Pandemic preparedness and cooperative justice

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Abstract

By examining the global public good nature of pandemic preparedness we can identify key social justice issues that need to be confronted to increase citizens' voluntary compliance with prevention and mitigation measures. As people tend to cooperate on a voluntary basis only with systems they consider fair, it becomes difficult to ensure compliance with public health measures in a context of extreme inequality. Among the major inequalities that need to be addressed we can find major differences in the extensiveness and intensiveness of quarantine experiences, lack of opportunities to participate in common efforts, hardship in complying with disease control recommendations, and an unfair distribution of the cooperative surplus.

KEYWORDS

COVID-19, healthcare system resilience, social justice, public goods, communicable diseases

1 INTRODUCTION

In a world of extreme inequalities, the risks and benefits that come along with global interconnectedness are unjustly distributed. While the richer part of the world enjoys the benefits of intercontinental travel and trade, only a fraction of the poor benefits from such interactions through additional jobs and imported goods. There is also a great disparity in how burdensome the public health hazards of such interactions are experienced. In the case of infectious diseases, the rich have access to clean running water to increase hygienic measures, are better equipped to isolate themselves to avoid contact with potential carriers and are much likelier to have access to healthcare facilities for diagnosis and treatment. The poor by definition have no or little disposable income to bridge emergencies, live in more crowded and confined spaces, and usually work under conditions where social distancing is impossible. Dissimilarities in the degrees of vulnerability and in the ability to shield from exposure to such diseases comes with a different sense of urgency as to when to implement preventive measures. The poor generally benefit from early containment and the implementation of strict quarantines after crossing international and regional borders, while the rich often take advantages from delaying such measures. For example, after weighing costs and benefits, inhabitants of poorer coastal villages draw a clear benefit from closing their villages to tourists coming from major cities who are likely to just have arrived from international travels. The disadvantages are even clearer when rich urban travelers do not shop or eat in locally-owned businesses and when much healthcare expenses are paid out of pocket. As this single example reveals, the social justice implications of this uneven distribution of risks and benefits in relation to pandemics are abundant.

To gain an understanding of the scope and nature of these injustices, I proceed by offering a closer examination of the challenge of building pandemic preparedness capabilities through a public goods perspective. This should allow us to identify a wider array of social justice issues that need to be confronted to gain wider compliance and participation among the general population with pandemic preparation and mitigation efforts directed by public authorities. As we are currently witnessing with the difficulties in containing COVID-19, we urgently need to rethink how to conceptually interpret pandemic preparedness and the underlying liberties and obligations for States and individuals. There is a strong scientific consensus on the fact that the resurgence of new or mutated diseases is just a matter of time and that we need to be better prepared in terms of infrastructure, human resources, scientific knowledge, policy guidelines and collaboration networks to handle future disease outbreaks.[1] Currently most countries are ill equipped to prevent, detect

[1]Selgelid, M. J., et al. (2009). Infectious disease ethics: Limiting liberty in contexts of contagion. *Journal of Bioethical Inquiry. 6*(2), 149-152.

and rapidly respond to new communicable diseases.[2] We cannot expect pandemic preparedness to grow spontaneously, henceforth we need to learn from past lessons and improve the willingness to cooperate with authorities well in advance to be ready for upcoming public health challenges and not ignore possible future threats just after we barely manage to escape earlier ones.[3,4] This effort should also include the development of ethical concepts and guidelines[5] and the building of templates based on public consultations[6] to speed-up ethical decision-making in the future. The aim of this article is to contribute to this effort by providing an examination of the public good nature of pandemic preparedness and its ethical implications.

2 PANDEMIC PREPAREDNESS AS A PUBLIC GOOD

Pandemic preparedness can be defined as "the *ability* to anticipate, detect, respond effectively and cost-effectively to, and recover from, health events or conditions of an emergent or imminent nature."[7] This requires a collective effort that cannot succeed by governmental actions alone and requires the active cooperation of the general population. To make sure society is prepared for a pandemic, governments have to secure a bundle of goods, among which we may count: (i) good coverage of medical infrastructure, (ii) sufficient healthcare workers with appropriate equipment and training, (iii) effective public communication and education channels, (iv) public health monitoring and diagnosis, and (v) responsive and trustworthy leadership.[8] As pandemics by definition affect a large region or the world, international cooperation becomes crucial to contain and eradicate the disease.[9,10] Yet beyond the obligations of States in view of securing the human right "to the enjoyment of the highest attainable standard of physical and mental health",[11] pandemic preparedness demands that people as individuals embrace moral obligations and commitments to do their share to confine the disease. This dependency on the cooperation of other individuals and other States brings in the classic free-rider problems and distributive justice issues we can observe in the studies of public goods.[12] Moreover, the less willing citizens are to cooperate, the more invasive to privacy and civil liberties governmental actions need to be to contain the disease.

Pandemic preparedness can be considered a public good, as it shares with this type of good several characteristics. To start with, pandemic preparedness reveals the two standard features highlighted in economic literature[13]:

- Non-excludability. As long as people move around and there are organisms that act as disease vectors, non-contributors cannot be excluded from the benefits of establishing this public good.
- Non-rivalry. After measures to prepare society to avoid and mitigate the effects of pandemics are in place, they can be considered a good everyone can benefit from. Effective measures can be "consumed" by all simultaneously.

