

# A mirror in fiction: drawing parallelisms between Camus's *La Peste* and COVID-19

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## ABSTRACT

COVID-19 represents one of the most challenging global health issues in modern times. However, as epidemics have affected humans since our origins, many before us have described how significantly they compromise human lives. Leaving apart the aspects more linked to medicine and health sciences, we focus here on analysing how epidemics force people to change their habits, what type of emotions and behaviours they promote, and which roles are played by different social actors. For such a purpose, especially if we wish to draw some parallels between past epidemics and COVID-19, historical records seemed to be more suitable than literary works. Nonetheless, we have taken this approach relying on *La Peste* (Albert Camus, 1947), a novel based on a fictional epidemic of plague in the Algerian town of Oran. Far from creating a barrier separating fiction from reality, this reading allowed us to establish several links with our current situation. Recognising that context and solutions vary widely between the two scenarios, core matters concerning epidemics seemed to remain invariable. The important role of data and statistics, the leadership acquired by health authorities, the separations of relatives or the negative effects on trade and business are some issues which took place in Oran as well as nowadays. Besides that, epidemics also affect humans at an individual level, and certain thoughts and feelings in *La Peste*'s main characters may make us identify with our own fears and desires.

## INTRODUCTION

*La Peste* (Camus 1947) has served as a basis for several critical works, including some in the field of medical humanities (Bozzaro 2018; Deudon 1988; Tuffuor and Payne 2017). Frequently interpreted as an allegory of Nazism (with the plague as a symbol of the German occupation of France) (Finel-Honigman 1978; Haroutunian 1964), it has also received philosophical readings beyond the sociopolitical context in which it was written (Lengers 1994). Other scholars, on the other hand, have centred their analyses on its literary aspects (Steel 2016).

The COVID-19 pandemic has increased general interest about historical and fictional epidemics. *La Peste*, as one of the most famous literary works about this topic, has been revisited by many readers during recent months, leading to an unexpected growth in sales in certain countries (Wilsher 2020; Zaretsky 2020). Apart from that, commentaries about the novel, especially among health sciences scholars, have emerged with a renewed interest (Banerjee et al. 2020; Bate 2020; Vandekerckhove

2020; Wigand, Becker, and Steger 2020). This sudden curiosity is easy to understand if we consider both *La Peste*'s literary value, and people's desire to discover real or fictional situations similar to theirs. Indeed, Oran inhabitants' experiences are not quite far from our own, even if geographical, chronological and, specially, scientific factors (two different diseases occurring at two different stages in the history of medical development) prevent us from establishing too close resemblances between both situations.

Furthermore, it will not be strange if COVID-19 serves as a frame for fictional works in the near future. Other narrative plays were based on historical epidemics, such as Daniel Defoe's *A Journal of the Plague Year* or Giovanni Boccaccio's *Decameron* (Wigand, Becker, and Steger 2020; Withington 2020). The biggest pandemic in the last century, the so-called 'Spanish Influenza', has been described as not very fruitful in this sense, even if it produced famous novels such as Katherine A Porter's *Pale Horse, Pale Rider* or John O'Hara's *The Doctor Son* (Honigsbaum 2018; Hovanec 2011). The overlapping with another disaster like World War I has been argued as one of the reasons explaining this scarce production of fictional works (Honigsbaum 2018). By contrast, we may think that COVID-19 is having a global impact hardly overshadowed by other events, and that it will leave a significant mark on the collective memory.

Drawing on the reading of *La Peste*, we point out in this essay different aspects of living under an epidemic that can be identified both in Camus's work and in our current situation. We propose a trip throughout the novel, from its early beginning in Part I, when the Oranians are not aware of the threat to come, to its end in Part V, when they are relieved of the epidemic after several months of ravaging disasters.

We think this journey along *La Peste* may be interesting both to health professionals and to the lay person, since all of them will be able to see themselves reflected in the characters from the novel. We do not skip critique of some aspects related to the authorities' management of COVID-19, as Camus does concerning Oran's rulers. However, what we want to foreground is *La Peste*'s intrinsic value, its suitability to be read now and after COVID-19 has passed, when Camus's novel endures as a solid art work and COVID-19 remains only as a defeated plight.

## METHODS

We confronted our own experiences about COVID-19 with a conventional reading of *La Peste*. A first reading of the novel was used to



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establish associations between those aspects which more saliently reminded us of COVID-19. In a second reading, we searched for some examples to illustrate those aspects and tried to detect new associations. Subsequent readings of certain parts were done to integrate the information collected. Neither specific methods of literary analysis, nor systematic searches in the novel were applied. Selected paragraphs and ideas from Part I to Part V were prepared in a draft copy, and this manuscript was written afterwards.

## Part I

Some phrases in the novel could be transposed word by word to our situation. This one pertaining to its start, for instance, may make us remember the first months of 2020:

By now, it will be easy to accept that nothing could lead the people of our town to expect the events that took place in the spring of that year and which, as we later understood, were like the forerunners of the series of grave happenings that this history intends to describe. (Camus 2002, Part I)

By referring from the beginning to ‘the people of our town’, Camus is already suggesting an idea which is repeated all along the novel, and which may be well understood by us as COVID-19’s witnesses: epidemics affect the community as a whole, they are present in everybody’s mind and their joys and sorrows are not individual, but collective. For example (and we are anticipating Part II), the narrator says:

But, once the gates were closed, they all noticed that they were in the same boat, including the narrator himself, and that they had to adjust to the fact. (Camus 2002, Part II)

Later, he will insist in this opposition between the concepts of ‘individual’, which used to prevail before the epidemic, and ‘collective’:

One might say that the first effect of this sudden and brutal attack of the disease was to force the citizens of our town to act as though they had no individual feelings. (Camus 2002, Part II)

There were no longer any individual destinies, but a collective history that was the plague, and feelings shared by all. (Camus 2002, Part III)

This distinction is not trivial, since the story will display a strong confrontation between those who get involved and help their neighbours and those who remain behaving selfishly. Related to this, Claudia Bozzaro has pointed out that the main topic in *La Peste* is solidarity and altruistic love (Bozzaro 2018). We may add that the disease is so attached to people’s lives that the epidemic becomes the new everyday life:

In the morning, they would return to the pestilence, that is to say, to routine. (Camus 2002, Part III)

Being collective issues does not mean that epidemics always enhance altruism and solidarity. As said by Wigand *et al*, they frequently produce ambivalent reactions, and one of them is the opposition between altruism and maximised profit (Wigand, Becker, and Steger 2020). Therefore, the dichotomy between individualism and collectivism, a central point in the characterisation of national cultures (Hofstede 2015), could play a role in epidemics. In fact, concerning COVID-19, some authors have described a greater impact of the pandemic in those countries with higher levels of individualism (Maaravi *et al*. 2021; Ozkan *et al*. 2021). However, this finding should be complemented with other national cultures’ aspects before concluding

that collectivism itself exerts a protective role against epidemics. Concerning this, it has been shown how ‘power distance’ frequently intersects with collectivism, being only a few countries in which the last one coexists with a small distance to power, namely with a capacity to disobey the power authority (Gupta, Shoja, and Mikalef 2021). Moreover, those countries classically classified as ‘collectivist’ (China, Japan, South Korea, India, Vietnam, etc.) are also characterised by high levels of power distance, and their citizens have been quite often forced to adhere to COVID-19 restrictions and punished if not (Gupta, Shoja, and Mikalef 2021). Thus, it is important to consider that individualism is not always opposed to ‘look after each other’ (Ozkan *et al*. 2021, 9). For instance, the European region, seen as a whole as highly ‘individualistic’, holds some of the most advanced welfare protection systems worldwide. It is worth considering too that collectivism may hide sometimes a hard institutional authority or a lack in civil freedoms.

