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COVID-19 Library:
Filling the Gaps

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> "Intellectually, the greatest benefit I derived from the experience [of working in the office of President Ronald Reagan] was to be able to observe at close range how political decisions are made at the highest level. … I thought that high politics resulted from a careful, inductive process by virtue of which all the information available to the government is conveyed upwards and there subjected to judicious analysis, with all the pros and cons weighed until a decision is reached…. Reality turned out to be quite different."
>
> *Richard Pipes, Ronald Reagan's adviser*
> *"Vixi: Memoirs of a Non-Belonger". New Haven: Yale University Press, 2003, p. 208*

Abstract

Objectives: The present coronavirus crisis shook the modern world as only the world wars have shaken it before. In this review we analyzed the lockdown-based crisis management which was implemented by nearly all the countries, lessons learned and ways to improve the management of similar events in the future.

Methods: The historic experience of previous pandemics was studied. Risk-benefit analysis based on connection of health and wealth was performed. Decision making and crisis management were analyzed from the public choice perspective.

Findings: (1) *Historic experience.* Influenza-like pandemics are a natural consequence of human development and, therefore, should not be considered a global threat. The history of the Spanish Flu and numerous less-severe pandemics is well documented. It proves that the COVID-19 problems are not new, unlike round-the-globe governmental reactions that are unprecedented and definitely not based on any successful policy in the past. (2) *Health and wealth (risk-benefit analysis).* Enormous progress in life expectancy, health status, sharp decrease in infant mortality – all followed the economic progress and were clearly explainable by economic progress. Lost income means lost lives. In Israel, e.g., at least 500,000 life-years were lost to lockdowns. (3) *Decision making.* Several governments had prepared (years ago) detailed plans of response to influenza-like pandemics. The response plans mentioned lockdowns as a means of last resort only. All these plans were abandoned at the beginning of the COVID-19 crisis, with lockdowns becoming the first and main instrument. Actually, no scientific discussion took place. The extent of human life loss due to lockdowns themselves has never been taken into consideration in the decision-making process. (4) *Crisis management.* The forecasts which were chosen for political decision making systematically overestimated the threat, supporting excessive measures. The pro-lockdown evidence is shockingly thin, and based largely on comparing real-world outcomes against dire computer-generated forecasts derived from empirically untested models.

Discussion: Special interests of the decision-making groups provide partial explanation of the unprecedented policy. But the policy of depriving citizens of their basic rights could not be implemented without citizens' readiness to accept such deprivation. However, it has been stated that at some advanced stage of social development, the citizens – clients of the welfare state – tend to abandon the care of public affairs to the State.

Conclusions: Neither special interests nor people's qualities can be changed in a short time. It seems therefore that the only way to avoid the mistakes of the COVID-19 management in the future is to avoid managing any future medical crisis by means of emergency powers. Emergency powers should be used only in case of war.

Executive Summary

Objectives

The present coronavirus crisis shook the modern world as only the world wars have shaken it before. In this review we analyzed the lockdown-based crisis management which was implemented by nearly all the countries, lessons learned and ways to improve the management of similar events in the future.

Methods

The historic experience of previous pandemics was studied. Risk-benefit analysis based on connection of health and wealth was performed. Decision making and crisis management were analyzed from the public choice perspective.

Findings

1. *Historic experience*

Influenza-like pandemics are a natural consequence of human development. Therefore, they should not be considered a global threat. The history of the Spanish Flu and numerous less-severe pandemics is well documented. It proves that the COVID-19 problems are not new, unlike round-the-globe governmental reactions that are unprecedented and definitely not based on any successful policy in the past.

The Spanish Flu was one of the deadliest pandemics in centuries, and for sure the most lethal of well-documented pandemics. The highest mortality was detected among the 20-40 years age group and so caused sizable demographic damage – unlike COVID-19. This being said, there was no panic then and the response was mainly based on common sense. The leaders generally presumed reasonable and rational behaviour of the citizens also: e.g., quarantine practices were almost exclusively voluntary. Closure of non-entertainment business was out of discussion. School closure was discussed but often rejected due to the obvious outcome: children's bands roaming in dirty streets could boost the infection spread more than gathering in supervised and relatively clean schools.

The effectiveness of closures has not been proven. For example, mortality rates were similar in New York (535 per 100,000) and Los Angeles (494 per 100,000), even though in Los Angeles schools, churches and places of entertainment were closed for up to 6 weeks, and in New York – not. It should be noted that New York was a port city with a mass return of troops – infected by the flu – from Europe.

2. *Health and wealth (risk-benefit analysis)*

Irrefutable historical facts are the following: enormous progress in life expectancy, health status, sharp decrease in infant mortality – all followed the economic progress and were clearly explainable by economic progress. Lost income means lost lives. The extent of human life loss due to the economic damage can be roughly estimated based on the well-accepted value of below 150% GDP per capita per life-year as the upper limit of prudent expenditure on healthcare and safety. For Israel, e.g., that means that during one year, at least 500,000 life-years were lost to lockdowns – an equivalent of life years lost to cancer during 5 years.

3. *Decision making*

Several governments had prepared (years ago) detailed plans of response to influenza-like pandemics. Israel probably had the most elaborate plan which relied on the unique experience of civil-military partnership. The response plans, both in Israel and other states, mentioned lockdowns as a means of last resort only. All these plans were abandoned at the beginning of the COVID-19 crisis, with lockdowns becoming the first and main instrument. Governments in general and public healthcare bureaucracy in particular enjoyed unprecedented discretionary power and unprecedented funds under control.

Actually, no scientific discussion took place, as blatantly admitted in the pro-lockdown open letter of the UK Chief Medical Officers:

> "Whilst it is always helpful to have more data and more evidence, we caution that in this complex and fast-moving pandemic, certainty is likely to remain elusive. 'Facts' will be differently valued and differently interpreted by different experts and different interest groups. A research finding that is declared 'best evidence' or 'robust evidence' by one expert will be considered marginal or flawed by another expert."

The extent of human life loss due to lockdowns themselves has never been calculated and never been taken into consideration in the decision-making process. The same can be said about mask wearing that has also negative effects – e.g., increasing the risk of other infections such as aspiratory pneumonia.

4. *Crisis management*

The forecasts which were chosen for political decision making systematically overestimated the threat supporting excessive measures. Political leaders and government officials systematically "instilled fear in the population, thereby contributing to the making of mass hysteria" (Bagus et al, 2021).

After the first wave of the COVID-19 in the spring of 2020, it turned to be hard to find any piece of evidence that lockdowns had been effective in suppressing the epidemics (though loudly declared 'saving lives' by politicians and experts). The pro-lockdown evidence was shockingly thin, and based largely on comparing real-world outcomes against dire computer-generated forecasts derived from models that were not tested empirically. In addition, public health care facilities and nursing homes often became vehicles of contamination themselves – to a large extent because of the lockdown-based emergency policy implementation.

In spite of the above, lockdowns were imposed during the autumn/winter wave as if they were proven effective.

Discussion

The extreme measures that followed (without any reasonable discussion) abandonment of well-prepared crisis management plans provide ground for speculations that the decisions were not made exclusively on a professional and interest-free basis. Special interests of the decision-making groups provide partial explanation of the unprecedented policy. This explanation is only partial since such policy of depriving citizens of their basic rights could not be implemented without readiness of people to accept such deprivation. To explain the latter readiness, we want to cite G. Le Bon (1895) who is considered to be the father of social psychology:

> "When a people reaches that degree of civilization and power at which it is assured that it is no longer exposed to the attacks of its neighbours, it begins to enjoy the benefits of peace and material well-being procured by wealth. At this juncture the military virtues decline, the excess of civilization creates new needs, and egoism increases. Having no ideal beyond the hasty enjoyment of rapidly acquired advantages, the citizens abandon to the State (*welfare state* – MY & YS) the care of public affairs, and soon lose all the qualities that had made their greatness."

The interaction of the two factors – special interests of decision-makers (*thesis*) and abandoning to the State the care of public affairs by the citizens (*antithesis*) – resulted in a spiraling effect (*synthesis*) that yielded the implemented policies.

Conclusions

Neither special interests nor people's qualities can be changed in a short time. It seems therefore that there is only one way to avoid the mistakes of the COVID-19 management in the future: to avoid managing any future medical crisis by means of emergency powers – a situation in which a government is empowered to implement policies that it would normally not be permitted to do. Emergency powers should be used only in case of war.

Contents

I. Health & Wealth: Lost Income – Lost Lives

This directory contains materials, devoted to scientific discussion about dependencies and causal relationships between economic growth and public health, between personal economic (socioeconomic) status and the corresponding health status. Several papers are focused specifically on the loss of the principal source of income (job/business) affecting personal health, on the risks of morbidity and mortality caused by a sharp decline of personal socioeconomic status (SES).

Public health progress manifested itself in life expectancy, all-cause mortality, infant mortality, spread of various diseases and other statistical indicators. Personal health status data are usually collected in sociological surveys as self-estimation.

Irrefutable historical facts are the following: drastic progress in life expectancy, health status, sharp decrease in infant mortality – all of them followed the economic progress and were clearly explainable by economic progress. We suggest therefore that they were *caused* by economic progress (see 'Economic growth – improved health: national level'). The most principal factor contributing to both – economic prosperity and health progress – is strong protection of human life, liberty, and property.

While a very strong association between economic prosperity, high SES, and good health is almost never challenged, some researchers try to challenge the causality direction of the above association. They claim that a strong economy is an outcome of health progress rather than the principal cause of the latter. Such claims advocate generous governmental spending in healthcare and empowerment of governmental bodies, suggesting that governmental health spending promotes economic growth. The directory contains studies supporting these claims, and studies refuting them.

Every public expenditure, including saving lives or extending life expectancy of particular persons (target population), has unwanted but unavoidable side effects of statistical shortening of life expectancy of the general public by making people poorer. The amount of 140% GDP per capita per life-year should be considered as the upper limit of prudent expenditure on healthcare and safety. The last figure is in excellent correspondence with the existing healthcare policies.

1. Economic growth – improved health: national level

Here one will find a selection of studies focused on dependency between Economic Growth and Health progress.

Unprecedented economic growth ('modern economic growth' manifesting in per capita growth and not only population growth – the only reliable indicator of economic progress of all pre-capitalist epochs) caused drastic improvements in housing, foods, sanitation (Pritchet, Summers, 1996, Cutler, Miller, 2005, Acemoglu, Johnson, Robinson, 2003). Drastic decrease in principal prerequisites of diseases and early death (Preston, 1975) encouraged more investment in Human Capital (Becker, 1962; Costa, 2015). Educated, well paid people had a rising demand for healthcare services, and, eventually for medical research too. Modern medicine, vaccination contributed back in stronger incentives to invest in Health and education 'producing a virtuous cycle' (Costa, 2015).

