

## Introduction

Despite all the progress made by the biomedical sciences in the identification of pathogens, development of vaccines, and discovery of cures, contagious diseases remain a major threat to contemporary societies. Before the outbreak of the COVID-19 pandemic, the twentieth century and the first two decades of the current century had already seen a long series of epidemics and pandemics hit populations worldwide with different morbidity and mortality rates (influenza, AIDS/HIV, MERS, SARS, swine flu, and Ebola). The growth of crowded urban environments, more frequent traveling, and emigration waves are all factors contributing to the outbreak and spread of contagious diseases.

In such a global and interconnected world, epidemics and pandemics generate, today more than in the past, extremely complex health crises impacting almost every area of human life: they endanger economies, determine government decisions, affect individual psychologies, and stimulate cultural reactions. Scientific research and biomedical management of diseases are only two among many aspects of this phenomenon.

Many studies have been produced on epidemics, pandemics, contagion, and related concepts. The multilevel relevance of these phenomena has led, in many cases, to the adoption of a multidisciplinary perspective involving different approaches and methods (historical, socio-political, medical, cultural-historical, literary, etc.).<sup>1</sup>

In most of these studies, however, the philosophical outlook, when there is one at all, tends to be marginal. The purpose of this book is to give a philosophical treatment of epidemics and pandemics. In particular, the book will address a range

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<sup>1</sup> See, e.g., *Epidemics and Ideas: Essays on the Historical Perception of Pestilence*, ed. by Terence Ranger and Paul Slack (Cambridge: Cambridge University Press, 1992); *Contagion. Historical and Cultural Studies*, ed. by Alison Bashford and Claire Hooker (London-New York: Routledge, 2001); Saul Jarcho, *The Concept of Contagion in Medicine, Literature, and Religion* (Malabar: Krieger, 2000); *Imagining Contagion in Early Modern Europe*, ed. by Claire L. Calrin (Basingstoke: Palgrave Macmillan, 2005); *Tracés. Revue de Sciences humaines*, 21 (*Contagions*) (2011); *Contagion: Perspectives from Pre-Modern Societies*, ed. by Lawrence I. Conrad and Dominik Wujastyk (London-New York: Routledge, 2017 [1<sup>st</sup> ed. 2000]); Frank M. Snowden, *Epidemics and Society: From the Black Death to the Present* (New Haven: Yale University Press, 2019); *Die Corona-Gesellschaft. Analysen zur Lage und Perspektiven für die Zukunft*, ed. by Michael Volkmer and Karin Werner (Bielefeld: Transcript Verlag, 2020); *Le Medical Humanities al tempo del Covid-19. Temi, Problemi, Prospettive*, ed. by Stefano Scioli (Bologna: Emil di Odoya, 2021).

of longstanding issues (the notion of contagion, its meanings and its applications; the explanatory models for contagious and epidemic diseases; public authorities' reactions; the global nature of pandemics; practices of social control; the rationality of social and individual behaviours; the knowability of contagion and the forecasting of its spread; the role of the biomedical sciences; the struggle against superstitious and irrational beliefs; etc.).

The first part of the volume ('History of a Problem') explores the significance of these topics in philosophical and medical debates from classical Antiquity to the twentieth century. The seven contributions in this part deal with the issues of contagion and disease causation. Plague outbreaks feature as a main focus. The reading of all these papers in a historical sequence provides striking evidence that explanatory models based on miasmas and air corruption remained key to understanding the etiology of contagious diseases until the emergence of the germ theory and the discoveries of bacteriology. Neither Gerolamo Fracastoro's theory of seeds of contagion nor mechanism undermined the preeminence of the Galenic miasma theory. However, the historical reconstructions offered in this first section of the volume problematize this picture, calling attention to the existence, from ancient times onward, of contagionist models, describing their interactions with the miasma theory, and highlighting the ancient roots of the idea of contagion, its evolution during the Middle Ages and Modern Times, and its conceptual reconfiguration in contemporary philosophy.