Coming back to *La Peste*, we may think that Camus’s Oranians are not particularly ‘collectivist’. Their initial description highlights that they are mainly interested in their own businesses and affairs:

Our fellow-citizens work a good deal, but always in order to make money. They are especially interested in trade and first of all, as they say, they are engaged in doing business. (Camus 2002, Part I)

And later, we see some of them trying selfishly to leave the city by illegal methods. By contrast, we observe in the novel some examples of more ‘collectivistic’ attitudes, such as the discipline of those quarantined at the football pitch, and, over all, the main characters’ behaviour, which is generally driven by altruism and common goals.

Turning to another topic, the plague in Oran and COVID-19 are similar regarding their animal origin. This is not rare since many infectious diseases pass to humans through contact with animal vectors, being rodents, especially rats (through rat fleas), the most common carriers of plague bacteria (CDC. n.d.a, ECDC. n.d, Pollitzer 1954). Concerning SARS-CoV-2, even if further research about its origin is needed, the most recent investigations conducted in China by the WHO establish a zoonotic transmission as the most probable pathway (Joint WHO-China Study Team 2021). In Camus’s novel, the animal’s link to the epidemic seemed very clear since the beginning:

Things got to the point where Infodoc (the agency for information and documentation, ‘all you need to know on any subject’) announced in its free radio news programme that 6,231 rats had been collected and burned in a single day, the 25th. This figure, which gave a clear meaning to the daily spectacle that everyone in town had in front of their eyes, disconcerted them even more. (Camus 2002, Part I)

This accuracy in figures is familiar to us. People nowadays have become very used to the statistical aspects of the pandemic, due to the continuous updates in epidemiological parameters launched by the media and the authorities. Camus was aware about the relevance of figures in epidemics, which always entail:

...required registration and statistical tasks. (Camus 2002, Part II)

Because of this, the novel is scattered with numbers, most of them concerning the daily death toll, but others mentioning the number of rats picked up, as we have seen, or combining the number of deaths with the time passed since the start of the epidemic:

**Table 1** Recurring topics in *La Peste*. Each topic is accompanied by two examples from the novel and one concerning COVID-19, extracted from online press.

	<i>La Peste</i>	COVID-19 (online press)
Epidemiological monitoring and accuracy in figures	'It was only in the longer term, by noting the increase in the death rate, that people became aware of the truth. The fifth week produced 321 deaths and the sixth 345.' (Camus 2002, Part II) 'Rieux waited for the general statistics to be published, as they were at the start of each week.' (Camus 2002, Part IV)	'The global death toll has reached 164,938, according to the Johns Hopkins Coronavirus Resource Centre. The total number of infections worldwide is at 2 394 291.' (Skopeliti 2020)
Health authorities' role	'People called for radical measures, accusing the authorities of inaction, and some families who had seaside homes were already talking about escaping to them. But the following day the agency announced that the phenomenon had abruptly stopped and that the rodent control service had gathered only an insignificant number of dead rats.' (Camus 2002, Part I) 'The Prefecture had for a long time wanted to appease public anxieties –something that the plague had not allowed it to do- and was deciding to get the medical experts together for a report on the topic.' (Camus 2002, Part IV)	'The minister (...) did draw attention to the collaboration of the majority of Spain's regions with the Health Ministry's efforts to combat the second wave of the virus.' (Diez and Casqueiro 2020)
Media coverage	'...a new paper has been launched, <i>The Courier of the Epidemic</i> , with the aim of "informing our fellow-citizens, in a spirit of total objectivity, about the advances or decline in the illness.' (Camus 2002, Part II) 'For example, you could see the most intelligent among them pretending to search the newspapers, or radio broadcasts, for reasons to believe that the plague would shortly end.' (Camus 2002, Part III)	'The figures also show broader concerns about low trust in the media, with the population more approving of how the government and the Conservative party have handled the crisis than how the media has covered it.' (Waterson 2020)
Hygienic measures and transformation of facilities	'They were trying to encourage essential hygiene, and were checking out lofts and cellars that had not been visited by the disinfection squads.' (Camus 2002, Part II) 'There was only one public place that was not transformed into a hospital or an isolation facility.' (Camus 2002, Part IV)	'Already, four expeditionary hospitals in Africa (...) have been moved from military bases where doctors train in treating battlefield casualties to cities where COVID-19 outbreaks have stretched the healthcare systems.' (Morello 2020)
Medical achievements	'Rieux and he hoped that a serum made with cultures from the very microbe that was infecting the town would be more directly effective.' (Camus 2002, Part II) 'Castel's serum suddenly achieved a string of successes it had not previously achieved.' (Camus 2002, Part V)	'In a study of about 4000 healthcare personnel, police, firefighters and other essential workers, the Centres for Disease Control and Prevention found that the vaccines reduced the risk of infection by 80 percent after one shot.' (Sun 2021)
Everyday life disturbances	'Intercity telephone calls, permitted at first, caused such overcrowding in public phone booths and on the lines that they were entirely stopped for a few days, then strictly limited to what were described as urgent cases, such as deaths, births and marriages.' (Camus 2002, Part II) 'So Oran took on an unusual appearance. The number of pedestrian rose and, at slack times, many people, who had been reduced to inactivity by the closing of shops and some offices, filled the streets and cafés.' (Camus 2002, Part II)	'At this time, patrons may also eat and drink indoors at the bar counter, as long as they keep a distance of 1.5 metres between them.' (Santaeulalia and Linde 2020)
Funeral habits disturbance	'All the formalities were simplified and in general funerary pomp and circumstance were discarded.' (Camus 2002, Part III) 'A decree from the Prefect expropriated the occupants from graves leased in perpetuity and all the remains dug up were sent off to the crematorium.' (Camus 2002, Part III)	'With more than 200,000 officially dead from the virus — many experts say the real number is probably much higher — COVID-19 has upended these ancient end-of-life traditions for many.' (Mogul 2021)
Economic consequences	'The trucks turned on their sides and the solitary heaps of barrels or sacks showed that trade, too, had succumbed to the plague.' (Camus 2002, Part II) '...it disrupted the whole of economic life and so created quite a large number of unemployed.' (Camus 2002, Part III)	'The travel sector is bracing itself for the collapse of yet more holiday companies as businesses continue to struggle to meet the challenges of the COVID-19 crisis.' (Choat 2020)

"Will there be an autumn of plague? Professor B answers: 'No', "One hundred and twenty-four dead: the total for the ninety-fourth day of the plague." (Camus 2002, Part II)

We permit ourselves to introduce here a list of recurring topics in *La Peste*, since the salience of statistical information is one of them. These topics, some of which will be treated later, appear several times in the novel, in various contexts and stages in the evolution of the epidemic. We synthesise them in Table 1, coupled with a COVID-19 parallel example extracted from online press. This ease to find a current example for each topic suggests that they are not exclusive of plague or of Camus's mindset, but shared by most epidemics.