In addition, we can observe four other attributes frequently associated with public goods:

- A public good requires "jointness of production", that is, it necessarily requires a large number of participants to be established.[14] In other words, it is a good that only allows a limited number of free-riders. The disease transmission rate and form will determine the upper limit of the number of people who do not (or cannot) cooperate.
- The public good to be established has to be indeed considered "good" in the sense of having beneficial effects on all.[15] Pandemic preparedness can bring unwelcome consequences when such good exacerbates existing inequalities, for example, by distributing the burdens of quarantine unevenly by limiting without compensation the exercise of certain types of jobs to reduce the contagion rate.
- Another characteristic of public goods is that they need to become public regarding disclosure and inclusiveness. In other words, they need to be part of the public sphere in contrast to

[2]Cameron, E. E., Nuzzo, J. B., & Bell, J. A. (2019). *Global Health Security Index: Building Collective Action and Accountability*. Washington & Maryland: NTI & John Hopkins Center for Health Security.

[3]Jacobsen, K. H. (2020). Will COVID-19 generate global preparedness? *The Lancet. 395*, 1013-1014.

[4]Editorial. (2020). COVID-19: remaking the social contract. *Lancet. 395*, 1401. http://doi.org/10.1016/S0140-6736(1020)30983-30981

[5]Smith, M. J., & Silva, D. S. (2015). Ethics for pandemics beyond influenza: Ebola, drug-resistant tuberculosis, and anticipating future ethical challenges in pandemic preparedness and response. *Monash Bioethics Review. 33*(2-3), 130-147.

[6]Smith, M. J., & Upshur, R. (2019). Pandemic Disease, Public Health, and Ethics. In A. C. Mastroianni, J. P. Kahn, & N. E. Kass (Eds.), *The Oxford Handbook of Public Health Ethics* (pp. 797-811). New York: Oxford University Press.

[7]Ruger, J. P. (2020). Positive Public Health Ethics: Towards Flourishing and Resilient Communities and Individuals. *The American Journal of Bioethics. 20*(7), 44-54. https://doi.org/10.1080/15265161.2020.1764145, p. 49.

[8]Cf. Gostin, L. O., Friedman, E. A., & Wetter, S. A. (2020). Responding to COVID-19: How to Navigate a Public Health Emergency Legally and Ethically. *Hastings Center Report. 50*(2), 8-12.

[9]WHO. (2005). *International Health Regulations* (3rd edition ed.). Geneva: World Health Organization.

[10]Ruger, op. cit. note 7.

[11]UN Committee on Economic, Social and Cultural Rights. (2000). *General Comment No. 14: The right to the highest attainable standard of health (article 12 of the International Covenant on Economic, Social and Cultural Rights).* Retrieved August 4, 2020, from: https://digitallibrary.un.org/record/425041/files/E_C.12_2000_4-EN.pdf.

[12]Anomaly, J. (2011). Public health and public goods. *Public Health Ethics. 4*(3), 251-259.

[13]Feachem, R. G., & Medlin, C. A. (2002). Global public goods: health is wealth. *Nature. 417*(6890), 695.

[14]Waldron, J. (1987). Can Communal Goods Be Human Rights? *European Journal of Sociology. 28*(2), 296-322.

[15]Dees, R. H. (2018). Public Health and Normative Public Goods. *Public Health Ethics. 11*(1), 20-26.

being a private matter.[16] Under such understanding it would not be irrelevant how such public good is to be established, it needs to be developed through open processes. Transparency would not only be valued for instrumental reasons but for its intrinsic value.
- Pandemic preparedness is also a normative public good in the sense that nobody ought to be excluded from benefiting from this good (even when possible).[17,18] Human rights laws prohibit draconian measures such as exiling non-contributors to an empty island or similar.

Lastly, the strong reliance on citizens' commitments invites us to consider some attributes that are primarily associated with commons or common-pool resources[19]:

- Decision-making should be reached in an open, inclusive, informed and transparent manner, with ample room to give feedback, voice concerns and offer suggestions.
- Universal norms: The guidelines need to apply for all and exceptions to these rules must be well-justified.
- There needs to be an effort towards community-building, allowing the expression of shared values and virtues, such as solidarity and companionship.

To develop the capacity to limit the spread and the hazards of disease propagation as a public good, especially as a global public good, States need to urgently realign their responses to meet the goals of international cooperation envisaged in the International Health Regulations (IHR)[20] and build a stronger sense of global solidarity among their citizens. For instance, States should not concentrate on closing borders to not allow people to come legally into the country, but would rather pay attention that people undergo adequate screening and have the means to comply with quarantines to avoid that the outbreak reaches other locations.[21] They should follow such international norms[22] not only for the humanitarian reason of avoiding to contaminate other regions, but also for the prudent reason of not risking that the pathogen comes back in the country once the disease is locally controlled.

Experiences with past outbreaks show that whenever individuals and communities were meaningfully engaged and empowered they played an essential role in containing the disease.[23] Without rescinding governmental responsibilities, an advantage of understanding pandemic preparedness as a public good is that such conceptualization can give the wider public a greater role in establishing this good and helps to argue for a fairer distribution of costs and benefits. Furthermore, widescale voluntary compliance reduces the need to invade people's privacy by closely monitoring their activities and displacement.

To not overburden people, irrespective of their status as key-workers, it is therefore crucial that citizens are informed about the need and advantages of establishing the public good (i.e. pandemic preparedness) and the steps that need to be taken, including their expected contributions, the measures others are taking, the progress and delays, and the actions they should avoid, to gain their support on public health interventions and ensure continuous participation.

Pandemic preparedness requires maintaining the willingness to cooperate over longer periods of time, which can be quite burdensome and slowly develop a state of apathy. To speed up processes and reduce over-demandingness we need a fairer distribution of burdens and benefits. To do so, we will examine the different inequalities among the citizenry that need to be addressed as a matter of cooperative justice when establishing this public good.