The most principal factor contributing to both – economic prosperity and health progress – is strong protection of human life, liberty, and property (See, first and foremost A.Smith 'Wealth of Nations'[1]; see also Shulgin & Yanovskiy (2013) and Yanovskiy & Ginker (2017)). Such protection provides incentives both to work hard and to invest in personal human capital, with personal health being among the most important components of human capital.

Some authors point out short-run fluctuations which are opposite to above mentioned general trend and dependency: a slight increase of all-cause deaths rate during expansions and decrease during recessions (Granados, 2008).

[1] https://oll.libertyfund.org/titles/119#Smith_0206-02_323

'In England, on the contrary, the natural good effects of the colony trade, assisted by other causes, have in a great measure conquered the bad effects of the monopoly. These causes seem to be, the general liberty of trade, which, notwithstanding some restraints, is at least equal, perhaps superior, to what it is in any other country; the liberty of exporting, duty free, almost all sorts of goods which are the produce of domestic industry, to almost any foreign country; and what, perhaps, is of still greater importance, the unbounded liberty of transporting them from any one part of our own country to any other, without being obliged to give any account to any public office, without being liable to question or examination of any kind; **but above all, that equal and impartial administration of justice which renders the rights of the meanest British subject respectable to the greatest, and which, by securing to every man the fruits of his own industry, gives the greatest and most effectual encouragement to every sort of industry**.' Smith A. The Wealth of Nations. Book 4. Ch. VII «Of colonies». Part III «Of the advantages which Europe has derived from the discovery of America, and from that of a passage to the East Indies by the Cape of Good Hope»

'1' – basic papers on the issue
'2' – mechanisms of the influence of economic progress on the healthcare, mortality, life expectancy
'3' – country cases
'4.1' – the alternative hypothesis: governmental spending on healthcare promotes economic growth
'4.2' – critics of the alternative hypotheses
'5' – supplemental articles on the significance of the 'third factor' – strong protection of human life, liberty, and property

#	Article, chapter in the book	Short description
1	Preston Samuel H. The Changing Relation between Mortality and Level of Economic Development. *Population Studies*, Vol. 29, No. 2 (Jul 1975), pp. 231-248 http://www.jstor.org/stable/2173509	Preston presents his pioneering research and one of the most cited articles on the issue, presenting evidence of economic progress as predictor of mortality.
2	Pritchett Lant, Summers Lawrence H. Wealthier is Healthier. *The Journal of Human Resources*, Vol. 31, No. 4 (Autumn, 1996), pp. 841-868 http://www.jstor.org/stable/146149	"… we calculate that over a half a million child deaths in the developing world in 1990 alone can be attributed to the poor economic performance in the 1980s."
3	Costa Dora L. Health and the Economy in the United States from 1750 to the Present. *Journal of Economic Literature* Sept. 2015, Vol. 53, No. 3, pp. 503-570 https://www.jstor.org/stable/43932405	The gains to health are largest when the economy has moved from "brawn" to " brains " because this is when the wage returns to education are high, leading the healthy to obtain more education. More education may improve use of health knowledge, producing a virtuous cycle.
4	Becker Gary S. Investment in Human Capital: A Theoretical Analysis. *Journal of Political Economy*, Vol. 70, No. 5, Part 2: Investment in Human Beings (Oct 1962), pp. 9-49 http://www.jstor.org/stable/1829103	'… since earnings are gross of the return on human capital, some persons may earn more than others simply because they invest more in themselves.'

5	Cutler David M., Miller Grant. "The Role of Public Health Improvements in Health Advances: The 20th Century United States." *Demography* 42, 1 (February 2005): 1-22[2]. http://www.nber.org/papers/w10511	Mortality rates in the US fell more rapidly during the late 19th and early 20th Centuries than any other period in American history. This decline coincided with an epidemiological transition and the disappearance of a mortality "penalty" associated with living in urban areas.
6	Murray Christopher J L, Lopez Alan D. Global mortality, disability, and the contribution of risk factors: Global Burden of Disease Study. *The Lancet* Vol 349 • May 17, 1997 https://www.thelancet.com/pdfs/journals/lancet/PIIS0140673696074958.pdf	Developed regions account for 11.6% of the worldwide burden from all causes of death and disability, and account for 90.2% of health expenditure worldwide.
7	McGovern Mark E. and Canning David. Vaccination and All-Cause Child Mortality From 1985 to 2011: Global Evidence From the Demographic and Health Surveys. *American Journal of Epidemiology* Vol. 182 # 9 https://doi.org/10.1093/aje/kwv125	Childhood vaccination, and in particular measles and tetanus vaccination, is associated with substantial reductions in childhood mortality.
8	Roush Sandra W., Murphy Trudy V. Historical Comparisons of Morbidity and Mortality for Vaccine-Preventable Diseases in the United States. *JAMA*, November 14, 2007—Vol 298, No. 18 https://doi.org/10.1001/jama.298.18.2155	A greater than 92% decline in cases and a 99% or greater decline in deaths due to diseases prevented by vaccines recommended before 1980 were shown for diphtheria, mumps, pertussis, and tetanus. Endemic transmission of poliovirus and measles and rubella viruses has been eliminated in the United States; smallpox has been eradicated worldwide.
9	Svensson Mikael and Krüger Niclas A. Mortality and economic fluctuations: Evidence from wavelet analysis for Sweden 1800—2000 *Journal of Population Economics*, Vol. 25, No. 4 (October 2012), pp. 1215-1235 http://www.jstor.org/stable/23354789	Sweden. For the period 1800-2000, an increase in GDP by 1% decreased mortality by 0.7%

[2] See also NBER report version: Cutler, David M., Miller Grant. The Role of Public Health Improvements in Health Advances: The 20th Century United States. NBER Working Paper No. 10511 Issued in May 2004 NBER Program(s): http://www.nber.org/papers/w10511

10	Granados José A. Tapia. Macroeconomic Fluctuations and Mortality in Postwar Japan *Demography*, Vol. 45, No. 2 (May 2008), pp. 323-343 http://www.jstor.org/stable/25475976	After long-term declining trends are excluded, mortality rates tend to rise in economic recessions and fall in economic expansions. Suicides, as well as deaths attributable to diabetes and hypertensive disease, make up about 4% of total mortality and fluctuate countercyclical, increasing in recessions.
11	Arik Hulya and Arik Murat. Is It Economic Growth or Socioeconomic Development? A Crosssectional Analysis of the Determinants of Infant Mortality. *The Journal of Developing Areas*, Vol. 42, No. 2 (Spring, 2009), pp. 31-55 http://www.jstor.org/stable/40376209	… narrowly defined economic growth is the key to reducing mortality. infant mortality rates. the infant mortality rate using cross-sectional data for provinces in Turkey, … developing country. The findings indicate that gross domestic product is a significant determinant of the infant mortality rate, but the dependence is not linear.
12	Adams Peter, Hurd Michael D., McFadden Daniel L., Merrill Angela, Ribeiro Tiago. Healthy, Wealthy, and Wise? Tests for Direct Causal Paths between Health and Socioeconomic Status. *J. Econometrics* Volume 112, Issue 1, January 2003, Pages 3-56 http://www.nber.org/books/wise04-1	The death of a spouse appears to have a negative effect on the wealth of the survivor; this is plausibly a direct causal effect. There is evidence for some association of health conditions with increased dissaving from liquid wealth for intact couples and singles. The data: Asset and Health Dynamics of the Oldest Old
13	Acemoglu Daron and Johnson Simon. Disease and Development: The Effect of Life Expectancy on Economic Growth *Journal of Political Economy*, 2007, vol. 115, no. 6 https://doi.org/10.1086/529000	There is no evidence that the large increase in life expectancy raised income per capita.

14	Adda Jerome; Tarani Chandolab, Michael Marmot. Commentary. Socio-economic status and health: causality and pathways. *Journal of Econometrics* 112 (2003) 57 – 63[3]	Dispute Adams et al (see above) on causality: differential medical insurance coverage or access to health care across SES[4] groups may not be the main reason for such direct causal effects of SES on health. Rather, these results could indicate that the causal effect of SES on certain health conditions such as stroke could be partly through its effect on chronic diseases such as hypertension and obesity earlier on in life.
15	Yanovsky K., Shulgin S. Institutions, Democracy and Growth in the very Long Run. *Acta Oeconomica*, Vol. 63 (4) pp. 493–510 (2013) https://www.jstor.org/stable/24857649	The protection of private property rights requires, first and foremost, due guarantees for personal immunity. Discretionary arrests and property seizures undermine any formal guarantees of private property, low taxation benefits, etc.
16	Yanovskiy M., Ginker T. A proposal for a more objective measure of de facto constitutional constraints. *Constitutional Political Economy*, Vol. 28, pp. 311–320 (2017). https://doi.org/10.1007/s10602-017-9242-1	De facto constitutional constraints of the Governmental Power that assure political competition, and independent court system help to reduce a variety of risks. Such reduction, as Adam Smith once argued, 'gives the greatest and most effectual encouragement to every sort of industry.'

[3] http://www.sciencedirect.com/science/article/B6VC0-46MD806-1/2/207cbd190cfc3a4489b3dcf7cda3dda7
[4] SES – social-economic Status

2. Economic growth – improved health: personal level

High income secures better opportunities for healthy food, well-conditioned dwelling (at least warm!), better access to pure water, sanitation, physicians' services and medicines. Therefore, personal welfare causes better health status.

#	Article, chapter in the book	Short description
1	Spijker Jeroen, van Wissen Leo. Socioeconomic determinants of male mortality in Europe: the absolute and relative income hypotheses revisited. *Genus*, Vol. 66, No. 1 (January-April 2010), pp. 37-61[5]	While absolute income played a greater role in Eastern Europe than in Western Europe, it still serves a quite strong predictor for male mortality in Western Europe also.
2	Toivanen Susanna. Income differences in stroke mortality: A 12-year follow-up study of the Swedish working population *Scandinavian Journal of Public Health*, December 2011, Vol. 39, No. 8 (December 2011), pp. 797-804 https://www.jstor.org/stable/45150486	Sweden. Stroke mortality was highest in the lowest income group, with a gradient for the intermediate groups.
3	Rehnberg Johan, Fritzell Johan. The shape of the association between income and mortality in old age: A longitudinal Swedish national register study. *SSM - Population Health* 2 (2016) 750–756[6]	Sweden old-age population survey. The association between late-life income and mortality remained after controlling for midlife income.
4	Golinowska Stanisława and Tambor Marzena. Out-of-pocket payments on health in Poland: Size, tendency and Willingness to pay. *Society and Economy*, Vol. 34, No. 2 (2012), pp. 253-271 https://www.jstor.org/stable/3768153	Poland. Out-of-pocket expenditures are highest among population groups with high health needs (elderly, disabled, chronically ill) but also among individuals with relatively high incomes.