Talking about journalism and the media (one of the topics above), we might say that COVID-19's coverage is frequently

too optimistic when managing good news and too alarming when approaching the bad. Media's 'exaggerated' approach to health issues is not new; it was already a concern for medical journals' editors a century ago (Reiling 2013) and it continues to be it for these professionals in recent times (Barbour et al. 2008). It is well known that media tries to attract spectators' attention by making the news more appealing. However, they deal with the risk of expanding unreliable information, which may be pernicious for the public opinion. Related to the intention of 'garnishing' the news, Aslam et al. (2020) have described that 82% of more than 100 000 pieces of information about COVID-19 appearing in media from different countries carried an emotional, either negative (52%) or positive (30%) component, with only 18% of them considered as 'neutral' (Aslam et al. 2020). Some evidence

about this tendency to make news more emotional was described in former epidemics. For instance, a study conducted in Singapore in 2009 during the H1N1 crisis showed how press releases by the Ministry of Health were substantially transformed when passed to the media, by increasing their emotional appeal and by changing their dominant frame or their tone (Lee and Basnyat 2013). In *La Peste*, this superficial way of managing information by the media is also observed:

The newspapers followed the order that they had been given, to be optimistic at any cost. (Camus 2002, Part IV)

At the first stages of the epidemic in Oran, journalists proclaim the end of the dead rats' invasion as something to be celebrated. Dr Rieux, the character through which Camus symbolises caution (and comparable nowadays to trustful scientists, well-informed journalists or sensible authorities), exposes then his own angle, quite far from suggesting optimism:

The vendors of the evening papers were shouting that the invasion of rats had ended. But Rieux found his patient lying half out of bed, one hand on his belly and the other around his neck, convulsively vomiting reddish bile into a rubbish bin. (Camus 2002, Part I)

Camus, who worked as a journalist for many years, insists afterwards on this cursory interest that some media devote to the epidemic, more eager to grab the noise than the relevant issues beneath it:

The press, which had had so much to say about the business of the rats, fell silent. This is because rats die in the street and people in their bedrooms; and newspapers are only concerned with the street. (Camus 2002, Part I)

By then, Oranians continue rejecting the epidemic as an actual threat, completely immersed in that phase that dominates the beginning of all epidemics and is characterised by 'denial and disbelief' (Wigand, Becker, and Steger 2020, 443):

A pestilence does not have human dimensions, so people tell themselves that it is unreal, that it is a bad dream which will end. [...] The people of our town were no more guilty than anyone else, they merely forgot to be modest and thought that everything was still possible for them, which implied that pestilence was impossible. They continued with business, with making arrangements for travel and holding opinions. Why should they have thought about the plague, which negates the future, negates journeys and debate? They considered themselves free and no one will ever be free as long as there is plague, pestilence and famine. (Camus 2002, Part I)

Probably to avoid citizens' disapproval, among other reasons, the Oranian Prefecture (health authority in Camus' novel) does not want to go too far when judging the relevance of the epidemic. While not directly exposed, we can guess in this fragment the tone of the Prefect's message, his intention to convey confidence despite his own doubts:

These cases were not specific enough to be really disturbing and there was no doubt that the population would remain calm. None the less, for reasons of caution which everyone could understand, the Prefect was taking some preventive measures. If they were interpreted and applied in the proper way, these measures were such that they would put a definite stop to any threat of epidemic. As a result, the Prefect did not for a moment doubt that the citizens under his charge would co-operate in the most zealous manner with what he was doing. (Camus 2002, Part I)

The relevant role acquired by health authorities during epidemics is another topic listed in our table. Language use, on the other hand, is an issue linkable both with the media topic and with this one. As in *La Peste*, during COVID-19 we have seen some public figures using words not always truthfully, carrying out a careful selection of words that serves to the goal of conveying certain interests in each moment. Dr Rieux refers in Part I to this language manipulation by the authorities:

The measures that had been taken were insufficient, that was quite clear. As for the 'specially equipped wards', he knew what they were: two outbuildings hastily cleared of other patients, their windows sealed up and the whole surrounded by a cordon sanitaire. (Camus 2002, Part I)

He illustrates the need of frankness, the preference for clarity in language, which is often the clarity in thinking:

No. I phoned Richard to say we needed comprehensive measures, not fine words, and that either we must set up a real barrier to the epidemic, or nothing at all. (Camus 2002, Part I)

At the end of this part, his fears about the inadequacy of not taking strict measures are confirmed. Oranian hospitals become overwhelmed, as they are now in many places worldwide due to COVID-19.

## Part II

Left behind the phases of 'denial and disbelief' and of 'fear and panic', it appears among the Oranians the 'acceptance paired with resignation' (Wigand, Becker, and Steger 2020, 443):

Then we knew that our separation was going to last, and that we ought to try to come to terms with time. [...] In particular, all of the people in our town very soon gave up, even in public, whatever habit they may have acquired of estimating the length of their separation. (Camus 2002, Part II)

In COVID-19 as well, even if border closure has not been so immovable as in Oran, many people have seen themselves separated from their loved ones and some of them have not yet had the possibility of reunion. This is why, in the actual pandemic, the idea of temporal horizons has emerged like it appeared in Camus's epidemic. In Spain, the general lockdown in March and April 2020 made people establish the summer as their temporal horizon, a time in which they could resume their former habits and see their relatives again. This became partially true, and people were allowed in summer to travel inside the country and to some other countries nearby. However, there existed some reluctance to visit ill or aged relatives, due to the fear of infecting them, and some families living in distant countries were not able to get together. Moreover, autumn brought an increase in the number of cases ('the second wave') and countries returned to limit their internal and external movements.

Bringing all this together, many people nowadays have opted to discard temporal horizons. As Oranians, they have noted that the epidemic follows its own rhythm and it is useless to fight against it. Nonetheless, it is in human nature not to resign, so abandoning temporal horizons does not mean to give up longing for the recovery of normal life. This vision, neither maintaining vain hopes nor resigning, is in line with Camus's philosophy, an author who wrote that 'hope, contrary to what it is usually thought, is the same to resignation.' (Camus 1939, 83; cited by Haroutunian 1964, 312 (translation is ours)), and that 'there is not love to human life but with despair about human life.'

(Camus 1958, 112–5; cited by Haroutunian 1964, 312–3 (translation is ours)).

People nowadays deal with resignation relying on daily life pleasures (being not allowed to make further plans or trips) and in company from the nearest ones (as they cannot gather with relatives living far away). Second, they observe the beginning of vaccination campaigns as a first step of the final stage, and summer 2021, reflecting what happened with summer 2020, has been fixed as a temporal horizon. This preference for summers has an unavoidable metaphorical nuance, and their linking to joy, long trips and life in the streets may be the reason for which we choose them to be opposed to the lockdown and restrictions of the pandemic.