The second section of the volume ('Concepts and Theories') gathers six papers providing a philosophical assessment of the cultural and social relevance of the epidemics and contagious diseases in today's societies. This relevance is assessed through an in-depth analysis of some concepts which characterized the public discourse during the COVID-19 crisis (zoonosis, contagion, immunization, conspiracy, fear, and emergency), and an investigation on the role of communication and science in the era of pandemic. Philosophical anthropology, ethics, social and political philosophy, semiotics, and philosophy of science offer a multifaceted interpretation of the radical challenges which pandemics pose to human life, identifying elements of discontinuity and continuity between the past and the present age. This multidisciplinary approach is enriched by the presence of an essay in the field of the Islamic Studies, which concludes this second part of the volume.

Though focusing on Western thought and society, the volume is open to other cultural areas; in particular, two contributions deal with medieval plague literature in Arabic and Hebrew, while another is dedicated to the impact of the Covid-19 pandemic on the political regimes of Middle Eastern countries.

It is also important to add that each paper in the volume provides not only a substantial contribution to the topic it discusses, but also an analytical recapitulation of previous specialist literature. As a consequence, the volume consolidates philosophical scholarship on epidemics and pandemics, laying the groundwork for future research.

Needless to say, the health crisis the world has been going through since 2019 had an influence on the choice of the subject of the volume. Since its outbreak, the

Covid-19 pandemic has been at the centre of a public debate marked by a variety of discourses and approaches. Different narratives have interacted, mixed, and interfered with each other. The constant appeal of newspapers and news broadcasts to stick to the results of medical and scientific research has failed to prevent the proliferation of antiscientific misinterpretations and online manipulation, with baseless conspiracy theories sometimes becoming viral or influential. In this context, the philosophical point of view has been largely underrepresented or badly represented. But in this very situation we strongly believe that a philosophical framework is needed to achieve a deeper understanding of the events that have already occurred and those still to come, and to fully grasp the overall impact of the pandemic. In our opinion, philosophical analysis has an important political value, as it allows one to comprehend the past in critical ways and get rid of the superficial judgements, emotional interpretations, and fake news that distort the perception of the present.

Mauro Bonazzi's paper ('Thucydides and the Politics of Plague') is dedicated to Thucydides' description of the 'plague' (today there is a consensus among scholars that the epidemic so vividly described by the Greek historian was not the contagious disease caused, as we know today, by the bacterium *Yersinia Pestis*) that ravaged Athens for two years, in 430–429 BCE. The paper contrasts Thucydides' account with analyses contained in coeval works of the Hippocratic *corpus*, highlighting similarities and divergences. On the one hand, Bonazzi argues on the basis of a meticulous linguistic analysis that Thucydides was acquainted with medical tradition and its methods. On the other, the Thucydidean account was not primarily aimed at a medical understanding of the disease. Rather, Thucydides' purpose was to explore the social consequences of the epidemic. From his account it emerges that the plague brought to light the unsocial and anti-political aspect of human nature, which remains hidden in peaceful times. By insisting on this point, Thucydides was able to oppose the belief prevailing in fifth-century Athens that human society had progressed from an unsecure and violent past.

Many other works written in subsequent centuries were to portray, more or less effectively, the impact of epidemics on moral laws, family ties, and social rules — e.g., Procopius' *Persian War*, Petrus Diaconus' *Historia Langobardorum*, or Boccaccio's *Decameron*. Still, Thucydides' description can be considered the seminal text in the Western tradition on plague and epidemic diseases.