[5] http://www.jstor.org/stable/genus.66.1.37
[6] https://doi.org/10.1016/j.ssmph.2016.10.005

3. Personal income loss – increased mortality

Large and growing body of empirical studies provides more and more evidence of significant probability of health deterioration among the people, who lost their jobs and businesses. Currently, we have in our collection country cases with data analysis for US, UK, Australia, Korea, Scandinavian countries and Netherlands.

#	Article, chapter in the book	Short description
1	Viscusi W. Kip. The Value of Life in Legal Contexts: Survey and Critique. *American Law and Economics Review*, Vol. 2, No. 1 (Spring 2000), pp. 195-222 https://www.jstor.org/stable/42705366	Very wasteful expenditures may in fact prevent opportunities to save human lives and, thus result in loss of 'statistical lives'
2	Keeney Ralph L. Mortality Risks Induced by the Costs of Regulations. *Journal of Risk and Uncertainty*, 1994, Vol. 8, No. 1, Special Issue: Risk-Risk Analysis Symposium (1994), pp. 95-110 https://www.jstor.org/stable/41760718	Regulatory costs are ultimately paid for by the individuals in our society. The reduction in disposable can lead to changes in purchasing, such as for safety and health care; stress, such as from job loss; ... On average, these changes induce greater mortality risks and premature deaths. … Neglecting the consideration of the fatalities induced by regulatory costs setting of regulations will lead to unnecessary deaths.
3	Moshe Yanovskiy, Ori Nissim Levy, Yair Y. Shaki, Avi Zigdon, Yehoshua Socol. Cost-Effectiveness Threshold for Healthcare and Safety: Justification and Quantification. *medRxiv preprint*	Every public expenditure, including saving lives or extending life expectancy of particular persons (target population), has unwanted but unavoidable side effect of statistical shortening of life expectancy of the general public by making people poorer. Population-wide, a life-extending policy with cost-effectiveness below cost-effectiveness threshold claims more life than it saves. The amount of 140% GDP per capita per life-year should be considered as the upper limit of prudent expenditure on healthcare and safety. The last figure is in excellent correspondence with the existing healthcare policies. For Israel, e.g., that means that during one year, at least 500,000 life-years were lost to lockdowns – an equivalent of life years lost to cancer during 5 years.

4	Viscusi W. Kip. Regulating the Regulators. *The University of Chicago Law Review*, Vol. 63, No. 4 (Autumn, 1996), pp. 1423-1461 https://www.jstor.org/stable/1600278	This observation formed the basis of a judicial commentary on an expensive Occupational Safety and Health Administration regulation in which Judge Williams of the D.C. Circuit observed that excessive regulatory expenditures would make society poorer, potentially worsening individual health. Perhaps inspired by this opinion, Office of Management and Budget raised the issue of potentially counterproductive effects of excessive regulatory expenditures.
5	Beale Norman, Nethercot Susan. The nature of unemployment morbidity. *Journal of the Royal College of General Practitioners*, 1988, 38, 200-202. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1711419/	UK. Cardiovascular disorders were more frequently observed in unemployed men.
6	De Witte Hans. Job Insecurity: Review of International Literature on Definitions, Prevalence, Antecedents and Consequences. *SA Journal of Industrial Psychology*, 2005, 31 (4), 1-6 https://doi.org/10.4102/sajip.v31i4.200	(US and Europe) Extensive body of studies in the course of the past decades, documenting the negative consequences of job insecurity for individual workers' health.
7	Strully Kate W. Job Loss and Health in the U.S. Labor Market. *Demography*, Vol. 46, No. 2 (May 2009), pp. 221-246 https://www.jstor.org/stable/20616461	US data. Unemployed respondents report consistently worse health than stably employed reference group
8	Eliason Marcus and Storrie Donald. Does Job Loss Shorten Life? *The Journal of Human Resources* Vol. 44, No. 2 (Spring, 2009), pp. 277-302 https://www.jstor.org/stable/20648898	Data on Sweden. The overall mortality risk among men increased by 44 percent during the first four years following job loss, while there was no impact on either female overall mortality or in the longer run. For both sexes, there was an about twofold short-run increase suicides and alcohol-related mortality

9	Browning Martin, Heinesen Eskil. Effect of job loss due to plant closure on mortality and hospitalization. *Journal of Health Economics* 31 (2012) 599– 616 https://doi.org/10.1016/j.jhealeco.2012.03.001	Denmark 1980-2006. job loss increases the risk of overall mortality and mortality caused by circulatory disease; of suicide and suicide attempts; and of death and hospitalization due to traffic accidents, alcohol-related disease, and mental illness.
10	Mäki Netta and Martikainen Pekka. A register-based study on excess suicide mortality among unemployed men and women during different levels of unemployment in Finland. *Journal of Epidemiology and Community Health* (1979), Vol. 66, No. 4 (April 2012), pp. 302-307 https://www.jstor.org/stable/23215756	Finland. Long-term unemployment seems to have causal effects on suicide, which may be partly mediated by low income.
11	Bender Keith A., Theodossiou Ioannis. A reappraisal of the unemployment-mortality relationship: Transitory and permanent effects. *Journal of Public Health Policy*, February 2015, Vol. 36, No. 1 (February 2015), pp. 81-94 https://www.jstor.org/stable/43288067	US state-level data for 1974 to 2003. … The permanent scars of unemployment on population health are detrimental and overwhelming. They dwarf any opposite and transitory effects.
12	Shin Donggyo, Kim Ji Man, Tandi Tinyami Erick, Park Eun-Cheol. Impact of change in job status on mortality for newly onset type II diabetes patients: 7 years follow-up using cohort data of National Health Insurance, Korea. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews* 10S (2016) S1–S6 http://dx.doi.org/10.1016/j.dsx.2015.08.012	Korea. Mortality hazard ratio of continuously unemployed individuals is 3.78 times higher in males and 9.78 times higher in females than in those who keep their jobs. The continuous unemployment and the loss of job are related to risk of death in diabetic patients. The impact of unemployment is largest for the middle-class man.
13	Bloemen, H, Hochguertel, S, Zweerink, J. Job loss, firm-level heterogeneity and mortality: Evidence from administrative data. *Journal of Health Economics* 59 (2018) 78–90 https://doi.org/10.1016/j.jhealeco.2018.03.005	Using Dutch administrative data, we find that job loss due to firm closure increased the probability of death within five years by 0.60 percentage points.

14	Shields Lisa B. E., Hunsaker Donna M., Hunsaker John C. III. 'Trends of suicide in the United States during the 20th century', in: M. Tsokos, *Forensic Pathology Reviews*, Vol. 3 Humana Press Inc., Totowa, NJ (Springer) 2005 https://doi.org/10.1007/978-1-59259-910-3_10	US. Extensive review of suicide factors and trends.
15	Ko A, Kim K, Sik Son J, Park HY, Park SM. Association of pre-existing depression with all-cause, cancer-related, and noncancer-related mortality among 5-year cancer survivors: a population-based cohort study. *Sci Rep*. 2019 Dec 4; 9(1):18334. http://dx.doi.org/10.1038/s41598-019-54677-y .	Korea. Significant associations between pre-existing depression and mortalities (all-cause and noncancer-related mortality) were only observed among male cancer survivors.
16	Pinquart M., Duberstein P. R. Depression and cancer mortality: a meta-analysis. *Psychol Med.* 2010 November; 40 (11): 1797–1810. http://dx.doi.org/10.1017/S0033291709992285	International Dataset. Depression diagnosis and higher levels of depressive symptoms predicted elevated mortality. This was true in studies that assessed depression before cancer diagnosis as well as in studies that assessed depression following cancer diagnosis (electronic databases data).
17	Taouk Yamna, Spittal Matthew J., Milner Allison J., LaMontagne Anthony D. All-cause mortality and the time-varying effects of psychosocial work stressors: A retrospective cohort study using the HILDA survey. *Social Science & Medicine* 266 (2020) 113452 https://doi.org/10.1016/j.socscimed.2020.113452	Australia. Long-term exposure to low job control and low job security is associated with increased risk of all-cause mortality. Effects were largely restricted to males.

18	Case A, Deaton A (2015) Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. *Proceeding of National Academy of Science USA* Volume 112 No 49 pp. 15078–15083 https://doi.org/10.1073/pnas.1518393112	"This paper documents a marked increase in the all-cause mortality of middle-aged white non-Hispanic men and women in the United States between 1999 and 2013. We comment on potential economic causes and consequences of this deterioration."
19	Case A, Deaton A. *Deaths of Despair and the Future of Capitalism*. Princeton University Press. 2020[7]	The book presents a solid corpus of evidence (based on health, morbidity and mortality statistics) of the grave and lasting consequences of loss of socioeconomic status which resulted in a decline in health and a rise in mortality.[8]

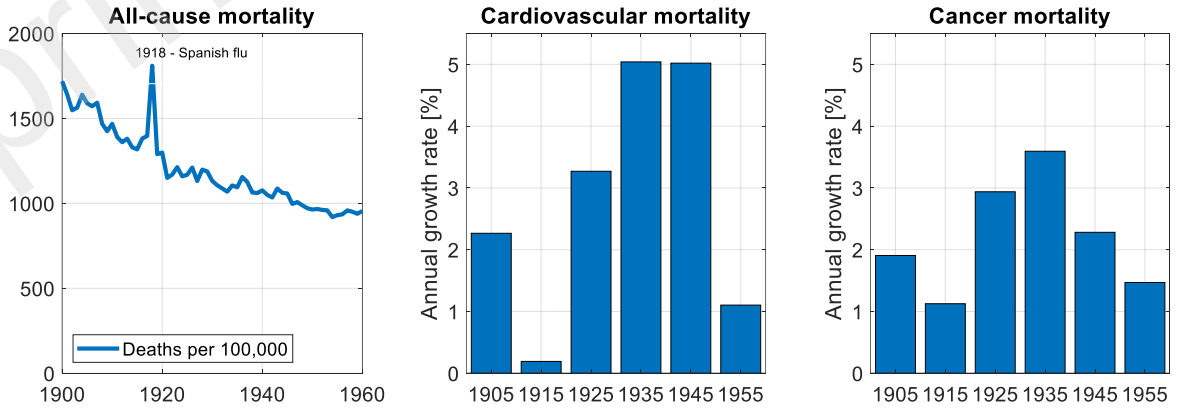
[7] https://scholar.princeton.edu/deaton/publications/deaths-despair-and-future-capitalism
[8] See our review of the book at Academia.edu or at SSRN for more details https://www.academia.edu/44993531/ https://papers.ssrn.com/abstract=3771015

4. Personal income and health: The Great Depression case study

Some authors point out that the positive trend of mortality decrease was not altered during the Great Depression, questioning therefore the negative health effects of the economic factors. Moreover, there is an opinion that the positive impact of the government health policy (New Deal programs) on health overweighed by far any possible harm of the Depression itself. However, the following facts should be considered by researchers of this important historic case.