3 WHY DOES COOPERATIVE JUSTICE MATTER FOR PANDEMIC PREPAREDNESS?

Cooperative justice demands a fair distribution of costs in creating and maintaining a public good and requires that any benefits resulting from such a cooperative undertaking be fairly shared.[24] The COVID-19 pandemic has shown that the burdens each citizen needs to carry to make their contribution towards the establishment of the public good of pandemic preparedness are unjustly distributed. During the early stage of the outbreak we observed some common complaints in social media concerning the distribution of costs: Who pays for diagnosis? Here both the individual and the public has an interest in the results. Is there paid leave from work? Emergency public health measures jeopardize some forms of livelihood and not others.

The lack of guidelines[25] and clarity at an early stage on who assumes costs make it particularly difficult for low- and middle-income earners to comply with best practices when it comes to responding to public health interventions and make the necessary arrangements to facilitate economic and social recovery. Governments in most countries took too much time (if they did at

[16]Rabotnikof, N. (2005). *En Busca de Un Lugar Común. El Espacio Público En La Teoría Política Contemporánea*. México, DF: UNAM, Instituto de Investigaciones Filosóficas.

[17]O'Neill, J. (2001). Property, Care, and Environment. *Environment and Planning C: Government and Policy. 19*, 695-711.

[18]Dees, R. H. (2018). Public Health and Normative Public Goods. *Public Health Ethics. 11*(1), 20-26.

[19]Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge: Cambridge University Press.

[20]Gostin, L. O., Habibi, R., & Meier, B. M. (2020). Has Global Health Law Risen to Meet the COVID-19 Challenge? Revisiting the International Health Regulations to Prepare for Future Threats. *Journal of Law, Medicine & Ethics. 48*(2), 376-381.

[21]Hoffman, S. J., & Fafard, P. (2020). Border Closures: A Pandemic of Symbolic Acts in the Time of COVID-19. In C. M. Flood, et al. (Eds.), *Vulnerable: the law, policy & ethics of COVID-19* (pp. 555-569). Ottawa: University of Ottawa Press.

[22]See IHR (2005), on exit screening and restrictions Article 18.1, and on travellers Article 31 and Article 32.

[23]Yamin, A. E., & Habibi, R. (2020). Human Rights and Coronavirus: What's at Stake for Truth, Trust, and Democracy? *Health and Human Rights Journal* (March 1).

[24]This definition is taken in abstract form from Van Parijs, P. (2011). *Linguistic justice for Europe and for the world*. Oxford ; New York: Oxford University Press.

[25]This has been even referred to as "COVID fog", see Huxtable, R. (2020). COVID-19: where is the national ethical guidance? *BMC Medical Ethics. 21*:32. https://doi.org/10.1186/s12910-020-00478-2.

all) to provide some basic assistance so that their citizens could meet subsistence needs. This not only triggers questions of fairness but also casts doubt on the effectiveness of public health measures when large groups of citizens are likely to end up ignoring recommendations. Often it is specifically those people who work in service with a high rotation of clients and patients (e.g. catering, service counter, nurses) who are most vulnerable and have the worst means to adapt their behavior.

Assessing such inequalities merely as consequences of low financial means will not provide a broad enough understanding of why public health measures that affect people differently are often perceived as unfair. While responding to a pandemic, we can observe inequalities in terms of:

- Extensiveness: duration of social distancing mandates and quarantines
- Intensiveness: strictness, degree of isolation and available facilities during lockdowns
- Opportunities to comply with measures and to provide assistance
- Being target of transparency and communication measures
- Promotion of shared values and identity
- Benefiting from cooperative arrangements

In how far inequalities in terms of burdens and opportunities are perceived as unfair varies according to subjective (risk awareness, sociability) and objective (resources) factors. Inequalities are not categorically wrong, we have plenty of differential treatments that are widely accepted, for instance progressive taxation or exemptions for low-income earners and parents. As long as they do not discriminate against specific individuals or groups arbitrarily or on immoral grounds, we need additional arguments to claim that they are wrong. However, when differential treatment and burdens are not well-justified or are indefensible, it may lead to non-compliance. There is an innate tendency to avoid cooperating with people and institutions who are considered unfair.[26,27,28] People might only voluntarily do their share to establish a public good when they subjectively consider the cooperative venture as fair.

Pandemic preparedness is highly dependent on voluntary cooperation with public health measures and institutions. There are major limits in enforcing cooperation through penalties. Penalties will also not restore the damage done. Policing is costly and intrusive, it may not be cost-effective or even be counterproductive. Large-scale non-compliance limits the ability to penalize effectively. For instance, if we institute legal liability for coming in sick to work, low-paid restaurant workers may end up choosing between the lesser evil, risking punishment and moral guilt for exposing others before losing their means of subsistence. Furthermore, as criminal laws have usually some knowledge requirement, for example knowing that one carries a contagious disease, it may discourage testing.[29] In terms of social justice, we need to recognize that such measures will disproportionately affect the poor, who are less able to afford protective gear, are dependent on public transportation to go to work, are more prone to break quarantine to gather income to cover basic needs and live in much more confined spaces.[30]

Let us revise the different factors identified as inequalities in more detail.

3.1 Inequalities In The Exposure To Quarantines

The duration of lockdowns will depend not only on the discipline and circumstances of individuals, but also on the ability and will of neighbors and co-workers to comply with the public health measures and recommendations. People can end up worse off due to factors that are outside their control. Moreover, a government's refusal or slowness to adjust measures to new developments may also extend the periods of confinement.