Marco Di Branco ('Between Religion and Science. The Debate on the Concept of Contagion in the Medieval Islamic World and Its Western Parallels') analyzes the contribution that two fourteenth-century Arab Andalusian intellectuals, Ibn Ḥātima, d. 1369 c., and Ibn al-Ḥaṭīb, 1313–1374, made to the notion of contagion, understood as disease transmission through direct contact or by proximity. After briefly outlining the key steps in the history of the concept of contagion, from classical Antiquity to the Black Death, Di Branco remarks that the notion of contagion was looked upon with suspicion in the Arabic medical tradition. Medieval Islamic theologians generally ascribed epidemics to the will of God, denied contagion, and believed that an epidemic disease was to be accepted as a fatality, or even a blessing for the believer,

as dying of plague could be regarded as a form of martyrdom that granted direct access to paradise.

By contrast, in the works of Ibn Ḥātima and Ibn al-Ḥaṭīb we find clear clinical evidence of the contagious nature of the pandemic. The two disagreed on important points, though. While Ibn Ḥātima traced the phenomenon back to a law of nature established by God, Ibn al-Ḥaṭīb directly accused theologians of causing the deaths of countless people by denying the reality of contagion.

Alessandro Palazzo ('Pestilences and Contagious Diseases in the Middle Ages. Albert the Great and the Fourteenth-Century Plague Treatises') explores Albert the Great's views on pestilences and contagious diseases. Albert (1200–1280), a Dominican theologian and a commentator on the Aristotelian corpus, was also an important authority on medicine who addressed the key issues of the late-medieval medical debates and was acquainted with the chief sources in this field (Aristotle, Galen, and Avicenna).

Even though Albert did not dedicate a specific work or part of a work to these topics, pestilences are given careful attention in his oeuvre. Despite objective limitations (he did not experience any plague outbreaks during his lifetime, and — for this reason as well as others — in his works the terms *pestis* and *pestilentia* are vague, lumping together a large variety of different sicknesses), Albert's investigation of the causes of pestilential and contagious diseases is worthy of consideration for at least two reasons. One is that he explained these phenomena in scientific terms and not as a result of God's will, which in the Middle Ages was often invoked as the cause of natural calamities. The other is that, as a consequence, his explanatory models provided the basis for the late medieval discourse on plague. In his works, the fourteenth-century treatises on plague, the so-called *Pestschriften*, found some of the conceptual tools they used to construct the etiological and nosological identity of this devastating disease.

Diana Disegni ('Latin-into-Hebrew Treatises on the Black Death') focuses on the reaction of medieval medicine to the mid-fourteenth-century plague outbreak, the so-called Black Death. Whereas scholars have so far mainly dealt with the Latin and vernacular medical literature on plague, Disegni investigates a so far less studied part of that vast corpus, namely, medical manuals written in Hebrew. Some of these were original works by Jewish physicians, while others were translations into Hebrew of Arabic and Latin works. Among these works were some by the most renowned Western physicians of the time, including Gentile da Foligno, Francesco Zanelli of Bologna, John of Burgundy, Petrus de Tossignano, Antonio Guaineri of Pavia, and Valescus de Taranta.

Disegni's paper offers a general overview of all these texts, correcting, completing, and expanding on the incomplete or erroneous accounts currently available in scholarship. Moreover, by focusing on Hebrew plague treatises, the paper sheds light on the phenomenon of Latin-into-Hebrew translation, which has long been dismissed as a marginal aspect of the intercultural exchanges between Mediterranean cultures in the Middle Ages, especially compared to Arabic-into-Hebrew translation.

Concetta Pennuto ('Contagion and Pandemics. Plague in Early Modern Medical Thought') deals with early modern sources, and specifically with the evolution of the notion of contagion. The plague outbreaks that struck Europe on a regular basis from the mid-fourteenth century until the eighteenth century led physicians and public officials to take steps to counter the spread of the disease. In particular, the extreme danger practitioners were exposed to impelled them to adopt means to protect themselves. Moreover, while the recurring outbreaks stimulated medical and philosophical reflections on the concept of contagion, assistance to the sick foregrounded the physician's relationship with his patients and his own responsibilities. Thus, the paper also explores the interaction between medical theory and practice by shedding light on the practitioners' social and ethical engagement and analyzing the evolution of ideas regarding the cure of plague-afflicted patients.