We alluded previously to the manipulation of language, and figures, as relevant as they are, they are not free from manipulation either. Tarrou, a close friend to Dr Rieux, points out in this part of the novel how this occurred:

Once more, Tarrou was the person who gave the most accurate picture of our life as it was then. Naturally he was following the course of the plague in general, accurately observing that a turning point in the epidemic was marked by the radio no longer announcing some hundreds of deaths per week, but 92, 107 and 120 deaths a day. ‘The newspapers and the authorities are engaged in a battle of wits with the plague. They think that they are scoring points against it, because 130 is a lower figure than 910.’ (Camus 2002, Part II)

Tarrou collaborates with the health teams formed to tackle the plague. Regarding these volunteers and workers, Camus refuses to consider them as heroes, as many essential workers during COVID-19 have rejected to be named as that. The writer thinks their actions are the natural behaviour of good people, not heroism but ‘a logical consequence’:

The whole question was to prevent the largest possible number of people from dying and suffering a definitive separation. There was only one way to do this, which was to fight the plague. There was nothing admirable about this truth, it simply followed as a logical consequence. (Camus 2002, Part II)

We consider suitable to talk here about two issues which represent, nowadays, a great part of COVID-19 fears and hopes, respectively: new genetic variants and vaccines. Medical achievements are another recurrent issue included in table 1, and we write about them here because it is in Part II where Camus writes for the first time about vaccines, and where it insists on an idea aforementioned in Part I: that the plague bacillus affecting Oran is different from previous variants:

...the microbe differed very slightly from the bacillus of plague as traditionally defined. (Camus 2002, Part II)

Related to COVID-19 new variants, they represent a challenge because of two main reasons: their higher transmissibility and/or severity and their higher propensity to skip the effect of natural or vaccine-induced immunity. Public health professionals are determining which is the actual threat of all the new variants discovered, such as those first characterised in the UK (Public Health England 2020), South Africa (Tegally et al. 2021) or Brazil (Fujino et al. 2021). In *La Peste*, Dr Rieux is always suspecting that the current bacteria they are dealing with is different from the one in previous epidemics of plague. Since several genetic variations for the bacillus *Yersinia pestis* have been characterised (Cui et al. 2012), it could be possible that the epidemic in Oran originated from a new one. However, we should not forget that we are analysing a literary work, and that scientific accuracy is

not a necessary goal in it. In fact, Rieux’s reluctances have to do more with clinical aspects than with microbiological ones; he doubts since the beginning, relying exclusively on the symptoms observed, and continues doing it after the laboratory analysis:

I was able to have an analysis made in which the laboratory thinks it can detect the plague bacillus. However, to be precise, we must say that certain specific modifications of the microbe do not coincide with the classic description of plague. (Camus 2002, Part II)

Camus is consistent with this idea and many times he mentions the bacillus to highlight its oddity. Insisting on the literary condition of the work, and among other possible explanations, he is maybe declaring that that in the novel is not a common (biological, natural) bacteria, but the Nazism bacteria.

Turning to vaccines, they constitute the principal resource that the global community has to defeat the COVID-19 pandemic. Vaccination campaigns have started all over the world, and three types of COVID-19 vaccines are being applied in the European Union, after their respective statements of efficacy and security (Baden et al. 2021; Polack et al. 2020; Voysey et al. 2021), while a fourth vaccine has just recently been approved (EMA 2021a). Although some concerns regarding the safety of two of these vaccines have been raised recently (EMA 2021b; EMA 2021c), vaccination plans are going ahead, being adapted according to the state of knowledge at each moment. Some of these vaccines are mRNA-based (Baden et al. 2021; Polack et al. 2020), while others use a viral vector (Bos et al. 2020; Voysey et al. 2021). They are mainly two-shot vaccines, with one exception (Bos et al. 2020), and complete immunity is thought to be acquired 2 weeks after the last shot (CDC. n.d.b, Voysey et al. 2021). Other countries such as China or Russia, on the other hand, were extremely early in starting their vaccination campaigns, and are distributing among their citizens different vaccines than the aforementioned (Logunov et al. 2021; Zhang et al. 2021).

Even if at least three types of plague vaccines had been created by the time the novel takes place (Sun 2016), vaccines do not play an important role in *La Peste*, in which therapeutic measures (the serum) are more important than prophylactic ones. Few times in the novel the narrator refers to prophylactic inoculations:

There was still no possibility of vaccinating with preventive serum except in families already affected by the disease. (Camus 2002, Part II)

Deudon has pointed out that Camus mixes up therapeutic serum and vaccine (Deudon 1988), and in fact there exists a certain amount of confusion. All along the novel, the narrator focuses on the prophylactic goals of the serum, which is applied to people already infected (Othon’s son, Tarrou, Grand...). However, both in the example above (which can be understood as vaccinating household contacts or already affected individuals) and in others, the differences between treating and vaccinating are not clear:

After the morning admissions which he was in charge of himself, the patients were vaccinated and the swellings lanced. (Camus 2002, Part II)

In any case, this is another situation in which Camus stands aside from scientific matters, which are to him less relevant in his novel than philosophical or literary ones. The distance existing between the relevance of vaccines in COVID-19 and the superficial manner with which Camus treats the topic in *La Peste* exemplifies this.

### Part III

In part III, the plague's ravages become tougher. The narrator turns his focus to burials and their disturbance, a frequent topic in epidemics' narrative (table 1). Camus knew how acutely increasing demands and hygienic requirements affect funeral habits during epidemics:

Everything really happened with the greatest speed and the minimum of risk. (Camus 2002, Part III)

Like many other processes during epidemics, the burial process becomes a protocol. When protocolised, everything seems to work well and rapidly. But this perfect mechanism is the Prefecture's goal, not Rieux's. He reveals in this moment an aspect in his character barely shown before: irony.

The whole thing was well organized and the Prefect expressed his satisfaction. He even told Rieux that, when all was said and done, this was preferable to hearses driven by black slaves which one read about in the chronicles of earlier plagues. 'Yes,' Rieux said. 'The burial is the same, but we keep a card index. No one can deny that we have made progress.' (Camus 2002, Part III)

Even if this characteristic may seem new in Dr Rieux, we must bear in mind that he is the story narrator, and the narration is ironic from time to time. For instance, speaking precisely about the burials:

The relatives were invited to sign a register –which just showed the difference that there may be between men and, for example, dogs: you can keep check of human beings-. (Camus 2002, Part III)

In Camus's philosophy, the absurd is a core issue. According to Lengers, Rieux is ironic because he is a kind of Sisyphus who has understood the absurdity of plague (Lengers 1994). The response to the absurd is to rebel (Camus 2013), and Rieux does it by helping his fellow humans without questioning anything. He does not pursue any other goal than doing his duty, thus humour (as a response to dire situations) stands out from him when he observes others celebrating irrelevant achievements, such as the Prefect with his burial protocol. In the field of medical ethics, Lengers has highlighted the importance of Camus's perspective when considering 'the immediacy of life rather than abstract values' (Lengers 1994, 250). Rieux himself is quite sure that his solid commitment is not 'abstract', and, even if he falls into abstraction, the importance relies on protecting human lives and not in the name given to that task:

Was it truly an abstraction, spending his days in the hospital where the plague was working overtime, bringing the number of victims up to five hundred on average per week? Yes, there was an element of abstraction and unreality in misfortune. But when an abstraction starts to kill you, you have to get to work on it. (Camus 2002, Part II)

Farewells during COVID-19 may have not been particularly pleasant for some families. Neither those dying at nursing homes nor in hospitals could be accompanied by their families as previously, due to corpses management protocols, restrictions of external visitors and hygienic measures in general. However, as weeks passed by, certain efforts were made to ease this issue, allowing people to visit their dying beloved sticking to strict preventive measures. On the other hand, the number of people attending funeral masses and cemeteries was also limited, which affected the conventional development of ceremonies as well. Hospitals had to deal with daily tolls of deaths never seen before, and the overcrowding of mortuaries made us see rows of coffins

placed in unusual spaces, such as ice rinks (transformation of facilities is another topic in table 1).