1. Since the beginning of the 20th century (at least) the overall mortality decreased and the life expectancy increased, mainly due to the decrease in infectious diseases' mortality. The overall mortality decrease was accompanied, however, by the increase in cardiovascular and cancer mortality: Roughly speaking, more and more people die of heart attack or cancer being 50-60 years old *because* they did not die of diphtheria or tuberculosis at age 30-40. However, during the Great Depression the cardiovascular and cancer mortality *growth rate* slightly increased compared to both pre-Depression (1909-1929) and post-Depression (1940-1960) periods. Cardiovascular diseases and cancer are linked to psychosomatic consequences of job loss etc. (while any psychosomatic factors in carcinogenesis are a matter of debate, there is no doubt that psychosomatic factors affect a person's resistance to illness and reaction to treatment). While the overall mortality continued to decrease during the Depression, the slope of this decrease certainly did not grow despite extensive government health programs which were a part of the New Deal.
2. Even the most prominent supporters of the theory of positive impact of the New Deal programs on health (Fishback et al, 2007) admit that most funds were spent in relatively richer and healthier [swing] states (due to political reasons). Therefore, the Great Depression does not provide reliable evidence of government ability to mitigate the health damage caused by economic factors.

Summarizing, it can be said: Though the evidence of the Great Depression negative effect on health is inconclusive, the opposite claims – of the overall positive effect of the massive government involvement in health during that period – are certainly not backed by the existing data.



#	Article, chapter in the book	Short description
1	Granados J.A.T., Roux A.V.D. 2009. Life and death during the Great Depression. *Proceeding of National Academy of Science USA* Volume 106 No 41, pp. 17290 – 17295 www.pnas.org/cgi/doi/10.1073/pnas.0904491106	"Population health did not decline and indeed generally improved during the 4 years of the Great Depression, 1930–1933, with mortality decreasing for almost all ages, and life expectancy increasing by several years in males, females, whites, and nonwhites. For most age groups, mortality tended to peak during years of strong economic expansion." *Authors totally ignored lasting trends of mortality decrease before and after the Great Depression, focused on short-run fluctuations*
2	Burgard Sarah A., Ailshire Jennifer A., Kalousova Lucie. The Great Recession and Health: People, Populations, and Disparities. *The Annals of the American Academy of Political and Social Science*, November 2013, Vol. 650, pp. 194-213 https://www.jstor.org/stable/24541682	Authors propose a number of explanations of mixed ways how Great Depression's economic hardships impacted public health (the reasons for both deteriorations and improvements) while ignore long lasting trends (like decrease in infectious diseases mortality.
3	Linder Forrest E., Grove Robert D. *Vital statistics rates in the United States 1900-1940*. US Government Printing office. Washington D.C., 1947.	Statistics shows stable decline of overall mortality, while cardiovascular and cancer mortality grows. A slight increase in cardiovascular and cancer mortality *growth rate* during the Depression. Relevant data are compiled and presented in EXCEL file (#5)
4	Grove Robert D., Hetzel Alice M. *Vital statistics rates in the United States 1940-1960*. National Center for Health Statistics, Washington D.C., 1968 https://www.cdc.gov/nchs/nvss/mortality/hist290.htm	
5	M. Yanovskiy. Compilation of mortality statistics in the US 1900–1960 http://instecontransit.org/wp-content/uploads/2014/12/US_MortalityTrends13122020.xlsx	

6	Fishback Price V., Haines Michael R., Kantor Shawn. "Births, Deaths and New Deal Relief during the Great Depression". *The Review of Economics and Statistics* Vol. 89 No 1, 2007 pp. 1-14. https://www.nber.org/papers/w11246	Mortality declined long before and after the New Deal. Taking this trend into account, the authors calculate the statistical significance of the effect of the New Deal relief spending as essentially low. Despite the above, they claim: "The significant rise in relief spending during the New Deal contributed to reductions in infant mortality, suicide rates, and some other causes of death." The authors estimated cost effectiveness of the New Deal spending in a wide range: 0.8 to 9 million US dollars (in 2000 prices). They state that the above estimation is compatible with cost effectiveness of modern medical programs (Medicaid, e.g.). It should be kept in mind, however, that GDP per capita before the Depression was 5 times less than now. Therefore, the New Deal measures were essentially just 20% cost-effective compared with the modern programs.
7	Fleck Robert K. Electoral Incentives, Public Policy, and the New Deal Realignment. *Southern Economic Journal* 1999, Vol. 65 No. 3, pp. 377-404 https://doi.org/10.2307/1060806	Regression analysis shows that the New Deal spending and roll call voting patterns in the House of Representatives support the model of the effects of electoral incentives on the policy. Together, the theoretical results and the empirical evidence help to explain … why a government dominated by the Democratic Party would provide high benefits to swing states (historically, richer and healthier) and much lower benefits to the traditionally Democratic South

II. Experience gained during previous pandemics

The history of the Spanish flu and numerous less-severe pandemics is well documented. It proves that COVID-19 problems are not new, unlike round-the-globe governmental reactions that are unprecedented and definitely not based on any successful policy in the past.

1. Spanish Flu – extent and impact

The papers provide mortality assessments, discussion of the origin and description of the transmission 'machinery'. The huge death toll is explained by the unfortunate coincidence of the especially aggressive virus with the World War I. The latter, among other issues, involved mass transportations in crowded vessels and high concentration of personnel at military bases and frontlines. The armed forces turned therefore into huge virus transmitting devices.

#	Article, chapter in the book	Short description
1	Erkoreka A. (2010) The Spanish influenza pandemic in occidental Europe (1918–1920) and victim age. *Influenza and Other Respiratory Viruses* 4 (2), 81–89. https://doi.org/10.1111/j.1750-2659.2009.00125.x	"Spanish influenza principally affected men and women between 15 and 44 years of age." **The median age of the deceased was 28 years**.
2	Patterson K. David, Pyle Gerald F. The Geography and Mortality of the 1918 Influenza Pandemic. *Bulletin of the History of Medicine*, Spring 1991, Vol. 65, No. 1, pp. 4-21 [***one of the most broadly cited paper on the issue***] https://www.jstor.org/stable/44447656	"Aided by the greatly enhanced pace and volume of human movement, pandemic influenza spread at remarkable speed and affected almost every inhabited place. … In six months the pandemic killed some 30 million people."
3	Johnson Nial P.A.S., Mueller Juergen. Updating the Accounts: Global Mortality of the 1918-1920 "Spanish" Influenza Pandemic. *Bulletin of the History of Medicine*, Spring 2002, Vol. 76, No. 1 (Spring 2002), pp. 105-115 https://www.jstor.org/stable/44446153	This paper suggests that death toll was of the order of 50 million, though Patterson & Pyle (1991) estimated as 30 million. "However, it must be acknowledged that even this vast figure may substantially lower than the real toll, perhaps as much as 100 percent" [*i.e., total death toll could reach 100 million*]

4	Erkoreka Anton. Origins of the Spanish Influenza pandemic (1918-1920) and its relation to the First World War. *Journal of Molecular Genetic Medicine* (2009), 3(2), 190-194 [9]	"The millions of young men who occupied the military camps and trenches were the substrate on which the influenza virus developed and expanded."
5	Humphries, Mark Osborne Paths of Infection: The First World War and the Origins of the 1918 Influenza Pandemic. *War in History*, Vol. 21, No. 1 (January 2014), pp. 55-81 https://www.jstor.org/stable/26098366	"A multidisciplinary perspective combined with new research in British and Canadian archives reveals that the 1918 flu most likely emerged first in China in the winter of 1917-18, diffusing across the world as previously isolated populations came into contact with one another on the battlefields of Europe."
6	Shanks G.D., Waller M., Smallman-Raynor R. Spatiotemporal patterns of pandemic influenza-related deaths in Allied naval forces during 1918. *Epidemiology and Infection*, Oct. 2013, Vol. 141, No. 10, pp. 2205-2212 https://www.jstor.org/stable/24475817	"Certainly, there were ideal conditions for the spread of respiratory viruses on board naval ships and in trenches, but an influenza-like disease was widespread in both military and civilian population. Seaports were epidemiological centres of influenza spread in 1918 similar to airports during the 2009 pandemic."
7	Hollenbeck, James E. The 1918-1919 Influenza Pandemic: A Pale Horse Rides Home from War. *Bios*, Vol. 73, No. 1 (Mar., 2002), pp. 19-27 https://www.jstor.org/stable/4608623	"The H3 HA was found in the feces of ducks in the Ukraine, years before it emerged in a 1967 pandemic. Pigs act as the reassorters and transformers for the various influenza… We have witnessed two such mild pandemics in recent history since 1918-1919; the 1957 Asian flu and 1968 Hong Kong flus were such examples. Humanity will continue to be vulnerable to influenza."

[9] https://europepmc.org/article/PMC/2805838 ; https://doi.org/10.4172/1747-0862.1000033

2. Spanish Flu – response

US Local governments' reactions on the Spanish flu – the most severe among the well-documented pandemics – were mainly based on common sense. The local leaders generally presumed reasonable and rational behaviour of the citizens also: Quarantine practices were almost exclusively voluntary. Closure of non-entertainment business was out of discussion. School closure was discussed but often rejected due to the obvious outcome: children's bands roaming in dirty streets could boost the infection spread more than gathering in supervised and relatively clean schools.

The effectiveness of closures has not been proven. For example, mortality rates were similar in New York (535 per 100,000) and Los Angeles (494 per 100,000), despite the fact that in Los Angeles schools, churches and places of entertainment were closed for up to 6 weeks, and in New York – not. It should be noted that New York was a port city with a mass return of troops – infected by the flu – from Europe.

The highest mortality was detected among the 20-40 age group and, so caused sizeable demographic damage "including disruptions to marriage and labor markets – contributed to fertility reduction in the long term." (Boberg-Fazlić et al, 2017).

Spanish Flu – one of the deadliest pandemics in centuries, and for sure the most lethal of well-documented pandemics – was not accompanied by mass panic and did not cause either harsh governmental response or sizable economic damage – in contrast with the COVID-19 case. It has been previously estimated that a new influenza pandemic in Europe with the same virulence as the Spanish flu would cause about 4% GDP reduction (Holtenius & Gillman, 2014). However, COVID-19 of much less virulence caused much greater damage

#	Article, chapter in the book	Short description
1	Aimone F. The 1918 Influenza Epidemic in New York City: A Review of the Public Health Response. *Public Health Reports* (1974-), Vol. 125, Supplement 3: *The 1918-1919 Influenza Pandemic in the United States* (2010), pp. 71-79 https://www.jstor.org/stable/41435301	New York City: No lockdown. The business continues. Health officials mounting a large-scale health education campaign while regulating public spaces such as schools and theatres (which are open).
2	Pieter N., O'Leary M. The 1918-1919 Influenza Epidemic in Los Angeles. *Southern California Quarterly*, Vol. 86, No. 4 (Winter 2004), pp. 391-403 https://www.jstor.org/stable/41172237	Los Angeles: Theatres, churches and schools were closed for up to 6 weeks ("Partial Closing Law"). Non-entertainment business continues.

