affect the social acceptance of their ignorance management strategies. An individual or an institution which has a high level of prestige will be more likely to openly admit ignorance. In other contexts, copycat declarations of ignorance will increase the actors' prestige. This is particularly evident in contemporary political discourse: conceiving a gap between, on one side, rich, greedy and corrupted élites and, on the other, people whose needs international politics and economics increasingly ignores. Thus, while global élite members are always educated, ignorance has become a mark of belonging to the



'people'. In other words, according to the current populist vision of the world, ignorance is synonymous with 'democracy' and 'honesty'.

While many empirical research paths may lead from such a framework, one fact is evident: in the current cultural context, ignorance is cause of unprecedented prestige. Never have so many people felt so proud to have skipped so much education, to have avoided books or art and, at the same time, claim the right to participate in the main decision-making processes that affect social life. Further scholarship should highlight potentially dysfunctional consequences of this cultural scenario, as well as trying to identify the underlying cause of it.

## References

- Alcoff, M. L. (2007). Epistemologies of ignorance: Three types. In S. Sullivan, & N. Tuana (Eds.), *Race and epistemologies of ignorance* (pp. 39–58). Albany, NY: State University of New York Press.
- Bhatasara, S. (2015). Debating sociology and climate change. *Journal of Integrative Environmental Sciences*, 12(3), 217–233.
- Croissant, J. L. (2014). Agnotology: Ignorance and absence or towards a sociology of things that aren't there. *Social Epistemology*, 28(1), 4–25.
- Davies, W. (2011). Knowing the unknowable: The epistemological authority of innovation policy experts. *Social Epistemology*, 25, 401–421.
- El Kassar, N. (2018). What ignorance really is. Examining the foundations of epistemology of ignorance. *Social Epistemology*, 32, 300–310.
- Gaudet, J. (2013). It takes two to tango: Knowledge mobilization and ignorance mobilization in science research and innovation. *Prometheus*, 31(3), 169–187.
- Gaudet, J., & Czub, S. (2012). Short communication: Knowledge mobilization and ignorance mobilization dynamics in veterinary research. *Sociology Working Paper* (pp. 1–9).
- Giddens, A. (1991). *Modernity and self-identity. Self and society in the late modern age*. Cambridge: Polity.
- Gross, M. (2010). *Ignorance and surprise: Science, society and ecological design*. Cambridge, MA: MIT Press.
- Gross, M., & McGoey, L. (Eds.). (2015). *Routledge international handbook of ignorance studies*. New York: Routledge.
- Hawking, S., & Mlodinow, L. (2010). *The grand design*. New York: Bantam Books.
- McGoey, L. (2012a). Strategic unknowns: Towards a sociology of ignorance. *Economy and Society*, 41(1), 1–16.
- McGoey, L. (2012b). The logic of strategic ignorance. *Journal of British Sociology*, 63(3), 555–576.
- Nowotny, H. (2008). *Insatiable curiosity: Innovation in a fragile future*. Cambridge, MA: MIT Press.
- Nowotny, H., Scott, P., & Gibbons, M. (2001). *Rethinking science: Knowledge and the public in an age of uncertainty*. Cambridge: Polity Press.
- Pitasi, A. (2014). Designing hypercitizenship methodologically. *Direito Econômico e Socioambiental*, 5 (1), 2–18.
- Pitasi, A., & Angrisani, M. (2013). 'Hyper citizenship' and the evolution of a global identity. *Journal of Sociological Research*, 4 (2), 318–335.
- Prigogine, I., & Stengers, I. (1984). *Order out of chaos: Man's new dialogue with nature*. Toronto, ON: Bantam.
- Proctor, R. N., & Schiebinger, L. (Eds.). (2008). *Agnotology. The making and unmaking of ignorance*. Stanford, CA: Stanford University Press.
- Roberts, J., & Armitage, J. (2008). The ignorance economy. *Prometheus*, 26 (4), 335–354.
- Ruzzeddu, M. (2017). Ignorance in a complex era: Functions and dysfunctions. In E. Fabó, E. Ferone, & J. Ming Chen (Eds.), *Systemic actions in complex scenarios* (pp. 54–69). Newcastle upon Tyne: Cambridge Scholars.
- Schein, E. (2004). *Organizational culture and leadership*. San Francisco: Jossey-Bass.
- Steyn, M. (2012). The ignorance contract: Recollections of apartheid childhoods and the construction of epistemologies of ignorance. *Identities*, 19 (1), 8–25.
- Vitek, B., & Jackson, W. (2008). *The virtues of ignorance*. Lexington, KY: The University Press of Kentucky.
- Watzlawick, P., Beavin, J., & Jackson, D. (1967). *Pragmatics of human communication*. New York: Norton.
- Witte, M. H., Crown, P., Bernas, M., & Witte, Ch. L. (2008). Lessons learned from ignorance: The curriculum on medical (and other) ignorance. In B. Vitek, & W. Jackson (Eds.), *The virtues of ignorance* (pp. 251–272). Lexington, KY: The University Press of Kentucky.