Mariangela Priarolo ('New Sciences and Old Diseases: Seventeenth-Century Readings of the Causes of the Plague') investigates the persistence of the miasmatic explanation of the plague until the nineteenth century. It is claimed that one of the reasons for this persistence is that the Galenic model of explanation was reinforced by mechanism, the new dominant scientific paradigm in the seventeenth century. One should notice that early modern criticism of Galenism, especially that coming from mechanist philosophers, was indeed concerned more with the notion of natural faculties than with Galen's concrete descriptions of specific diseases, such as plague.

Through a reinterpretation of Fracastoro's notion of seeds of contagion, the seventeenth-century corpuscular version of mechanism made it possible to see Galenic (putrid) exhalations, or 'effluvia', as (very tiny) parts of matter in motion that could be described, analyzed, and quantified, and hence rightfully included within the new view of the world.

Fabrizio Meroi ('Contagion and Epidemics in Twentieth-Century Thought. A Hypothesis About Bergson') addresses the issues of epidemics and contagion in late modern philosophy and culture. In particular, he investigates the discussion of these topics in the fields of literature, philosophy, and the human sciences in general. The main focus of his essay, however, is Henri Bergson. Meroi argues that the concept of contagion is ubiquitous in Bergson's works, albeit in a very peculiar form. Bergson often resorts to terms and concepts such as influence, diffusion, propagation, and transmission when dealing with psychological and gnoseological issues, the evolution of life, and anthropological, ethical, and religious themes. According to Meroi, in Bergson's work contagion is not a mere metaphor, but underpins an original theoretical model of interpretation of reality based on a dynamic of interaction and transfer that constitutes a conceptual structure characteristic of his thought.

The second part of the volume is opened by an analysis of the concept of 'zoonosis'. The COVID-19 pandemic has forced humans to confront fundamental questions of identity. Carlo Brentari ('Zoonosis') argues that the species identity — namely that humans should consider the fact that they belong to the species *Homo sapiens* within a larger ecosystem — should be brought to the fore in light of the pandemic. This identity of humans as biological runs up against other kinds of identities, for example of humans as fundamentally religious beings, with accompanying rituals that might

need to be altered or ceased during the pandemic. Since the pandemic affected the entire globe, the author also suggests this fact could encourage humans to think of themselves as part of a larger collective, given the common experience of all. The pandemic also calls into question understandings of nature as apart from civilization; climate change shows that human activity impacts the environment beyond the narrow confines of what happens in ‘islands of civilization’. In the end, there is no escape from the fact that humans are animals and are part of nature, and thinking of humans’ ability to modify the environment also holds out hope that they could yet re-balance it in the face of climate change.

But the pandemic has also represented the return of ‘large-scale death’ on the public scene of the world. This is the starting point of Michele Nicoletti’s essay (‘Fear and Dispossession’) which analyzes the nexus between fear, society, and politics in general terms and, more specifically, in the time of pandemics. This chapter identifies the fear of self-dispossession as a feature common to contemporary societies. The COVID-19 crisis has emphasized this fear and has limited the opportunities for enjoying personal liberties and rights. Within this context, the author maintains that an important role can be played by a vigorous re-proposal of the principle of ‘self-belonging’, understood as, on the one hand, the aspiration that one’s dignity be respected, and, on the other, that the irreducibility and inviolability of the Self be recognized. This principle can serve as the foundation for not only an existential perspective of the liberty and relationality of the individual, but also a vision of society based upon respect for basic universal rights and a democratic practice which extends from the local to the global level. The principle of self-belonging is seen as an alternative to the authoritarian and paternalistic approaches to the pandemic crisis.