In most households, space constraints do not allow to safely isolate a single family member in a separate room if infected or required to quarantine, thereby obligating the rest of the family to self-isolate as well. When diagnosis capacity is limited, this may lead to longer periods of quarantine if family members become risk factors on separate instances.

In countries where testing is subject to fees, low- and middle-income residents may need to self-isolate as a precautionary measure when they do not have sufficient means to pay for diagnosis. As people are showing such different reactions to COVID-19 strains, there is no certainty to know without diagnosis, with the exception of chronic cases, whether one already had the disease or not. As a consequence, people would have to self-isolate upon every major suspicion, extending considerably their time in quarantine. As of July 2020, there is no certainty about an immunity to re-infections[31], which increases the need to self-isolate as a precautionary measure.

Lack of resources may also make protective gear inaccessible, thus increasing the number of cases where it would be morally desirable to undergo a preventive quarantine. As many essential workers are low-paid and often need to purchase their protective equipment with their own means, they are much more likely to face suspicious cases as they have frequent contact with strangers and often work in poorly isolated buildings or outside, risking catching common flus and thus complicating self-diagnosis.

[26]Dodds, W. K. (2005). The Commons, Game Theory and Aspects of Human Nature That May Allow Conservation of Global Resources. *Environmental Values*. *14*, 411-425. https://doi.org/10.3197/096327105774462683.

[27]Ooms, G. (2010). Why the West is perceived as being unworthy of cooperation. *Journal of Law, Medicine and Ethics*. *38*(3), 594–613. https://doi.org/10.1111/j.1748-720X.2010.00514.x.

[28]Ruger, J. P. (2015). Governing for the common good. *Health Care Analysis, 23*(4), 341-351.

[29]Skinner-Thompson, S. (2020, March 27). Don't Criminalize COVID-19. *Slate*. Retrieved August 11, 2020, from https://slate.com/news-and-politics/2020/03/criminalize-coronavirus-hiv-stigma.html.

[30]Ibid.

[31]York, A. (2020). Can COVID-19 strike twice? *Nature Reviews Microbiology*. https://doi.org/10.1038/s41579-020-0424-x.

Such vast inequalities in terms of the duration of social-distancing and quarantine measures may reduce the discipline with which such obligations and recommendations are followed or even lead to non-compliance. The imposition of quarantines on a district basis allows comparison among neighbors and has an arbitrariness component. Such selective quarantines may also exacerbate class differences and racial injustices, when authorities decide to restrict civil movement in neighborhoods where low-paid keyworkers predominantly live. Social media may make it even more difficult to maintain discipline while others are enjoying freedom.

3.2 Unequal Burdens During Quarantines

Some people will face far more intensive struggles as closures jeopardize their livelihood and their way of life, and expose them to new forms of vulnerability as safe harbors close down. The decision particularly within small business to let employees go comes also with a substantial moral weight.

While from a public health perspective the outbreaks of pandemics are something scientists expect, it is not something we usually would expect the average citizens to be prepared for. It is one of the tasks citizens assume their government is handling in accordance with their internationally binding commitments. Under such a perspective we cannot blame people for the burden they face during a pandemic due to their bad choices. People whose business are unaffected or even prosper in times of public health emergencies do so more often out of luck than foresight. To take an example, restaurants who focus on fresh slow food require more complex labor and delivery arrangements than those selling industrially processed food. It is also in the interests of public health that the formers are able to maintain their businesses.

When it comes to assessing the intensity of quarantine experiences we need to recognize that there is ample variation on how the confinement is subjectively and objectively experienced. While many parents are collapsing under the stress of balancing the work involved in childrearing with their professional duties, this does not mean that childless people do not have any care obligations or that they are not struggling with the drastic switch from a social extramural lifestyle away to a solitary inhouse confinement. There is no strict correlation between a specific lifestyle and the capacity people develop to confront the states of anxiety, depression, solitude (or lack of privacy) and uncertainty that come with a pandemic event. In addition, people generally decide to live together in view of normal circumstances and rarely foresee in their planning special events that would impede them to have periodic breaks away from each other. In terms of health policies, it is important to identify the cases where people show a high level of distress, as it is the subjective experience that is decisive to comply or deviate from health measures. Adequate health policies need to acknowledge that people have diverse lifestyles and are exposed to different pressures.

It also needs to be recognized that people who obey quarantine restrictions fulfil both private and public interests. As individuals they reduce their chances in getting the disease, but at the same time they are requested to provide the public service of avoiding to be disease vectors and of facilitating screening efforts by helping to keep a disease within a certain geographic range. While individuals may have a strong interest not to disperse disease, we do have to recognize their effort in collaborating with disease containment. Uncertainty about how to meet basic needs and maintain quality of life may drastically intensify the quarantine experience.[32] The sacrifice citizens make should be compensated when others draw benefits from it.[33,34] Moreover, particularly in the Global South, COVID-19 might be just one of the many risk factors people face.[35] When other risk factors, such as domestic violence, hunger, civil unrest and other more dangerous diseases, become a greater threat, people will change or skip their precautions to confront the largest threat. Therefore, for the sake of justice and health security, it is crucial that people are endowed with the resources they urgently need to comply with public health measures.[36]

While there are strong arguments to compensate people who are in lock-down to control a disease outbreak for lost income, this recommendation clashes with political feasibility if the outbreaks become more extensive and more people need to be compensated for their losses.[37] In a few countries, governments have stepped in to assist substantially some of the workers affected by the measures, usually leaving migrants and people without formal work contracts on their own. A strategy to reduce the burden of self-containment, and to acknowledge the fact that we are all part of the effort to limit the spread of the disease, is to offer an unconditional basic income for the time the public health emergency lasts (or implement such type of income on a permanent basis[38]) independently of citizenship status. This income should not be too modest, as economic research on poverty shows that people generally spend part of their income, no matter how low, on non-essential goods and will not content themselves with just securing their basic needs.[39] Failing to provide resources for the occasional small luxury may have as a consequence

[32]Pūras, D., et al. (2020). The right to health must guide responses to COVID-19. *Lancet, 395*, 1888–1890.