3	Burg S. Wisconsin and the Great Spanish Flu Epidemic of 1918. *The Wisconsin Magazine of History*, Vol. 84, No. 1 (Autumn, 2000), pp. 36-56 https://www.jstor.org/stable/4636887	Wisconsin: "Never before in the history of the state has it become necessary to close schools, churches, theaters, saloons; in fact**,** everything except factories, offices, and places of regular employment" – for 6 weeks since mid-October 1918.
4	Rockafellar, Nancy. "In Gauze We Trust": Public Health and Spanish Influenza on the Home Front, Seattle, 1918-1919. *The Pacific Northwest Quarterly*, Vol. 77, No. 3 (Jul., 1986), pp. 104-113 https://www.jstor.org/stable/24388347	"The flu cause six-week closure of schools, theatres and churches since November. The schools reopened after theatres and churches in January." Gauze masks wearing was compulsory for several weeks.
5	Martinez-Catsam, Ana Luisa. Desolate Streets: The Spanish Influenza in San Antonio *The Southwestern Historical Quarterly*, Vol. 116, No. 3 (January, 2013), pp. 286-303 https://www.jstor.org/stable/24388347	San Antonio, Texas: 3 times for two-week period since October 1918 till 1920; closing schools, churches, and theaters; banning public meetings and funerals
6	University of Michigan Center for the History of Medicine. Pittsburgh, Pennsylvania and the 1918-1919 Influenza Epidemic. The American Influenza Epidemic of 1918: A Digital Encyclopaedia https://www.influenzaarchive.org/cities/city-pittsburgh.html Assessed and downloaded December 24 2020.	"Pittsburgh's excess death rate was a whopping 807 per 100,000 people. Despite some grumbling, Pittsburgh officials acted on state wide closure order very quickly, even before receiving official word. In fact, Pittsburgh's closures came even sooner in its epidemic than did Boston's. Both Philadelphia and Boston closed schools earlier ... Pittsburgh's high death rate was in part due to the city's notoriously poor air quality during the time. A lifetime of exposure to heavy smoke pollution from the city's coal-fed steel mills may have left many residents more susceptible to respiratory complications from influenza[10]"

[10] See: (1) Samuel R. Haythorn and Harry B Meller, "Necropsy Evidences on the Relation of Smoky Atmosphere to Pneumonia" American Journal of Public Health, 28 (1938): 479-486 and (2) E. G. Knox, "Atmospheric Pollutants and Mortalities in English Local Authority Areas," Journal of Epidemiology and Community Health, 62 (2008): 442-447.

7	Holtenius, Jonas and Gillman, Anna. The Spanish flu in Uppsala, clinical and epidemiological impact of the influenza pandemic 1918-1919 on a Swedish county. *Infection Ecology and Epidemiology* 2014, 4: 21528 https://doi.org/10.3402/iee.v4.21528	"The epidemiologic and pathologic results of the Spanish flu in Uppsala were in accordance with the results in other places." "It has been estimated that a new influenza pandemic [in Europe] with the same virulence as the Spanish flu would cause … a 4.3% GDP reduction"[11] *Actually, COVID-19 of much less virulence caused much greater damage.* "With the exception of closing dance halls beginning on November 6, no other suggested actions were undertaken in Uppsala because they were considered inefficient by local authorities." "The age of admitted and fatal cases followed the previously noted pattern with the highest incidence and mortality in the 20 - 29 age group; 85% of the deaths were of patients younger than 40"
8	Boberg-Fazlić Nina, Ivets Maryna, Karlsson Martin, Nilsson Therese. Disease and Fertility: Evidence from the 1918 Influenza Pandemic in Sweden IZA Institute of Labor Economics DP No. 10834. June 2017[12]	"This paper studies the effect of the 1918–19 influenza pandemic on fertility using a historical dataset from Sweden…. Our findings help understand the link between mortality and fertility, one of the central relations in demography, and show that several factors – including disruptions to marriage and labor markets – contribute to fertility reduction in the long term."

[11] Economic impact of Spanish Flu Pandemics data is presented at Pandemics&GDP_dynamics.xlsx http://instecontransit.org/wp-content/uploads/2014/12/PandemicsGDP_dynamics10012021.xlsx

[12] https://www.iza.org/publications/dp/10834/disease-and-fertility-evidence-from-the-1918-influenza-pandemic-in-sweden

3. Pandemics – permanent factor in human existence

The following articles discuss origin, emergence and spread of pandemic influenza-like illnesses and conclude that such pandemics are a natural consequence of human development. Therefore, they should not be considered a global threat.

#	Article, chapter in the book	Short description
1	Statistics based on *Maddison Project Database, version 2018*. Bolt, Jutta, Robert Inklaar, Herman de Jong and Jan Luiten van Zanden (2018)[13] http://instecontransit.org/wp-content/uploads/2014/12/PandemicsGDP_dynamics10012021.xlsx	GDP dynamics 1901-2016
2	Saunders-Hastings Patrick R., Krewski Daniel. Reviewing the History of Pandemic Influenza: Understanding Patterns of Emergence and Transmission. *Pathogens* 2016, 5, 66; https://doi.org/10.3390/pathogens5040066	"This review argues that pandemic influenza is in part a consequence of human development, …. While progress in infectious disease prevention, control, and treatment has improved our ability to respond to such outbreaks, globalization processes relating to … mobility have increased the threat of pandemic emergence and accelerated global disease transmission."
3	Henderson D. A., Brooke Courtney, Inglesby Thomas V., Toner Eric, and Nuzzo Jennifer B. *Biosecurity and Bioterrorism: Biodefense Strategy, Practice, and Science* Volume 7, Number 3, 2009 HTTPS://DOI.ORG/ 10.1089=bsp.2009.0729[14]	A review of the 1957-58 pandemic of Asian influenza (H2N2) is proposed for comparison with 2009 (H1N1) pandemic. "Using historical surveillance reports, published literature, and media coverage, this article provides an overview of the epidemiology of and response to the 1957-58 influenza pandemic in the U.S., during which an estimated 25% of the population became infected with the new pandemic virus strain. … **Quarantine was not considered to be an effective mitigation strategy** and was ''obviously useless because of the large number of travellers and the frequency of mild or inapparent cases.'' *Economic growth not interrupted during the pandemics (see data from #1 of this Table)*

[13] https://www.rug.nl/ggdc/historicaldevelopment/maddison/releases/maddison-project-database-2018?lang=en https://www.rug.nl/ggdc/historicaldevelopment/maddison/

[14] https://www.massnurses.org/files/Henderson%20et%20al%20%202009.pdf

4	Boberg-Fazlic, Nina; Ivets, Maryna; Karlsson, Martin; Nilsson, Therese (2017): Disease and Fertility: Evidence from the 1918 Influenza Pandemic in Sweden, *IZA Discussion Papers*, No. 10834, Institute of Labor Economics (IZA), Bonn[15]	"The U.K. naval blockade and German naval belligerence hurt the country's import trade … price controls and rationing were introduced. A poor harvest in 1916 led to food shortages in some places and social unrest for … a short period, … Some sectors of the economy benefited from the war. Raw material exports to belligerent countries increased significantly … Conversely, there was a downturn for these sectors following the end of the war. After a period of economic growth, the economy experienced a brief decline in 1920-1921, where GDP dropped by 5% in one year and unemployment increased, but the country recovered fast". Thus, the great pandemics' direct and immediate effect not detected in Sweden."
5	Vellore Arthi, John Parman, Disease, downturns, and wellbeing: Economic history and the long-run impacts of COVID-19, *Explorations in Economic History*, Volume 79, 2021 https://doi.org/10.1016/j.eeh.2020.101381	"Experience from both historical pandemics and historical recessions can inform our view of the possible long-run effects of COVID- 19, and how we might mitigate these costs. The experience of the 1918 influenza pandemic suggests that disease exposure can **impact individuals throughout their lifetimes**,[16] both directly through poorer ongoing health, and indirectly through reduced investment in human capital… **Particularly in a pandemic where large shares of prime-aged people fall ill as in the 1918 Pandemic**". *The magnitude of COVID -19 pandemic, as well as the fraction of economically active people (20-45 years old) that suffered, are incomparably less than during the Spanish Flu. Therefore, neither immediate nor lasting damage for the economy could be anticipated without harsh lockdowns.*

[15] https://www.iza.org/publications/dp/10834/disease-and-fertility-evidence-from-the-1918-influenza-pandemic-in-sweden
[16] The authors speculate the Spanish Flu could have contributed to the Great Depression – the claim which is pretty hard to verify.

6	Brown Sharon P., Mason Sandra L., Tiller Richard B. The effect of Hurricane Katrina on employment and unemployment. *Monthly Labor Review* August 2006 pp. 52-69[17]	Severe hurricane Katrina 2005 impact on employment / unemployment in Louisiana lasted just three months (Tables 2 and 3 p. 68). So, one time shock 2005 heavier than on-time lockdown 2020 (hurricane caused evacuation and property damage) impact was pretty limited in more or less free and therefore flexible economy.
7	Linhart Y., Shohat T., Bromberg M., Mendelson E., Dictiar R., Green M.S. Excess mortality from seasonal influenza is negligible below the age of 50 in Israel: implications for vaccine policy. Infection (2011) Vol. 39 pp. 399–404 https://doi.org/10.1007/s15010-011-0153-1	Linhart Y., Shohat T., Bromberg M., Mendelson E., Dictiar R., Green M.S. Excess mortality from seasonal influenza is negligible below the age of 50 in Israel: implications for vaccine policy. Infection (2011) Vol. 39 pp. 399–404

[17] https://www.bls.gov/opub/mlr/2006/08/art5full.pdf

4. Pre-corona preparations for pandemics

Several governments had prepared (years ago) detailed plans of response to influenza pandemic. Israel probably had the most elaborate plan which relied on the unique experience of civil-military partnership. The plan prescribed active role of local government and appointed military bodies as a principal coordinator of the response. The response plans, both in Israel and other states, mentioned lockdowns as a means of last resort only. All these plans were abandoned at the beginning of the COVID-19 crisis, while governments in general and public healthcare bureaucracy in particular enjoyed unprecedented discretionary power and unprecedented funds under control. Such abandonment of existing plans provides ground for speculations that the decisions were not made exclusively on professional and interest-free basis.