We turn now to two other points which COVID-19 has not evaded: infections among essential workers and epidemics' economic consequences. The author links burials with infections among essential workers because gravediggers constitute one of the most affected professions, and connects this fact with the economic recession because unemployment is behind the large availability of workers to replace the dead gravediggers:

Many of the male nurses and the gravediggers, who were at first official, then casual, died of the plague. [...] The most surprising thing was that there was never a shortage of men to do the job, for as long as the epidemic lasted. [...] When the plague really took hold of the town, its very immoderation had one quite convenient outcome, because it disrupted the whole of economic life and so created quite a large number of unemployed. [...] Poverty always triumphed over fear, to the extent that work was always paid according to the risk involved. (Camus 2002, Part III)

The effects of the plague over the economic system are one of our recurrent topics (table 1). The plague in Oran, as it forces to close the city, impacts all trading exchanges. In addition, it forbids travellers from arriving to the city, with the economic influence that that entails:

This plague was the ruination of tourism. (Camus 2002, Part II)

Oranians, who, as we saw, were very worried about making money, are especially affected by an event which jeopardises it. In COVID-19, for one reason or for another, most of the countries are suffering economic consequences, since the impact on normal life from the epidemic (another recurrent topic) means also an impact on the normal development of trading activities.

### Part IV

In Part IV we witness the first signals of a stabilisation of the epidemic:

It seemed that the plague had settled comfortably into its peak and was carrying out its daily murders with the precision and regularity of a good civil servant. In theory, in the opinion of experts, this was a good sign. The graph of the progress of the plague, starting with its constant rise, followed by this long plateau, seemed quite reassuring. (Camus 2002, Part IV)

At this time, we consider interesting to expand the topic about the transformation of facilities. We mentioned the case of ice rinks during COVID-19, and we bring up now the use of a football pitch as a quarantine camp in Camus's novel, a scene which has reminded some scholars of the metaphor of Nazism and concentration camps (Finel-Honigman 1978). In Spain, among other measures, a fairground was enabled as a field hospital during the first wave, and it is plausible that many devices created with other purposes were used in tasks attached to healthcare provision during those weeks, as occurred in Oran's pitch with the loudspeakers:

Then the loudspeakers, which in better times had served to introduce the teams or to declare the results of games, announced in a tinny voice that the internees should go back to their tents so that the evening meal could be distributed. (Camus 2002, Part IV)

Related to this episode, we can also highlight the opposition between science and humanism that Camus does. The author alerts us about the dangers of a dehumanised science, of choosing

procedures perfectly efficient regardless of their lack in human dignity:

The men held out their hands, two ladles were plunged into two of the pots and emerged to unload their contents onto two tin plates. The car drove on and the process was repeated at the next tent. 'It's scientific,' Tarrou told the administrator. 'Yes,' he replied with satisfaction, as they shook hands. 'It's scientific.' (Camus 2002, Part IV)

Several cases with favourable outcomes mark Part IV final moments and prepare the reader for the end of the epidemic. To describe these signs of recovering, the narrator turns back to two elements with a main role in the novel: rats and figures. In this moment, the first ones reappear and the second ones seem to be declining:

He had seen two live rats come into his house through the street door. Neighbours had informed him that the creatures were also reappearing in their houses. Behind the walls of other houses there was a hustle and bustle that had not been heard for months. Rieux waited for the general statistics to be published, as they were at the start of each week. They showed a decline in the disease. (Camus 2002, Part IV)

## Part V

Given that we continue facing COVID-19, and that forecasts about its end are not easy, we cannot compare ourselves with the Oranians once they have reached the end of the epidemic, what occurs in this part. However, we can analyse our current situation, characterised by a widespread, though cautious, confidence motivated by the beginning of vaccination campaigns, referring it to the events narrated in Part V.

Even more than the Oranians, since we feel further than them from the end of the problem, we are cautious about not to anticipate celebrations. From time to time, however, we lend ourselves to dream relying on what the narrator calls 'a great, unadmitted hope'. COVID-19 took us by surprise and everyone wants to 'reorganise' their life, as Oranians do, but patience is an indispensable component to succeed, as fictional and historical epidemics show us.

Although this sudden decline in the disease was unexpected, the towns-people were in no hurry to celebrate. The preceding months, though they had increased the desire for liberation, had also taught them prudence and accustomed them to count less and less on a rapid end to the epidemic. However, this new development was the subject of every conversation and, in the depths of people's hearts, there was a great, unadmitted hope. [...] One of the signs that a return to a time of good health was secretly expected (though no one admitted the fact) was that from this moment on people readily spoke, with apparent indifference, about how life would be reorganized after the plague. (Camus 2002, Part V)

We put our hope on vaccination; social distancing and other hygienic measures have proved to be effective, but vaccines would bring us a more durable solution without compromising so hardly many economic activities and social habits. As we said, a more important role of scientific aspects is observed in COVID-19 if compared with *La Peste* (an expected fact if considered that Camus's story is an artistic work, that he skips sometimes the most complex scientific issues of the plague and that health sciences have evolved substantially during last decades). Oranians, in fact, achieve the end of the epidemic not through clearly identified scientific responses but with certain randomness:

All one could do was to observe that the sickness seemed to be going as it had arrived. The strategy being used against it had not changed; it had been ineffective yesterday, and now it was apparently successful. One merely had the feeling that the disease had exhausted itself, or perhaps that it was retiring after achieving all its objectives. In a sense, its role was completed. (Camus 2002, Part V)

They receive the announcement made by the Prefecture of reopening the town's gates in 2 weeks time with enthusiasm. Dealing with concrete dates gives them certainty, helps them fix the temporal horizons we wrote about. This is also the case when they are told that preventive measures would be lifted in 1 month. Camus shows us then how the main characters are touched as well by this positive atmosphere:

That evening Tarrou and Rieux, Rambert and the rest, walked in the midst of the crowd, and they too felt they were treading on air. Long after leaving the boulevards Tarrou and Rieux could still hear the sounds of happiness following them... (Camus 2002, Part V)

Then, Tarrou points out a sign of recovery coming from the animal world. In a direct zoological chain, infected fleas have vanished from rats, which have been able again to multiply across the city, making the cats abandon their hiding places and to go hunting after them again. At the final step of this chain, Tarrou sees the human being; he remembers the old man who used to spit to the cats beneath his window:

At a time when the noise grew louder and more joyful, Tarrou stopped. A shape was running lightly across the dark street. It was a cat, the first that had been seen since the spring. It stopped for a moment in the middle of the road, hesitated, licked its paw, quickly passed it across its right ear, then carried on its silent way and vanished into the night. Tarrou smiled. The little old man, too, would be happy. (Camus 2002, Part V)

Unpleasant things as a town with rats running across its streets, or a man spending his time spitting on a group of cats, constitute normality as much as the reopening of gates or the reboot of commerce. However, when Camus speaks directly about normality, he highlights more appealing habits. He proposes common leisure activities (restaurants, theatres) as symbols of human life, since he opposes them to Cottard's life, which has become that of a 'wild animal':

At least in appearance he [ Cottard ] retired from the world and from one day to the next started to live like a wild animal. He no longer appeared in restaurants, at the theatre or in his favourite cafés. (Camus 2002, Part V)

We do not disclose why Cottard's reaction to the end of the epidemic is different from most of the Oranians'. In any case, the narrator insists later on the assimilation between common pleasures and normality:

'Perhaps,' Cottard said, 'Perhaps so. But what do you call a return to normal life?' 'New films in the cinema,' said Tarrou with a smile. (Camus 2002, Part V)

Cinema, as well as theatre, live music and many other cultural events have been cancelled or obliged to modify their activities due to COVID-19. Several bars and restaurants have closed, and spending time in those who remain open has become an activity which many people tend to avoid, fearing contagion. Thus, normality in our understanding is linked as well to these simple and pleasant habits, and the complete achievement of them will probably signify for us the desired defeat of the pandemic.