[33]Holm, S. (2009). Should persons detained during public health crises receive compensation? *Journal of Bioethical Inquiry. 6*(2), 197-205.

[34]Selgelid, M. J. (2009). Promoting justice, trust, compliance, and health: the case for compensation. *The American Journal of Bioethics. 9*(11), 22-24.

[35]Broadbent, A., et al. (2020). Lockdown is not egalitarian: the costs fall on the global poor. *The Lancet. 396*, 21-22. https://doi.org/10.1016/S0140-6736(20)31422-7.

[36]Holm, S. (2020). A general approach to compensation for losses incurred due to public health interventions in the infectious disease context. *Monash Bioethics Review.* https://doi.org/10.1007/s40592-020-00104-2.

[37]Holm, S. (2009). Should persons detained during public health crises receive compensation? *Journal of Bioethical Inquiry. 6*(2), 197-205.

[38]Torres Quiroga, M. (2020). Repensando la renta básica, el apoyo mutuo y el género durante la pandemia de la COVID-19 en México. *Revista de Bioética y Derecho. 50*, 239-253. https://doi.org/10.1344/rbd2020.50.31829.

[39]Banerjee, A. V., & Duflo, E. (2011). *Poor Economics: rethinking poverty & the ways to end it*. New Delhi: Penguin Random House India.

that people may break quarantine to meet unfulfilled strong desires.

Lockdowns may increase burdens on women and girls. A fair division of the housework load is in too many instances not the rule. In addition, during health emergencies women generally tend to be the ones providing the additional care work of sick relatives, they are more likely to work in the informal sector, and their valuables tend be sold first to compensate for lost income.[40] Another alarming issue is the increased exposure to domestic violence particularly women and girls face during quarantines.[41] Lockdowns prevent victims from seeking help and make it much more difficult for outsiders to identify the cases where they need to intervene. As men draw a higher benefit from quarantines due to their higher vulnerability to COVID-19, the situation where women suffer more from lockdowns demands urgent governmental action.

To prevent the erosion of the public good of pandemic preparedness, it is crucial that an outcome that resembles inverted progressive taxation is prevented. Those who have the highest burdens in absorbing the shocks of a pandemic should not end up paying proportionally to their assets the most. People who face very severe burdens during pandemics in comparison to others may be tempted to make small exceptions during their quarantine under the belief that only the few people who face similar struggles are allowed to take the health measures less strictly. The belief of making a disproportionate sacrifice for the common cause may serve as an excuse to justify deviation.

3.3 Opportunities To Comply With Measures And Provide Assistance

It is often impossible or very difficult to not expose others during a pandemic, especially in the case of COVID-19, when there are not sufficient accurate diagnosis tests available to know when to self-isolate taking extreme precautions. Furthermore, for many social distancing is not always possible and protective gear is often inaccessible or unavailable. Yet the wealthier part of the population has far better means to comply with social distancing, is likelier to switch over to online work[42] and often manages to get access to scarce protective gear and diagnosis tests. From a moral perspective, there is a strong case for arguing that we do not have the freedom to be part of a contagion chain and that we therefore need to take action to avoid harming others.[43,44] This puts substantial pressure on the poor, as most people want to exercise the virtues of benevolence and compassion, which is furthermore required by many religious doctrines, moral perspectives and worldviews. The inability to comply with good practice and social expectations, especially during urgencies, can be seen as a form of deprivation.[45]

During public health emergencies many people seek to cooperate with efforts to respond to the exceptional situation that go far beyond moral mandates to avoid harming others. One of the demands of contributive justice, for instance, seeks to offer people opportunities to contribute to the greater good.[46] Similarly, Martha Nussbaum has identified the ability to show concern for others as a central human capability.[47] Arguably, this goes beyond merely showing emotional support through social media, but requires to be able to actively do something to help remediate the situation of those who are suffering. The fact that there are plenty of people who want to express their goodwill should not serve as an excuse to not do every reasonable effort to reduce their exposure to risks when continuing to provide essential services and assisting the needy by delivering supplies and offering care. We may glorify the heroic effort of nurses who continue to work despite the risk with nothing else to protect themselves other than plastic bags. Reflecting on such efforts has however a bitter aftertaste as we realize that the outbreak of such public health emergencies were a known scientific fact and that middle- and higher-income countries count with plenty of resources to prepare for such events. If pandemic preparedness comes with the sacrifice of a significant number of people due to the failure to secure a relatively minor amount of resources to make protective gear proactively available, we cannot really speak of a jointly-produced public good where everyone did their share under the current context of extreme inequality. Furthermore, in a democratic society we as taxpayers failed to elect politicians who announced to collect sufficient taxes and align priorities to ensure our health system and the provision of other essential services are resilient to foreseeable disasters without needlessly compromising the safety of key workers.[48] Under today's circumstances, the price being paid to confront the COVID-19 pandemic does not reveal a sufficient rate of social

[40]Agarwal, B. (2020). COVID-19 and lockdowns. Retrieved May 11, 2020, from https://www.wider.unu.edu/publication/covid-19-and-lockdowns.