#	Article, chapter in the book	Short description
1	Italy National Plan for Preparedness and response to an Influenza Pandemic. Ministry of Health, 2006 [18]	Lockdown was not even mentioned among the range of measures.
2	Occupational Safety and Health Administration "Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers" U.S. Department of Labor, OSHA 3328-052007[19]	State-wide Lockdown not even mentioned. Quarantine measures is mentioned in the context of self-quarantine: "Public health measures of hand washing, respiratory hygiene, staying home when ill, respecting quarantine, isolation, "snow day" and travel, and public gathering limitations. … Education (on public health measures, infection control guidelines, home care, self-triage [to determine when medical care is necessary])." So "travel and public gathering limitations" are the only measures reminding 2020 lockdowns.
3	Israeli ministry of health. Plan of preparation to influenza pandemic (in Hebrew), 2007[20]	Lockdown was mentioned in the plan at the end of the sequence of possible response measures, just as a means of last resort. The plan was based on the active (leading organizational) role of the military with broad inclusion of local authorities at the cost of limitation of the power of the Health Ministry.

[18] http://www.salute.gov.it/imgs/C_17_pubblicazioni_511_allegato.pdf
[19] https://www.osha.gov/Publications/3328-05-2007-English.html
[20] https://www.health.gov.il/Subjects/emergency/preparation/DocLib/tora/BIO_TORA_PANDEMIC_FLU.pdf

4	Kohn Sivan, Barnetta Daniel J., Leventhal Alex, Reznikovich Shmuel, Meir Oren, Laor Danny, Grotto Itamar, Balicer Ran D. Pandemic influenza preparedness and response in Israel: A unique model of civilian-defense collaboration. *Journal of Public Health Policy* Vol. 31, 2, 256–269 https://doi.org/10.1057/jphp.2010.17	"The value of military structures in responding to pandemic influenza has become widely acknowledged in recent years. In 2005, the Israeli Government appointed the Ministry of Defense to be in charge of national preparedness and response for a severe pandemic influenza scenario. The Israeli case offers a unique example of civilian-defense partnership where the interface between the governmental, military and civilian spheres has formed a distinctive structure. The Israeli pandemic preparedness protocols represent an example of a collaboration in which aspects of an inherently medical problem can be managed by the defense sector". *The unique experience and the model of response, manifesting one of Israel big and obvious advantage, was abandoned in 2020 without public discussions and without any explanations.*

III. Professional Issues

1. Forecasts

While forecasting is generally a risky activity, inaccurate forecast generally could be better than no forecast at all. The problem is, however, that the forecasts which were chosen for political decision making – systematically overestimated the threat supporting excessive measures.

#	Article, chapter in the book	Short description
1	Ferguson Nail M. et al Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. *Imperial College London* March 16 2020.[21]	Even if all patients were able to be treated, we predict there would still be in the order of 250,000 deaths in GB, and 1.1-1.2 million in the US.
2	Ioannidis John P.A, Cripps Sally, Tanner Martin A. Forecasting for COVID-19 has failed. https://doi.org/10.1016/j.ijforecast.2020.08.004	Lack of transparency, errors, lack of determinacy, consideration of only one or a few dimensions of the problem at hand, lack of expertise in crucial disciplines, groupthink and bandwagon effects, and selective reporting are some of the causes of these failures. Nevertheless, epidemic forecasting is unlikely to be abandoned. …When major decisions (e.g., draconian lockdowns) are based on forecasts, the harms (in terms of health, economy, and society at large) need to be approached in a holistic fashion, considering the totality of the evidence.

[21] https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf

3	Nadella Pranay, Swaminathan Akshay, Subramanian.S. V. Forecasting efforts from prior epidemics and COVID-19 predictions. *European Journal of Epidemiology* (2020) 35:727–729 https://doi.org/10.1007/s10654-020-00661-0	We reviewed the accuracy of forecasts made during prior twenty-first century epidemics, namely SARS, H1N1, and Ebola. We found that while disease prediction models were relatively nascent as a research focus during SARS and H1N1, for Ebola, numerous such forecasts were published. We found that forecasts of deaths for Ebola were often far from the eventual reality, with a strong tendency to over predict.
4	Chin Vincent, Ioannidis John P.A, et al. A case study in model failure? COVID-19 daily deaths and ICU bed utilisation predictions in New York state. *European Journal of Epidemiology* (2020) 35:733–742 https://doi.org/10.1007/s10654-020-00669-6	For accuracy of prediction, all models fared very poorly. Only 10.2% of the predictions fell within 10% of their training ground truth, irrespective of distance into the future. For accurate assessment of uncertainty, only one model matched relatively well the nominal 95% coverage, but that model did not start predictions until April 16, thus had no impact on early, major decisions.

2. Excess deaths

During previous flu epidemics, mass testing was not practiced, and excess mortality was used to assess extent of disease. For example, some seasonal flus in Israel in 1999 – 2006 resulted in excess mortality comparable to that of 2020 (Linhart et al, 2011).

Attribution of mortality to COVID-19 turned to be important political issue. However, about 25% of patients who died being tested positively on COVID-19 had 3 and more comorbidities, and only below 2% had no comorbidities (Palmeri et al, 2020).

CDC's list of underlying medical conditions that increase person's risk of severe illness from COVID-19 contains most causes of mortality (both in the USA and worldwide). Differentiating between the immediate cause of death and underlying causes is far not straightforward, giving place to a significant bias.

Special attention should be paid to the publication of Yanni Gu (2020) shedding light on the way how CDC presents its statistical data on excess mortality. The editor has promptly removed the paper, blaming the author for 'inaccuracy', downplaying COVID threat and 'failure to provide additional information about the effects of COVID-19'[22]. Then the editor has promised to introduce 'fact-checking' at the site, while failing to explain or even to address the only point presented by Yanni Gu: How, during one week in mid-April 2020, all the basic trends in the causes of mortality in the USA (cardiovascular diseases, cancer, diabetes etc) turned to be broken, and COVID-19 mortality championed over all the traditional causes.

#	Article, chapter in the book	Short description
1	Linhart Y., Shohat T., Bromberg M., Mendelson E., Dictiar R., Green M.S. Excess mortality from seasonal influenza is negligible below the age of 50 in Israel: implications for vaccine policy. *Infection* (2011) Vol. 39 pp. 399–404 https://doi.org/10.1007/s15010-011-0153-1	"Overall excess mortality rates [in Israel] ranged from 7.7 to 36.1 per 100,000 for all causes, and from 4.4 to 24.4 per 100,000 for respiratory and circulatory causes." *The article is based on the data collected during 1999-2006. The upper limit of annual excess mortality (24.4 per 100,000 in 1999-2000) corresponds to about 2200 excess deaths in year 2020 – not considerably less than official the COVID-19 death toll.*

[22] https://www.jhunewsletter.com/article/2020/11/a-closer-look-at-u-s-deaths-due-to-covid-19

2	Palmieri et al, 2020 "Characteristics of COVID-19 patients dying in Italy Report based on available data on March 24 th, 2020" (March, 24).[23]	The first wave of COVID-19 in Italy. "Overall, 1.4% of the sample presented with a no comorbidities, 21.4% with a single comorbidity, 26.1% with 2, and 51.2% with 3 or more"
3	CDC. Evidence used to update the list of underlying medical conditions that increase a person's risk of severe illness from COVID-19 Updated Nov. 2, 2020[24]	"Strongest and Most Consistent Evidence [of underlying conditions … risk of severe illness …] Cancer, Chronic obstructive pulmonary disease, Heart conditions, such as heart failure, coronary artery disease, or cardiomyopathies, Severe Obesity, Type 2 diabetes mellitus"
4.	Gu Yanni. A closer look at U.S. deaths due to COVID-19 November 27, 2020. *News-Letter (Published by the Students of Johns Hopkins since 1896)* January 24, 2021[25]	Author of paper (swiftly retracted by the newsletter) pays attention on break of trends in statistics of mortality on principal causes in the United States about mid-April 2020 (since a week ending April 18). All causes showed sharp decrease compared to 2019 (especially heart diseases, cancer and diabetes), while COVID-19 as the cause of death experienced sharp increase.

[23] https://www.epicentro.iss.it/coronavirus/bollettino/Report-COVID-2019_24_marzo_eng.pdf
[24] https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/evidence-table.html
[25] https://web.archive.org/web/20201126171832/https://www.jhunewsletter.com/article/2020/11/a-closer-look-at-u-s-deaths-due-to-covid-19

3. Effectiveness of lockdowns in suppressing COVID-19

It turned to be hard to find any piece of evidence that lockdowns were effective in the suppressing the epidemics, though loudly declared 'saving lives' by politicians and experts. "The pro-lockdown evidence is shockingly thin, and based largely on comparing real-world outcomes against dire computer-generated forecasts derived from empirically untested models" (AIER 2020).

#	Article, chapter in the book	Short description
1	Savaris, R.F., Pumi, G., Dalzochio, J. et al. Stay-at-home policy is a case of exception fallacy: an internet-based ecological study. *Scientific Reports* **11**, 5313 (2021). https://doi.org/10.1038/s41598-021-84092-1	"In ~ 98% of the comparisons using 87 different regions of the world we found no evidence that the number of deaths/million is reduced by staying at home."
2	Eran Bendavid, Christopher Oh, Jay Bhattacharya, John P. A. Ioannidis. Assessing mandatory stay-at-home and business closure effects on the spread of COVID-19. *Eur J Clin Invest*. 2021;51:e13484. https://doi.org/10.1111/eci.13484	"While small benefits [of lockdowns] cannot be excluded, we do not find significant benefits on case growth of more restrictive NPIs [nonpharmaceutical interventions]. Similar reductions in case growth may be achievable with less-restrictive interventions."
3	Bjørnskov Christian. Did Lockdown Work? An Economist's Cross-Country Comparison. 6 Aug 2020 https://dx.doi.org/10.2139/ssrn.3665588	"I explore the association between the severity of lockdown policies in the first half of 2020 and mortality rates. Using two indices from the Blavatnik Centre's Covid 19 policy measures[26] and comparing weekly mortality rates from 24 European countries in the first halves of 2017-2020, and addressing policy endogeneity in two different ways, I find no clear association between lockdown policies and mortality development."

[26] See references below, at 7.3.

4	American Institute for Economic Research. *Lockdowns Do Not Control the Coronavirus: The Evidence*. December 19, 2020 https://www.aier.org/article/lockdowns-do-not-control-the-coronavirus-the-evidence	*A digest of 30 papers (including the abovementioned paper of Bjørnskov) – all showing no correlation between lockdown severity and mortality.* "There is no relationship between lockdowns (or whatever else people want to call them to mask their true nature) and virus control. Perhaps this is a shocking revelation, given that universal social and economic controls are becoming the new orthodoxy… The pro-lockdown evidence is shockingly thin, and based largely on comparing real-world outcomes against dire computer-generated forecasts derived from empirically untested models, and then merely positing that stringencies and "nonpharmaceutical interventions" account for the difference between the fictionalized vs. the real outcome. The anti-lockdown studies, on the other hand, are evidence-based, robust, and thorough, grappling with the data we have (with all its flaws) and looking at the results in light of controls on the population."