Nidesh Lawtoo (‘The Mimetic Faculty Reloaded. Contagion, Immunization, Conspiracies in the Age of Viral Reproduction’) takes as his starting point the idea of humans as mimetic beings, in the sense that they represent the world around them, but also imitate others. This fact takes on particular relevance in the pandemic, since as the virus literally creates copies of itself and spreads, conspiracy theories arise in an analogical fashion, and in turn the two contagions mutually amplify each other. As with vaccination against the coronavirus, the author calls us to rethink what a ‘vaccination’ might look like for the affective contagion of rumours and conspiracy theories. The author traces the genealogy of the concept of mimesis in Plato and Nietzsche, both of whom speak of ‘mimetic pathos’ which ‘has the (will to) power to take possession of spectators, dispossess them of their rational faculty, or logos, and generate mimetic pathologies that are constitutive of the *vita mimetica*’. In the twenty-first century, with the rise of conspiracy theories around COVID, a new understanding of mimesis and crowd psychology is needed. The solution cannot be in logos, or scientific discourses, since this is what the *pathos* of the conspiracy theories contradicts. The answer might instead be ‘balancing diagnostic operations that account for the role of *pathos* in reloading the mimetic faculty in the digital age — and perhaps turn[ing] the mimetic faculty to *patho*-logical use by relying on the power of positive models or examples to promote the importance of vaccination and preventive measures more generally via both logical and affective means’.

The crisis of the subject is the main focus of L'udmila Lacková's chapter ('Crisis of the Subject in Mediated Communication'). The author explores how the pandemic has changed communication. With face-to-face communication — unmediated communication — much less possible during the pandemic, we are forced to turn to various forms of new media. The author highlights how the seeming freedom offered by new media can actually be limiting, since it imposes limits onto the subject and mediates the ways in which they interact with others. Thus, it is not simply that new media creates an intermediary between the addressor and addressee, the media fundamentally changes the communication itself. The increased popularity of visual media, for example, made it easier to display and spread emotive messages than in purely verbal media. In some ways, mediated communication might allow us to express ourselves better than in unmediated forms of communication, and simplistic fears of new technology for its own sake are often unfounded. In any case, the pandemic has created new conditions for communication, the results of which we are still reckoning with.

But the COVID-19 crisis also affected the role of science. Federico Laudisa ('The Epistemology of Models in the Era of Pandemic') explores the philosophical issues of modelling in the sciences, something that gained particular importance during the pandemic. What, the author asks, are models actually representing? And what should we do with these models? The author investigates different types of models — for example, scale models that offer a scaled down representation of a specified target, or toy models that strip away irrelevant factors to give an isolated representation of a target. When it comes to pandemic modelling, compartmental models show the relative numbers of susceptible people, infected people, and so on, while agent-based models assign greater importance to capturing behaviour at the individual level. Both kinds of model, however, face various issues with collecting, measuring, and analyzing data. All these models furthermore suffer from the well-known problem of induction. While the author offers potential solutions to this problem, nonetheless, the pandemic and the subsequent response by scientists and the general public suggests that a new epistemology of science may be necessary.

The last chapter ('The COVID-19 Pandemic. An Exogenous Shock into Political Systems in the Middle East and North Africa?') aims at including the area of Islamic Studies in this rich and plural overview. Pejman Abdolmohammadi examines the effects of the pandemic on countries in the Middle East and North Africa, a region already suffering from a range of crises. Economically, the pandemic will contribute to instability and economic downturns. While wealthy oil states can weather this economic instability to some extent, and already war-torn countries simply have less to lose since they began with so little, the economic changes will particularly hit developing countries, like Iran and Turkey. Nonetheless, in all cases, the resulting instability could lead to further sectarian tensions and violence on an everyday level, as well as bolster recruitment efforts by terrorist groups. Furthermore, people across the region may become increasingly disillusioned with traditional narratives that

elites use to justify keeping themselves in power, thus creating an even more unstable situation. As a new global competition between Western nations and countries like Russia and China emerges in the wake of the pandemic, the strategic role of the region becomes that much more important.



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