[41]Torres Quiroga, M. (2020). Repensando la renta básica, el apoyo mutuo y el género durante la pandemia de la COVID-19 en México. *Revista de Bioética y Derecho. 50*, 239-253. https://doi.org/10.1344/rbd2020.50.31829.

[42]Marmot, M., & Allen, J. (2020). COVID-19: exposing and amplifying inequalities. *Journal of Epidemiology and Community Health*. https://doi.org/10.1136/jech-2020-214720.

[43]Bublitz, C. (2020, April 9). Es gibt keine Freiheit, Teil einer Infektionskette zu sein: Solidarität und Pflicht in der Pandemie. Retrieved April 9, 2020, from https://www.praefaktisch.de/covid-19/es-gibt-keine-freiheit-teil-einer-infektionskette-zu-sein-solidaritaet-und-pflicht-in-der-pandemie.

[44]Matose, T., & Lanphier, E. (2020). Rights Don't Stand Alone: Responsibility for Rights in a Pandemic. *The American Journal of Bioethics. 20*(7), 169-172. https://doi.org/10.1080/15265161.2020.1779405.

[45]Wolff, J., & de-Shalit, A. (2007). *Disadvantage*. Oxford & New York: Oxford University Press.

[46]Timmermann, C. (2018). Contributive Justice: An Exploration of a Wider Provision of Meaningful Work. *Social Justice Research. 31*(1), 85-111. https://doi.org/10.1007/s11211-017-0293-2.

[47]Nussbaum, M. C. (2006). *Frontiers of justice : disability, nationality, species membership*. Cambridge, Mass.: The Belknap Press : Harvard University Press.

[48]Cf. Schuklenk, U. (2020). The ethical challenges of the SARS-CoV-2 pandemic in the global south and the global north–same and different. *Developing World Bioethics. 20*(2), 62-64.

cohesion where everyone is treated as equals and nobody is put at risk due to minor cost-saving policies.

A broader understanding of pandemic preparedness as a public good, as envisioned in the IHR, demands that we ensure that people are sufficiently well endowed to cope with the harshness of preventive and mitigative measures and that means are available to allow people to do their share in limiting the spread of disease with sufficient ease. When individual liberties are sacrificed for the public good, the state should make it easier for people to comply with measures, for practical reasons, to fulfill legally binding international obligations and as a matter of justice.[49,50] This demands to improve their coping ability, by ensuring running water supplies, preventing the exposure to multiple hazards (such being malnourished), increasing sanitization of public transportation, providing protective gear, facilitating food supplies, communicating essential information, among others.

The prompt implementation of drastic measures needs to consider its effect on all people, including the highly numerous poorer workers. Do people have shelter? Do people depend on what they earn during the day to feed themselves? Here the complete detachment of political elites to the needs and circumstances of a massive number of their citizens is extremely worrying.[51] As a matter of justice and health security, public health authorities should not fail to respond to the needs of vulnerable groups, such as the homeless, refugees and migrant workers.[52]

Under a public goods perspective, the jointness-of-production requirement does not only highlight the difficulty of establishing the good without widescale public participation, but also suggests a moral mandate for each person to contribute according to their capacity to the realization of the good. A society is better prepared for a pandemic event when their members notify possible health hazards, continue to provide key services, assist vulnerable people in their community and take the necessary precautions to minimize disease transmission. The widely diffused condemnation of free-riding adds even more guilt for failing to participate in such common efforts.

3.4 Transparency And Communication For All

A key requirement of pandemic preparedness is that authorities adequately inform the public about the nature of the threat. This is a major challenge as it is precisely at the early stage of a pandemic, where knowledge and data about the pandemic is poor and insufficient, that important public health decisions need to be drawn.[53] An exaggeration of claims may come at the risk of reducing future cooperation and unjustly limiting people's freedom. Underplaying risks[54] will be condemned by citizens claiming that they would have taken the measures more seriously if they were adequately informed of the risks. Uncertainties need to be explicitly acknowledged while issuing recommendations and obligations.[55,56] Rules and recommendations need not only to be transparent but also well-justified.[57] This applies to both, the certainty of scientific evidence and the ethical justification of the different policies that are being implemented.[58] People have a fundamental right that the rules that limit their freedom and specify obligations be well-justified and publicly accessible,[59] which is of special concern for the highly intrusive public health regulations during pandemics. Furthermore, governments need to show that they are following best scientific practice and are implementing from all suggested strategies the one least invasive to civil liberties and privacy.[60] Although rules and recommendations can be adapted to special circumstances, people need to see that the rules apply to all and that the exceptions are reasonable and acceptable.[61]

States with linguistic diversity need to increase public awareness by translating materials into local languages, with special attention to indigenous languages, and offer the information through various means,[62] to facilitate access for people with hearing or sight impediments and insufficient reading capacity. Governments also have the responsibility to improve citizens' health literacy, by preventing the diffusion of false information, clarifying common mistakes, warning against the use of unproven or unsafe substances, and help prevent

[49]Sheather, J. (2020). Coronavirus and the ethics of quarantine— why information matters. Retrieved April 6, 2020, from https://blogs.bmj.com/bmj/2020/02/17/coronavirus-and-the-ethics-of-quarantine-why-information-matters/.

[50]Loewe, D. (2020). *Ética y coronavirus*. Santiago de Chile: Fondo de Cultura Económica.

[51]Timmermann, C. (2020). Epistemic ignorance, poverty and the COVID-19 pandemic. *Asian Bioethics Review*. https://doi.org/10.1007/s41649-020-00140-4

[52]Silva, D. S., & Smith, M. J. (2020). Social distancing, social justice, and risk during the COVID-19 pandemic. *Canadian Journal of Public Health. 111*. 459–461.