4. Effectiveness of mandatory mask-wearing

Masks may be useful to limit transmission under some circumstances. However, this has not been verified in general population. Moreover, it has been suggested earlier in 2020 that "Masks are not only tools, they are also talismans…" and that "greatest contribution [of masks] may be to reduce the transmission of anxiety, over and above whatever role they may play in reducing transmission of Covid-19" (Klompas et al, *N. Eng. J. Med*, 2020). "There is *some evidence to support the wearing of masks or respirators during illness* to protect others…" (Cowling et al, 2010), Anyhow, the anticipated benefit hardly justifies harsh police enforcement of this 'talisman', especially outdoors.

Prolonged mask wearing has also negative effects increasing the risk of other infections like aspiratory pneumonia.[27]

It should be also mentioned that officials changed their advice in the midst of crisis: mask-wearing was initially discouraged, but soon after turned to be mandatory.

#	Article, chapter in the book	Short description
1	Klompas et al., Universal Masking in Hospitals in the Covid-19 Era. May 21, 2020 New England Journal of Medicine 2020; 382:e63 https://doi.org/10.1056/NEJMp2006372	**Masks** are not only tools, they **are also talismans** … One might argue that fear and anxiety are better countered with data and education than with a marginally beneficial mask, particularly in light of the worldwide mask shortage, but it is difficult to get clinicians to hear this message in the heat of the current crisis. Expanded masking protocols' **greatest contribution may be to reduce the transmission of anxiety, over and above whatever role they may play in reducing transmission of Covid-19**.
2	European Centre for Disease Prevention and Control. *Using face masks in the community: first update*. 15 February 2021. ECDC: Stockholm; 2021. https://www.ecdc.europa.eu/sites/default/files/documents/covid-19-face-masks-community-first-update.pdf	• ***Low to moderate certainty*** of evidence that ***medical*** face masks have ***small to moderate effect*** for the prevention of COVID-19 in the community. • ***Very low certainty*** of evidence that ***non-medical*** face masks have ***small to moderate effect*** for the prevention of COVID-19 in the community.

[27] See also position of The Association of American Physicians and Surgeons (AAPS) https://aapsonline.org/mask-facts/.

3	Gandhi Monica, Havlir Diane. The Time for Universal Masking of the Public for Coronavirus Disease 2019 Is Now. *Open Forum Infectious Diseases*, Volume 7, Issue 4, April 2020, ofaa131, https://doi.org/10.1093/ofid/ofaa131	In this perspective, we recommend universal masking of the US public during coronavirus disease 2019 due to the high contagiousness of severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2), viral shedding of viable SARS-CoV-2 from asymptomatic individuals, and the likely contribution of masking to core distancing public health strategies for curbing transmission.
4	Marks Michael, Millat-Martinez Pere, Ouchi Dan, et al. Transmission of COVID-19 in 282 clusters in Catalonia, Spain: a cohort study. *The Lancet. Infectious Diseases*. Published: February 02, 2021 https://doi.org/10.1016/S1473-3099(20)30985-3	"We did not find any evidence of decreased risk of transmission in individuals who reported mask use… Mask use is probably correlated with type of exposure, which might further confound associations, but we did not note any association between mask use and risk either in our unadjusted analysis or in a multivariable model excluding type of exposure"
5	Letizia Andrew G. et al, SARS-CoV-2 Transmission among Marine Recruits during Quarantine. *New England Journal of Medicine*, Vol. 383, Issue 25. Pp. 2407 – 2416. 2020. https://doi.org/10.1056/NEJMoa2029717	1848 recruits volunteered to participate in the study and adhere to strict rules of **mask wearing** and social distancing. 35 participants (1.9%) tested positive on day 7 or on day 14. Another 1554 recruits declined to participate in the study; their adherence to the rules was not monitored. 26 of them (1.7%) were tested positive on day 14. *Actually, the infection rate was equal in the two groups.*
6	Brown Jeremy S. Community-acquired pneumonia. *Clinical Medicine* 2012, Vol 12, No 6: 538–543 https://www.rcpjournals.org/content/clinmedicine/12/6/538.full.pdf	"Community acquired pneumonia remains a significant and increasingly common medical problem in the industrialised world, with a substantial rate of complication and mortality. **Aspiration of oral and/or nasopharyngeal commensal is among the principal source of infection**." *This side-effect of continued mask wearing seems to be systematically ignored*
7	Cowling B.J.,Zhou Y. et al. "Face masks to prevent transmission of influenza virus: a systematic review." *Epidemiology & Infection*, Volume 138, Issue 4, April 2010, pp. 449 – 456 https://doi.org/10.1017/S0950268809991658	"There is some evidence to support the wearing of masks or respirators during illness to protect others, and public health emphasis on mask wearing during illness may help to reduce influenza virus transmission. There are fewer data to support the use of masks or respirators to prevent becoming infected."

8	Smith Jeffrey D., MacDougall Colin C., et al. "Effectiveness of N95 respirators versus surgical masks in protecting health care workers from acute respiratory infection: a systematic review and meta-analysis" CMAJ May 17, 2016 188 (8) 567-574; https://doi.org/10.1503/cmaj.150835	"We identified six clinical studies … In the meta-analysis of the clinical studies, we found no significant difference between N95 respirators and surgical masks in associated risk of (a) laboratory-confirmed respiratory infection, (b) influenza-like illness, or (c) reported work-place absenteeism."
9	Brewster J. "Is Trump Right That Fauci Discouraged Wearing Masks? Yes But Early On And Not For Long" https://www.forbes.com/sites/jackbrewster/2020/10/20/is-trump-right-that-fauci-discouraged-wearing-masks/	Feb. 27 One day after the Centers for Disease Control confirmed the first possible instance of Covid-19 "community spread," CDC Director Robert Redfieldis asked at a Hearing on Capitol Hill whether healthy people should wear a face covering and responds, "No." Feb. 29 "U.S. Surgeon General Jerome Adams orders Americans to "STOP BUYING MASKS!" March, 8 "Fauci says "there's no reason to be walking around with a mask,"

5. Transmission & reinfection

Masks and social distancing failed to show effectiveness in a direct experiment (probably, unique) at US Marine base (Letizia et al, 2020) – the experimental cohort consisted of disciplined young people supervised by military commander.

Alternatively, climate conditions were found to be a significant factor in another study.

While reinfection cases are observable, natural infection appears to elicit strong protection against reinfection for at least seven months. Reinfection rate was pretty low (under 1%), and reinfections were less severe than primary infections (Abu-Raddad et al, 2021).

#	Article, chapter in the book	Short description
1	Letizia Andrew G. et al, SARS-CoV-2 Transmission among Marine Recruits during Quarantine. *New England Journal of Medicine*, Vol. 383, Issue 25. Pp. 2407 – 2416. 2020. https://doi.org/10.1056/NEJMoa2029717	1848 recruits volunteered to participate in the study and adhere to strict rules of mask wearing and social distancing. 35 participants (1.9%) tested positive on day 7 or on day 14. Another 1554 recruits declined to participate in the study; their adherence to the rules was not monitored. 26 of them (1.7%) were tested positive on day 14. *Actually, the infection rate was equal in the two groups.*
2.	Méndez-Arriaga Fabiola. The temperature and regional climate effects on communitarian COVID-19 contagion in Mexico throughout phase 1. Science of The Total Environment Volume 735, 15 September 2020, 139560 https://doi.org/10.1016/j.scitotenv.2020.139560	The results showed a negative association between temperature (mean, max and min) and climate classification with both daily local COVID-19 (LCPR) confirmed positive cases and Local Transmission Ratio (LTR) variables. The precipitation associated positively with LCPC and LTR. The associations between the climate classification with LCPC and LTR are statistically significant
3.	Abu-Raddad Laith J., Chemaitelly Hiam, Coyle Peter et al. "SARS-CoV-2 reinfection in a cohort of 43,000 antibody positive individuals followed for up to 35 weeks". 2021 https://doi.org/10.1101/2021.01.15.21249731 MedRxiv preprint[28] January 15, 2021	"Conclusions: Reinfection is rare. Natural infection appears to elicit strong protection against reinfection with an efficacy >90% for at least seven months."

[28] https://www.medrxiv.org/content/10.1101/2021.01.15.21249731v1.full

6. Treatment

We have no intention to be involved in a scientific discussion whether *HCQ*, *Ivermectin* etc. are or are not effective in treatment of COVID-19. However, the unanimously negative attitude of the public health bodies to the suggested methods is suspicious. E.g., WHO coordinated test of *HCQ* (Mehra et al 2020) failed to reproduce the proposed protocol (Derwand, Scholz, Zelenko, 2020). Clearly observable position[29] and staunch resistance of WHO (as well as publicly funded institutions in the US and Europe) to any extensive use of medications for curing or alleviating symptoms of COVID-19 is compatible with interests for public attention, funding and discretionary power of healthcare bureaucracy. On the contrary, newly formed coalitions of physicians[30] endorsing some (not all) of the medications (*HCQ* at an early stage and, more broadly, *Ivermectin* and others) include numerous privately practicing doctors. The research of the latter suffers because of time pressure and lack of funds, but it is not harmed by conflict of interests. We suggest that the problem of adverse incentives of public servants constitutes much more grave problem than possible interest of big pharmaceutical companies to get governmental funding for research, development and production of vaccines.

#	Article, chapter in the book	Short description
1	Guner R., Hasanoglu I. et al. Comparing ICU Admission Rates of Mild/Moderate COVID-19 Patients Treated with Hydroxychloroquine, Favipiravir, and Hydroxychloroquine plus Favipiravir. *Journal of Infection and Public Health* (Journal pre-proof)[31]	HCQ with or without *favipiravir* treatment is associated with reduced risk of ICU admission compared to *favipiravir* alone in mild to moderate COVID-19 adult patients.
2	Egeli et al. Hydroxychloroquine for the treatment of COVID-19 and its potential cardiovascular toxicity: Hero or villain? *Best Practice & Research Clinical Rheumatology* 2021[32]	"… We then contrast these findings to later published larger observational studies and randomized controlled trials. We detail the emerging possible cardiovascular risks associated with antimalarial use in COVID-19 and whether COVID-19-related outcomes and cardiovascular risks may differ for antimalarials used in rheumatic diseases."