In *La Peste*, love is also seen as a simple good to be fully recovered after the plague. While Rieux goes through the ‘reborn’ Oran, it is lovers’ gatherings what he highlights. Unlike them, everyone who, during the epidemic, sought for goals different from love (such as faith or money, for instance) remain lost when the epidemic has ended:

For all the people who, on the contrary, had looked beyond man to something that they could not even imagine, there had been no reply. (Camus 2002, Part V)

And this is because lovers, as the narrator says:

If they had found that they wanted, it was because they had asked for the only thing that depended on them. (Camus 2002, Part V)

We have spoken before about language manipulation, hypocrisy and public figures’ roles during epidemics. Camus, during Dr Rieux’s last visit to the old asthmatic man, makes this frank and humble character criticise, with a point of irony, the authorities’ attitude concerning tributes to the dead:

‘Tell me, doctor, is it true that they’re going to put up a monument to the victims of the plague?’  
 ‘So the papers say. A pillar or a plaque.’  
 ‘I knew it! And there’ll be speeches.’  
 The old man gave a strangled laugh.  
 ‘I can hear them already: “Our dead...” Then they’ll go and have dinner.’ (Camus 2002, Part V)

The old man illustrates wisely the authorities’ propensity for making speeches. He knows that most of them usually prefer grandiloquence rather than common words, and seizes perfectly their tone when he imitates them (‘Our dead...’). We have also got used, during COVID-19, to these types of messages. We have also heard about ‘our old people’, ‘our youth’, ‘our essential workers’ and even ‘our dead’. Behind this tone, however, there could be an intention to hide errors, or to falsely convey carefulness. Honest rulers do not usually need nice words; they just want them to be accurate.

We have seen as well some tributes to the victims during COVID-19, some of which we can doubt whether they serve to victims’ relief or to authorities’ promotion. We want rulers to be less aware of their own image and to stress truthfulness as a goal, even if this is a hard requirement not only for them, but for every single person. Language is essential in this issue, we think, since it is prone to be twisted and to become untrue. The old asthmatic man illustrates it with his ‘There’ll be speeches’ and his ‘Our dead...’, but this is not the only time in the novel in which Camus brings out the topic. For instance, he does so when he equates silence (nothing can be thought as further from wordiness) with truth:

It is at the moment of misfortune that one becomes accustomed to truth, that is to say to silence. (Camus 2002, Part II)

or when he makes a solid statement against false words:

...I understood that all the misfortunes of mankind came from not stating things in clear terms. (Camus 2002, Part IV)

The old asthmatic, in fact, while praising the deceased Tarrou, remarks that he used to admire him because ‘he didn’t talk just for the sake of it.’ (Camus 2002, Part V).

Related to this topic, what the old asthmatic says about political authorities may be transposed in our case to other public figures, such as scholars and researchers, media leaders, businessmen and

women, health professionals... and, if we extend the scope, to every single citizen. Because hypocrisy, language manipulation and the fact of putting individual interests ahead of collective welfare fit badly with collective issues such as epidemics. Hopefully, also examples to the contrary have been observed during COVID-19.

The story ends with the fireworks in Oran and the depiction of Dr Rieux’s last feelings. While he is satisfied because of his medical performance and his activity as a witness of the plague, he is concerned about future disasters to come. When COVID-19 will have passed, it will be time for us as well to review our life during these months. For now, we are just looking forward to achieving our particular ‘part V’.

## LIMITATIONS

Given its lacking in a systematic reading method, added to its strong basis in personal impressions, this essay may be quite subjective. However, we think that the associative method we used gave us a capacity to reflect human experiences and behaviours during an epidemic that would have been hardly achieved through a structured approach. The decision to keep the novel’s structure may have made the essay more difficult to follow, and we understand that a structure guided by topics could have been more logical. Nonetheless, since a key point in social behaviours is to analyse how they change over time, we opted to follow the novel in its original order. This helped us, moreover, to organise our own experiences about COVID-19, and to a better understanding of its evolution from the beginning to nowadays. Four other main limitations may apply to this essay. First, its author is very influenced by the geographical point from which he observes the pandemic (namely, a high-income country in the European region). Individuals in low-income and middle-income countries are being more susceptible to the effects of the pandemic, for instance, concerning the capacity of their health systems to tackle the disease or their access to vaccines supply. This essay has focused sometimes in issues, such as the closure of cinemas and restaurants or the hypocrisy by the media, which may lack of relevance in these other regions. However, it was done like this because these issues affect people’s lives too, though in a less severe manner. Second, the COVID-19 situation changes rapidly, and writing about it is highly influenced by the moment when it is done. However, we think a 1-year perspective gave us enough confidence to write about COVID-19 with some experience, even if major changes may occur in the months to come. Third, and we mentioned it before, COVID-19 and plague are very different diseases, and medical advances have substantially changed since Camus’s times to nowadays. Fourth, comparing fiction and reality is risky given that first one not always reflects faithfully the second one, but frequently exaggerates or transforms it.

## CONCLUSIONS AND FINAL COMMENTS

Despite the limitations just mentioned, we hope this trip through *La Peste* helps to enrich the medical dialogue on COVID-19. Mainly, it may do it by reducing individual or national selfishness and by showing how people’s suffering is the only important matter during epidemics. Health professionals might find in it some examples of Dr Rieux’s behaviour which may be useful for their own work, even if we tried to analyse the whole novel and did not focus on his figure. COVID-19 dialogue is sometimes affected by inaccuracies, changing criteria, pernicious debates between health and economy, and other controversial issues. This essay tries to show that those problems are not new, and to transmit the idea that we as health professionals will be more



successful against the pandemic by giving the population clear, not biased by non-scientific reasons, information. In the novel, those characters who focus on their work and do not try to lie or to cover inconvenient issues are at the end those who can say that they have learnt something after the epidemic, even if it has served for nothing and nobody is better after its passage.

We end with a last point. Remembering that we are approaching a literary work, and not anything else, we permit ourselves to close this text with literature. We defined ourselves as not very favourable to ostentatious ceremonies, and, if the aim is to honour the dead, we prefer Camus's method, that is, with literature itself. We offer here one of the most beautiful paragraphs in the novel, which speaks precisely about the dead. To honour Camus at the same time, we cite it first in its original language:

Et pendant toute la fin de l'été, comme au milieu des pluies de l'automne, on put voir le long de la corniche, au coeur de chaque nuit, passer d'étranges convois de tramways sans voyageurs, brinquebalant au-dessus de la mer. Les habitants avaient fini par savoir ce qu'il en était. Et malgré les patrouilles qui interdisaient l'accès de la corniche, des groupes parvenaient à se glisser bien souvent dans les rochers qui surplombent les vagues et à lancer des fleurs dans les baladeuses, au passage des tramways. On entendait alors les véhicules cahoter encore dans la nuit d'été, avec leur chargement de fleurs et de morts. (Camus 1972, 207–8)

[In the middle of the night, through the whole of the rest of the summer and beneath the autumn rains, one could see strange convoys of trams without passengers proceeding down the front, rattling along above the sea. Eventually, the people discovered what was going on; and despite patrols preventing anyone from reaching the promenade, some groups did quite often manage to get among the rocks right above the sea and throw flowers into the carriages as the trams went past. One could hear the vehicles still bumping along on a summer's night, laden with flowers and corpses.] (Camus 2002, Part III)

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#### BIBLIOGRAPHY

Aslam, Faheem, Tahir M. Awan, Jabir H. Syed, Aisha Kashif, and Mahwish Parveen. 2020. "Sentiments and Emotions Evoked by News Headlines of Coronavirus Disease (COVID-19) Outbreak." *Humanities and Social Sciences Communications* 7 (1): 1–9.