[53]Undurraga, E. A. (2020). Commentary: Challenges to Achieve Conceptual Clarity in the Definition of Pandemics. *Cambridge Quarterly of Healthcare Ethics. 29*(2), 218-222.

[54]For the Latin American case, see Litewka, S. G., & Heitman, E. (2020). Latin American healthcare systems in times of pandemic. *Developing World Bioethics. 20*(2), *69*-73. https://doi.org/10.1111/dewb.12262.

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[60]WHO. (2005). *International Health Regulations* (3rd edition ed.). Geneva: World Health Organization.

[61]Emanuel, E. J., et al. (2020). Fair Allocation of Scarce Medical Resources in the Time of Covid-19. *New England Journal of Medicine. 382*, 2049-2055. https://doi.org/10.1056/NEJMsb2005114

[62]Martinez Cruz, T. E. (2020). Resisting in the mountains in Mexico: using territory and self-determination to resist COVID-19. Retrieved May 6, 2020, from https://casasouth.org/resisting-in-the-mountains-using-territory-and-self-determination-to-resist-covid-19/.

the stigmatization of those infected and health workers.[63] Citizens should gather their information from reliable sources and fact-check the information they share with others.

As far as scientific and political cooperation goes, it is important to recall that one of the key benefits of cooperation is the advantage gained by sharing information and pooling knowledge on common concerns.[64] One of the key aims for having implemented and revised the IHR was to facilitate information sharing. It is crucial that individuals, institutions and governments trust that they can provide vital information without major reprisals, otherwise we forgo one of the key advantages of interconnected societies.[65] It would be counterproductive to be harsh on someone who informs medical authorities of her wide social activities while having mistaken COVID-19 symptoms with a common flu. Moreover, observations and concerns on public health matters brought up by people from all walks of life need to be handled with respect and examined on a non-discriminatory basis to improve detection capacities and anticipate possible threats. Yet the COVID-19 crisis has shown that hierarchical structures and fears of reprisals are still hindering timely notification and adequate information exchange with public health authorities.[66]

Communication strategies need to recognize the highly unequal burdens of quarantines and social distancing measures among the population.[67] It is wise to not tiring people by overextending the period of exceptionalism as they may develop a general apathy to the state of alert and lower their precautions during the most critical times.

3.5 The Promotion Of Shared Values And Identity

A reluctance to cooperate cannot be condemned without considering existing social arrangements.[68,69] Cooperation partners need to be worthy of cooperation, something difficult to realize when people from poorer areas see themselves as abandoned or when the youth condemns the lack of action from the older generation in areas that particularly concern them, such as mitigating climate change. Young people grow up hearing about the many ways climate change will impact the lives of millions in the future, including their own, and rarely see appropriate action. When appealing to intergenerational solidarity any eventual lack of compliance among the youth comes as no surprise.

Establishing a public good of universal interest – especially one demanding universal participation – comes with a moral mandate asking everyone to do their fair share and to make comparable sacrifices. This social cohesion is missing. For instance, we can observe a clear repulsion among large population segments over statements claiming that "we are all in this together." Celebrities attempting to show empathy and express a sense of shared vulnerability by posting pictures of their quarantine experiences in luxurious oversized houses have backfired, as it reveals how unequal the burdens of self-isolation are distributed. Early data on the vast differences on how the coronavirus is affecting minorities, particularly among the black and Latino population in the United States,[70] or people with black, Asian and minority ethnic background in the United Kingdom,[71] shows once again that racial injustice continues to be prevalent and increases even further the mistrust within these population groups towards governmental authorities. Distrust should not be hastily seen as irrational and historical injustices need to be truthfully acknowledged.[72,73] Citizens' mistrust towards government authorities can slow down efforts to limit a pandemic.[74] This effect was witnessed while confining Ebola in West Africa during the last major outbreak.[75] It seems that a reduced social capacity to confront pandemics is another item we need to add to the price tag for maintaining such vast social inequalities.

On the positive side, when it comes to social cohesion by expressing shared values, we are also witnessing a large number of citizens' initiatives to exercise solidarity and compassion. In a passionately written opinion piece titled "The horror films got it wrong: This virus has turned us into caring neighbours", George Monbiot describes a series of activities people are volunteering for, ranging from students offering childcare for healthcare workers to streets organizing themselves to go shopping for the neighborhood's elderly.[76] We are witnessing a craving to go beyond a

[63]Cf. Afolabi, M. O., et al. (2020). Lessons from the Ebola epidemics and their applications for COVID-19 pandemic response in sub-Saharan Africa. *Developing World Bioethics*. https://doi.org/10.1111/dewb.12275.

[64]Heath, J. (2006). The Benefits of Cooperation. *Philosophy & Public Affairs*. *34*(4), 313-351. https://doi.org/10.1111/j.1088-4963.2006.00073.x.

[65]Noah Harari, Y. (2020, March 15). In the Battle Against Coronavirus, Humanity Lacks Leadership. *Time*. Retrieved April 17, 2020, from https://time.com/5803225/yuval-noah-harari-coronavirus-humanity-leadership/.

[66]Gostin, L. O., Habibi, R., & Meier, B. M. (2020). Has Global Health Law Risen to Meet the COVID-19 Challenge? Revisiting the International Health Regulations to Prepare for Future Threats. *Journal of Law, Medicine & Ethics*. *48*(2), 376-381.

[67]Webster, R. K., et al. (2020). How to improve adherence with quarantine: Rapid review of the evidence. *Public Health*. *182*, 163-169.