- Baden, Lindsey R., Hana M. El Sahly, Brandon Essink, Karen Kotloff, Sharon Frey, Rick Novak, David Diemert, et al. 2021. "Efficacy and Safety of the Mrna-1273 Sars-Cov-2 Vaccine." *The New England Journal of Medicine* 384 (5): 403–16.
- Banerjee, Debanjan, T. S. Sathyanarayana Rao, Roy A. Kallivayalil, and Afzal Javed. 2020. "Revisiting 'The Plague' by Camus: Shaping the 'Social Absurdity' of the COVID-19 Pandemic." *Asian Journal of Psychiatry* 54: 102291.
- Bate, Jonathan. 2020. "The Worst Is Not, so Long as We Can Say 'This Is the Worst'." *Lancet* 395 (10235): 1479–80.
- Bos, Rinke, Lucy Rutten, Joan E. M. van der Lubbe, Mark J. G. Bakkers, Gijs Hardenberg, Frank Wegmann, David Zuijdgeest, et al. 2020. "AD26 Vector-Based Covid-19 Vaccine Encoding a Prefusion-Stabilized Sars-Cov-2 Spike Immunogen Induces Potent Humoral and Cellular Immune Responses." *NPJ Vaccines* 5: 91.
- Bozzaro, Claudia. 2018. "Physician-Assisted Dying: Thoughts Drawn from Albert Camus' Writing." *Theoretical Medicine and Bioethics* 39 (2): 111–22.
- Camus, Albert. 1939. *Noces*. Alger: Charlot.
- Camus, Albert. 1947. *La Peste*. Paris: Gallimard.
- Camus, Albert. 1958. *L'Envers et l'Endroit*. Paris: Gallimard.
- Camus, Albert. 1972. *La Peste*. Paris: Gallimard.
- Camus, Albert. 2002. *The Plague*. Translated by Robin Buss. London: Penguin. Tagusbooks.
- Camus, Albert. 2013. *El Hombre rebelde*. Translated by Josep Escué. Madrid: Alianza Editorial.
- CDC. n.d.a. "Plague: Ecology & Transmission." CDC website. Accessed May 5, 2021. <https://www.cdc.gov/plague/transmission/index.html>.
- CDC. n.d.b. "COVID-19: Types of Vaccines Available." CDC website. Accessed May 4, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines.html>.
- Choat, Isabel. 2020. "Travel Industry Fears Covid-19 Crisis Will Cause More Holiday Companies to Collapse." *The Guardian*. <https://www.theguardian.com/travel/2020/sep/10/travel-industry-fears-covid-19-crisis-will-cause-more-holiday-companies-to-collapse>.
- Cui, Yujun, Chang Yu, Yanfeng Yan, Dongfang Li, Yanjun Li, Thibaut Jombart, Lucy A. Weinert, et al. 2012. "Historical Variations in Mutation Rate in an Epidemic Pathogen, *Yersinia Pestis*." *Proceedings of the National Academy of Sciences* 110 (2): 577–82.
- Deudon, Eric H.. 1988. "A Case for Literary Malpractice: The Use of Camus's *The Plague* in American Medical Schools." *The Linacre Quarterly* 55 (2): 73–80.
- Díez, Anabel, and Javier Casqueiro. 2020. "Spanish Health Minister on Pandemic: 'The Situation Is Worrying, Unstable and Fragile.'" *El País* [English version by Simon Hunter]. Accessed October 15, 2020. <https://english.elpais.com/politics/2020-10-15/spanish-health-minister-on-pandemic-the-situation-is-worrying-unstable-and-fragile.html>.
- ECDC. n.d. "Factsheet about Plague." ECDC website. Accessed May 5, 2021. <https://www.ecdc.europa.eu/en/plague/facts>.
- EMA. 2021a. "EMA Recommends COVID-19 Vaccine Janssen for Authorization in the EU." News. <https://www.ema.europa.eu/en/news/ema-recommends-covid-19-vaccine-janssen-authorisation-eu>.
- EMA. 2021b. "AstraZeneca's COVID-19 Vaccine: EMA Finds Possible Link to Very Rare Cases of Unusual Blood Clots with Low Blood Platelets." News. <https://www.ema.europa.eu/en/news/astrazenecas-covid-19-vaccine-ema-finds-possible-link-very-rare-cases-unusual-blood-clots-low-blood>.
- EMA. 2021c. "COVID-19 Vaccine Janssen: EMA Finds Possible Link to Very Rare Cases of Unusual Blood Clots with Low Blood Platelets." News. <https://www.ema.europa.eu/en/news/covid-19-vaccine-janssen-ema-finds-possible-link-very-rare-cases-unusual-blood-clots-low-blood>.
- Finel-Honigman, Irène. 1978. "Oran: Protagonist, Myth and Allegory." *Modern Fiction Studies* 24 (1): 75–81. <https://www.jstor.org/stable/26281974>.
- Fujino, Takahisa, Hidetoshi Nomoto, Satoshi Kutsuna, Mugen Ujiie, Tetsuya Suzuki, Rubuna Sato, Tsuguto Fujimoto, Makoto Kuroda, Takaji Wakita, and Norio Ohmagari. 2021. "Novel SARS-COV-2 Variant in Travelers from Brazil to Japan." *Emerging Infectious Diseases* 27 (4): 1243–45.
- Gupta, Manjul, Amin Shoja, and Patrick Mikalef. 2021. "Toward the Understanding of National Culture in the Success of Non-Pharmaceutical Technological Interventions in Mitigating Covid-19 Pandemic." *Annals of Operations Research*: 1–18.
- Haroutunian, Lulu M.. 1964. "Albert Camus and the White Plague." *MLN* 79 (3): 311.
- Hofstede, Geert. 2015. "The 6-d Model of National Culture." Geert Hofstede website. Accessed April 21, 2021. <https://geerthofstede.com/culture-geert-hofstede-geert-jan-hofstede/6d-model-of-national-culture>.
- Honigsbaum, Mark. 2018. "Spanish Influenza Redux: Revisiting the Mother of All Pandemics." *The Lancet* 391 (10139): 2492–95.
- Hovanec, Caroline. 2011. "Of Bodies, Families, and Communities: Refiguring the 1918 Influenza Pandemic." *Literature and Medicine* 29 (1): 161–81.
- Joint WHO-China Study Team. 2021. "Who-Convened Global Study of Origins of SARS-COV-2: China Part. Joint Who-China Study Team Report." Accessed April 27, 2021. <https://www.who.int/publications/i/item/who-convened-global-study-of-origins-of-sars-cov-2-china-part>.
- Lee, Seow T., and Icha Basnyat. 2013. "From Press Release to News: Mapping the Framing of the 2009 H1N1 a Influenza Pandemic." *Health Communication* 28 (2): 119–32.