[68]Ooms, G. (2010). Why the West is perceived as being unworthy of cooperation. *Journal of Law, Medicine and Ethics*. *38*(3), 594–613. https://doi.org/10.1111/j.1748-720X.2010.00514.x.

[69]Ruger, op. cit. note 7.

[70]Fairchild, A., Gostin, L., & Bayer, R. (2020). Vexing, Veiled, and Inequitable: Social Distancing and the "Rights" Divide in the Age of COVID-19. *The American Journal of Bioethics*. *20*(7), 55-61.

[71]Siddique, H. (2020, May 10). Equality watchdog urged to investigate coronavirus impact on BAME people. *The Guardian*. Retrieved May 12, 2020 from https://www.theguardian.com/world/2020/may/10/equality-watchdog-urged-investigate-impact-on-bame-people-london-mayor.

[72]Fukuyama, F. (2020, March 30). The Thing That Determines a Country's Resistance to the Coronavirus. *The Atlantic*. Retrieved April 17, 2020, from https://www.theatlantic.com/ideas/archive/2020/03/thing-determines-how-well-countries-respond-coronavirus/609025/.

[73]Ahmad, A., et al. (2020). What does it mean to be made vulnerable in the era of COVID-19? *The Lancet*. *395*, 1481-1482. https://doi.org/10.1016/S0140-6736(20)30979-X.

[74]Gopichandran, V., Subramaniam, S., & Kalsingh, M. J. (2020). COVID-19 Pandemic: a Litmus Test of Trust in the Health System. *Asian Bioethics Review*. *12*, 213–221.

[75]Di Marco, M., et al. (2020). Opinion: Sustainable development must account for pandemic risk. *Proceedings of the National Academy of Sciences*. *117*(8), 3888-3892.

[76]Monbiot, G. (2020, March 31). The horror films got it wrong. This virus has turned us into caring neighbours. *The Guardian*. Retrieved April 1, 2020, from https://www.theguardian.com/commentisfree/2020/mar/31/virus-neighbours-covid-19.

widespread individualism towards a new form of collectivism. From a public good perspective, it is impressive to see that there are a large number of individuals and groups who due to the magnitude of the threat are willing to do more than their fair share and make up for the slack caused by inefficient governmental institutions and responses. However, as the challenge of maintaining continuity with charity donations shows, it is difficult to count on voluntary support if states of emergency prolong themselves over too extended periods of time.

When it comes to individuals, we can observe that principles of reciprocity create a number of expectations and moral obligations. In terms of quarantine, reciprocity demands that people who are confined are supported by those who are not and that there is an acknowledgement of their effort.[77] Similarly, people develop an expectation that by following social-distancing, wearing masks and keeping street life to a minimum, others will do the same to avoid putting them at risk and reduce the overall rate of contagion.

There is one more element in which pandemic preparedness resembles common-pool resources. The substantial effort people make to avoid the temptation of breaking social distancing measures often comes with a strong desire to sanction non-compliers. The sight of people publicly shaming and yelling at those who break quarantine or take a much more relaxed approach to social distancing is widespread. Similarly, the condemnation of usury, for example by inflating the prices of protective gear and hygienic products, during the public health emergency is particularly strong. There is also a strong demand to not rescue corporations who hold accounts in tax havens.

3.6 Inequality In Benefiting From Cooperation: Sharing The Cooperative Surplus

The fact that public goods require the contributions of a large proportion of the population comes with the expectation among those who contributed to have access to a fair share of the benefits of such cooperative undertaking. It has been therefore argued in another context[78] that one of the requirements of cooperative justice is that everyone gets some type of compensation from the cooperative surplus, that is the benefits that can be grasped when a public good is established. Yet again here, it is difficult, especially for the global poor, to see in how far they directly benefit from the many aggregate advantages of pandemic preparedness, such as open borders that allow international circulation. They might be more inclined to welcome an early preventive closure of borders and even restrict the mobility within regions of a country instead of becoming directly involved in establishing this good, which limits their opportunities to generate income or obliges them to spend scarce resources on precautionary measures to help halt the spread of the contagion. COVID-19 shows that the benefits and risks of globalization are unevenly distributed. Justice demands that the poor have access to a greater share of the cooperative surplus gained by international trade and travel. For instance, wealthier countries could offer the poor in tropical regions medical innovations for currently neglected diseases as a compensatory public good, and provide the poorer residents within their jurisdictions better access to infrastructure that improves their well-being (e.g. parks, internet, libraries) as compensatory common goods.

4 CONCLUDING REMARKS

To establish the public good of pandemic preparedness a close to universal participation is needed when it comes to inform about possible health hazards, comply with public health measures and make the necessary arrangements that will allow a rapid social and economic recovery. Cooperative justice demands that the costs and benefits of contributing to such a public good be fairly distributed. An irony the COVID-19 pandemic makes evident is that even those who have striven for privatization for decades now count on those disenfranchised from the global economy and from austerity cuts to join unconditionally the collective effort by appealing to notions of common interests and shared vulnerability. Due to the exponential multiplication of the virus, communities will remain vulnerable if they do not ensure access to basic health and sanitation infrastructure for all, at home and abroad.[79] Widespread discontent about current social arrangements – even among smaller population groups – can lead to boycott and sabotage of implemented health measures and mistrust towards governmental authorities. It is therefore crucial to adopt a broader understanding of pandemic preparedness as a public good and build social cohesion by addressing the demands of cooperative justice to encourage widespread cooperation and thereby improve resilience to public health emergencies.

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CONFLICT OF INTEREST

None to declare.

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[78]Van Parijs, op. cit. note 25.

[79]Ruger, op. cit. note 7.