- Lengers, Frank P. 1994. "The Idea of the Absurd and the Moral Decision. Possibilities and Limits of a Physician's Actions in the View of the Absurd." *Theoretical Medicine* 15 (3): 243–51.
- Logunov, Denis Y., Inna V. Dolzhikova, Dmitry V. Shcheblyakov, Amir I. Tukhvatulin, Olga V. Zubkova, Alina S. Dzharullaeva, Anna V. Kovyrsina, et al. 2021. "Safety and Efficacy of an RAD26 and Rad5 Vector-Based Heterologous Prime-Boost Covid-19 Vaccine: An Interim Analysis of a Randomised Controlled Phase 3 Trial in Russia." *Lancet* 397 (10275): 671–81.
- Maaravi, Yossi, Aharon Levy, Tamar Gur, Dan Confino, and Sandra Segal. 2021. "The Tragedy of the Commons: How Individualism and Collectivism Affected the Spread of the COVID-19 Pandemic." *Frontiers in Public Health* 9: 627559.
- Mogul, Rhea. 2021. "Mass Cremations as India Faces a Tsunami of Covid-19 Deaths." NBC News. Accessed April 29, 2021. <https://www.nbcnews.com/news/world/mass-cremations-india-faces-tsunami-covid-19-deaths-n1265592>.
- Morello, Carol. 2020. "Field Hospitals Meant for Combat Injuries Converted to Battle the Coronavirus." The Washington Post. Accessed April 30, 2020. [https://www.washingtonpost.com/national-security/field-hospitals-meant-for-combat-injuries-converted-for-use-in-the-battle-against-coronavirus/2020/04/29/590adeca-89a0-11ea-9759-6d20ba0f2c0e\\_story.html](https://www.washingtonpost.com/national-security/field-hospitals-meant-for-combat-injuries-converted-for-use-in-the-battle-against-coronavirus/2020/04/29/590adeca-89a0-11ea-9759-6d20ba0f2c0e_story.html).
- Ozkan, Aydin, Gulcin Ozkan, Abdullah Yalaman, and Yilmaz Yildiz. 2021. "Climate Risk, Culture and the Covid-19 Mortality: A Cross-Country Analysis." *World Development* 141: 105412.
- PLoS Medicine Editors, Virginia Barbour, Jocalyn Clark, Larry Peiperl, Emma Veitch, Mai Wong, and Gavin Yamey. 2008. "False Hopes, Unwarranted Fears: The Trouble with Medical News Stories." *PLoS Medicine* 5 (5): e118.
- Polack, Fernando P., Stephen J. Thomas, Nicholas Kitchin, Judith Absalon, Alejandra Gurtman, Stephen Lockhart, John L. Perez, et al. 2020. "Safety and Efficacy of the BNT162B2 Mrna Covid-19 Vaccine." *The New England Journal of Medicine* 383 (27): 2603–15.
- Pollitzer, Robert. 1954. *World Health Organization Monograph Series, No.22: Plague*. Geneva: World Health Organization. <https://apps.who.int/iris/handle/10665/41628>.
- Public Health England. 2020. "Investigation of Novel SARS-COV-2 Variant. Variant of Concern 202012/01." Accessed April 28, 2021. [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/959438/Technical\\_Briefing\\_VOC\\_SH\\_NJL2\\_SH2.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/959438/Technical_Briefing_VOC_SH_NJL2_SH2.pdf).
- Reiling, Jennifer. 2013. "Science and Newspaper Sensationalism." *Journal of the American Medical Association* 309 (3): 216.
- Santaaulalia, Inés, and Pablo Linde. 2020. "Social Life under Spain's Deescalation Plan: When Can I Expect to Visit Family and Friends?" El País [English version by Susana Urra]. Accessed May 1, 2020. <https://english.elpais.com/society/2020-05-01/social-life-under-spains-deescalation-plan-when-can-i-expect-to-visit-family-and-friends.html>.
- Skopeliti, Clea. 2020. "Coronavirus 19 April: At a Glance. A Summary of the Biggest Developments in the Global Coronavirus Outbreak." The Guardian. Accessed April 20, 2020. <https://www.theguardian.com/world/2020/apr/19/coronavirus-latest-20-april-global-160000>.
- Steel, David. 2016. "Plague Writing: From Boccaccio to Camus." *Journal of European Studies* 11 (42): 88–110.
- Sun, Lena H.. 2021. "Pfizer, Moderna Vaccines Are 90% Effective after Two Doses in Study of Real-Life Conditions, CDC Confirms." The Washington Post. Accessed March 29, 2021. <https://www.washingtonpost.com/health/2021/03/29/vaccine-effective-essential-workers-study>.
- Sun, Wei. 2016. "Plague Vaccines: Status and Future." *Advances in Experimental Medicine and Biology* 918: 313–60.
- Tegally, Houriiyah, Eduan Wilkinson, Marta Giovanetti, Arash Iranzadeh, Vagner Fonseca, Jennifer Giandhari, Deelan Doolabh, et al. 2021. "Detection of a Sars-Cov-2 Variant of Concern in South Africa." *Nature* 592 (7854): 438–43.
- Tuffuro, Akosua N., and Richard Payne. 2017. "Isolation and Suffering Related to Serious and Terminal Illness: Metaphors and Lessons From Albert Camus' Novel, The Plague." *Journal of Pain and Symptom Management* 54 (3): 400–403.
- Vandekerckhove, Wim. 2020. "COVID, Existentialism and Crisis Philosophy." *Philosophy of Management* 19 (2): 127–32.
- Voysey, Meryn, Sue A. C. Clemens, Shabir A. Madhi, Lily Y. Weckx, Pedro M. Folegatti, Parvinder K. Aley, Brian Angus, et al. 2021. "Safety and Efficacy of the Chadox1 NCOV-19 Vaccine (AZD1222) against Sars-Cov-2: An Interim Analysis of Four Randomised Controlled Trials in Brazil, South Africa, and the UK." *Lancet* 397 (10269): 99–111.
- Waterson, Jim. 2020. "Guardian Tops Poll of National Papers for Coronavirus Coverage." The Guardian. Accessed April 28, 2020. <https://www.theguardian.com/media/2020/apr/28/guardian-tops-poll-of-national-papers-for-coronavirus-coverage>.
- Wigand, Moritz E., Thomas Becker, and Florian Steger. 2020. "Psychosocial Reactions to Plagues in the Cultural History of Medicine: A Medical Humanities Approach." *The Journal of Nervous and Mental Disease* 208 (6): 443–44.
- Wilsher, Kim. 2020. "Albert Camus Novel the Plague Leads Surge of Pestilence Fiction." The Guardian. Accessed March 28, 2020. <https://www.theguardian.com/books/2020/mar/28/albert-camus-novel-the-plague-la- peste-pestilence-fiction-coronavirus-lockdown>.
- Withington, Phil. 2020. "Journal of a Plague Year." *The Lancet* 395 (10239): 1754–55.
- Zaretsky, Robert. 2020. "The Unwilling Guide: Camus's the Plague." *Social Research: An International Quarterly* 87 (no.2): 297–98. <https://muse.jhu.edu/article/764873>.
- Zhang, Yanjun, Gang Zeng, Hongxing Pan, Changgui Li, Yaling Hu, Kai Chu, Weixiao Han, et al. 2021. "Safety, Tolerability, and Immunogenicity of an Inactivated SARS-CoV-2 Vaccine in Healthy Adults Aged 18–59 Years: A Randomised, Double-Blind, Placebo-Controlled, Phase 1/2 Clinical Trial." *The Lancet. Infectious Diseases* 21 (2): 181–92.