[29] Pay attention on their declaration and on leaks, including in form of so-called 'fact-checking'
[30] See for example FLCCC https://covid19criticalcare.com/. This coalition is generally supported by The Association of American Physicians and Surgeons (AAPS): https://aapsonline.org/covidpatientguide/ .
[31] https://doi.org/10.1016/j.jiph.2020.12.017
[32] https://doi.org/10.1016/j.berh.2020.101658

3	Derwand, R., Scholz, M., Zelenko, V. COVID-19 outpatients – early risk-stratified treatment with zinc plus low dose hydroxychloroquine and azithromycin: a retrospective case series study. Int. J. Antimicrob. Agents (2020), https://doi.org/10.1016/j.ijantimicag.2020.106214	"Only diagnosed COVID-19 patients who met the defined risk stratification requirements of group A, B or C received a prescription for the following triple therapy for 5 consecutive days in addition to standard supportive care: zinc sulfate (220 mg capsule once daily, containing 50 mg elemental zinc); HCQ (200 mg twice daily); and azithromycin (500 mg once daily)." "Clinical experience from severely ill inpatients with pneumonia who were treated with high-dose HCQ is not readily transferable to the outpatient setting with upper respiratory tract disease only. … "
4	Mehra Mandeep R, Desai Sapan S, Frank Ruschitzka, Amit N Patel Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis 2020 https://doi.org/10.1016/S0140-6736(20)31180-6	"We were unable to confirm a benefit of hydroxychloroquine or chloroquine, when used alone or with a macrolide, on in-hospital outcomes for COVID-19. Each of these drug regimens was associated with decreased in-hospital survival and an increased frequency of ventricular arrhythmias when used for treatment of COVID-19." The problem of this large scale research, it not reproduced Derwand, , Scholz, Zelenko practice / protocol even in dosage. "The median time from 42mmunization42on to diagnosis of COVID-19 was 2 days (IQR 1–4). The mean daily dose and duration of the various drug regimens were as follows: … hydroxychloroquine alone, 596 mg" "France reported that the use of hydroxychloroquine at a dose of 600 mg"[33].
5	Hongchao Pan et al. Repurposed antiviral drugs for COVID-19 – interim WHO SOLIDARITY trial results WHO Solidarity trial consortium MedRxiv (October 15) version. https://doi.org/10.1101/2020.10.15.20209817	These *Remdesivir*, *Hydroxychloroquine*, *Lopinavir* and *Interferon* regimens appeared to have little or no effect on hospitalized COVID-19, as indicated by overall mortality, initiation of ventilation and duration of hospital stay. The mortality findings contain most of the randomized evidence on Remdesivir and Interferon, and are consistent with meta-analyses of mortality in all major trials. (Funding: WHO. Registration: ISRCTN83971151, NCT04315948)

[33] Indian source reports claim, that WHO test used 2400 mg daily dosage https://www.newindianexpress.com/nation/2020/may/29/icmr-writes-to-who-disagreeing-with-hcq-assessment-officials-say-international-trial-dosage-four-ti-2149702.html ; UK test of HCQ applied the same dose 2400 mg of HCQ daily: https://anthraxvaccine.blogspot.com/2020/06/who-trial-using-potentially-fatal.html

6	Caly Leon, Druce Julian D., Cattona Mike G., Jans David A., Wagstaff Kylie M. The FDA-approved drug ivermectin inhibits the replication of SARS-CoV-2 in Vitro. *Antiviral Research* 178 (2020) 104787 https://doi.org/10.1016/j.antiviral.2020.104787	Although several clinical trials are now underway to test possible therapies, the worldwide response to the COVID-19 outbreak has been largely limited to monitoring/ containment. We report here that Ivermectin, an FDA-approved anti-parasitic previously shown to have broad-spectrum anti-viral activity in vitro, is an inhibitor of the causative virus (SARS-CoV-2), with a single addition to Vero-hSLAM cells 2 h post infection with SARS-CoV-2 able to effect ~5000-fold reduction in viral RNA at 48 h. Ivermectin therefore warrants further investigation for possible benefits in humans.
7	Cepelowicz Rajter Juliana, Sherman Michael S., et al. Use of Ivermectin Is Associated With Lower Mortality in Hospitalized Patients With Coronavirus Disease 2019. CHEST 2021; Volume 159 (Issue 1), pp. 85-92 https://doi.org/10.1016/j.chest.2020.10.009	Ivermectin treatment was associated with lower mortality during treatment of COVID-19, especially in patients with severe pulmonary involvement. Randomized controlled trials are needed to confirm these findings.
8	Kory Pierre, Meduri G. Umberto, Iglesias Jose et al, 2021. Review of the Emerging Evidence Demonstrating the Efficacy of Ivermectin in the Prophylaxis and Treatment of COVID-19. Front-Line Covid-19 Critical Care Alliance (FLCCC).[34]	«To our knowledge, the current review is the earliest to compile sufficient clinical data to demonstrate the strong signal of therapeutic efficacy as it is based on numerous clinical trials in multiple disease phases. One limitation is that half the controlled trials have been published in peer-reviewed publications, with the remainder taken from manuscripts uploaded to medicine pre-print servers. Although it is now standard practice for trials data from pre-print servers to immediately influence therapeutic practices during the pandemic, given the controversial therapeutics adopted as a result of this practice, the FLCCC argues that it is imperative that our major national and international health care agencies devote the necessary resources to more quickly validate these studies and confirm the major, positive epidemiological impacts that have been recorded when ivermectin is widely distributed among populations with a high incidence of COVID-19 infections».

[34] https://covid19criticalcare.com/wp-content/uploads/2020/11/FLCCC-Ivermectin-in-the-prophylaxis-and-treatment-of-COVID-19.pdf

9	Dupuy B. No evidence ivermectin is a miracle drug against COVID-19 December 11, 2020 Associated Press fact checking[35]	"CLAIM: The antiparasitic drug ivermectin "has a miraculous effectiveness that obliterates" the transmission of COVID-19 and will prevent people from getting sick. AP'S ASSESSMENT: False. There's no evidence ivermectin has been proven a safe or effective treatment against COVID-19." References: FDA and public University of Wisconsin–Madison
10	NIH. The COVID-19 Treatment Guidelines Panel's Statement on the Use of Ivermectin for the Treatment of COVID-19[36] January 14, 2021	"The COVID-19 Treatment Guidelines Panel (the Panel) has determined that currently there are insufficient data to recommend either for or against the use of ivermectin for the treatment of COVID-19. Results from adequately powered, well-designed, and well conducted clinical trials are needed to provide more specific, evidence-based guidance on the role of ivermectin for the treatment of COVID-19." The previous position of NIH, dated August 27, recommended against Ivermectin.[37]
10	INSERM[38] Rosa-Calatrava Manuel "L'ivermectine, nouveau traitement « miracle » contre la Covid-19, vraiment?" [39]	"Ivermectin is an antiparasitic drug that is not currently approved for the treatment of any viral infections, including SARS-CoV-2 infection." "The question of its effective dose has not been resolved, as has its therapeutic and / or prophylactic positioning." "To date, ivermectin is therefore not yet recommended for the treatment or prevention of Covid-19 outside the framework of a clinical trial."[40]

[35] https://apnews.com/article/fact-checking-afs:Content:9768999400
[36] https://www.covid19treatmentguidelines.nih.gov/
[37] https://covexit.com/nih-updates-its-position-on-ivermectin/
[38] Founded in 1964, INSERM is a public scientific and technological institute which operates under the joint authority of the French Ministries of Health and Research. https://www.inserm.fr/en/about-inserm/inserm-glance
[39] https://presse.inserm.fr/livermectine-nouveau-traitement-miracle-contre-la-covid-19-vraiment/42011/
[40] https://trialsitenews.com/slovakia-becomes-the-first-eu-nation-to-formally-approve-ivermectin-for-both-prophylaxis-and-treatment-for-covid-19-patients/

IV. Emergency policy implementation

1. Hospitals and nursing homes – Europe and USA

Hospitals in Europe and USA were prepared to manage pretty small groups of highly contagious patients, while unprepared to much more probable challenge – large-scale contagion. Even more important, public health care facilities and nursing homes often became vehicles of contamination themselves.

#	Article, chapter in the book	Short description
1.	Nacoti M. et al. At the Epicenter of the Covid-19 Pandemic and Humanitarian Crises in Italy: Changing Perspectives on Preparation and Mitigation. *New England Journal of Medicine – Catalyst*. https://catalyst.nejm.org/doi/full/10.1056/CAT.20.0080	In a pandemic, patient-centered care is inadequate and must be replaced by community centered care. Solutions for Covid-19 are required for the entire population, not only for hospitals. The catastrophe unfolding in wealthy Lombardy could happen anywhere. Clinicians at a hospital at the epicenter call for a long-term plan for the next pandemic.
2	Singh et al. Mapping infectious disease hospital surge threats to lessons learnt in Singapore: a systems analysis and development of a framework to inform how to DECIDE on planning and response strategies. *BioMed Central Health Services Research* (2017) |vol. 17 p. 622-635. https://doi.org/10.1186/s12913-017-2552-1	The Singapore hospital system is highly adapted to crowding, functioning remarkably well at constant near-full capacity in peacetime and resilient to endemic surges.
3	Fusco F.M. et al. Isolation rooms for highly infectious diseases: an inventory of capabilities in European countries. Journal of Hospital Infection (2009) 73, pp. 15-23 https://doi.org/10.1016/j.jhin.2009.06.009	In participating countries, high level isolation rooms (HIRs) are available in at least 211 hospitals, with at least 1789 hospital beds. The authors stress: “The adequacy of this number is not known and will depend on prevailing circumstances”. Sporadic highly infectious diseases (HID) cases can be managed in the available HIRs.

4	Minder Raphael, Peltier Elian. A Deluged System Leaves Some Elderly to Die, Rocking Spain's Self-Image. *New York Times*[41] March 25 2020	Spain's nursing homes became centers of COVID-19 spread: "Even amid the coronavirus crisis, the tragedy unfolding in Spain's nursing homes has shocked a nation that takes pride in its reverence for older people and in its [public] health care system."
5	Aloisi Silvia, Pollina Elvira, Barbaglia Pamela. Italy's medics at 'end of our strength' as they too fall ill.[42]	"At Italy's Oglio Po hospital, 25 out of 90 doctors are infected with the coronavirus … In Lombardy, the Italian region with the highest number of cases and deaths, at least two hospitals became vehicles of contamination, with patients infecting medical staff who then spread the disease as they travelled around their communities" Reuters (Milan)
6	Bielza Rafael , Sanz Juan et al. Clinical Characteristics, Frailty, and Mortality of Residents With COVID-19 in Nursing Homes of a Region of Madrid. *Journal of the American Medical Directors Association* Volume 22, Issue 2, February 2021, Pages 245-252. https://doi.org/10.1016/j.jamda.2020.12.003	"Mortality of the residents living in Nursing Homes with COVID-19 was almost 45%. The altered level of consciousness as an atypical presentation of COVID-19 should be considered in this population. A severe form of the disease, present in more than three-quarters of patients, was associated with mortality, apart from the male sex, CFS >6, dementia, and dyspnea, whereas age and care setting were not."
7	Baum Aaron, Schwartz Mark D. Admissions to Veterans Affairs Hospitals for Emergency Conditions During the COVID-19 Pandemic. *JAMA* 2020;324 (1): pp. 96-99. https://doi.org/10.1001/jama.2020.9972	"Reduced hospitalizations for conditions requiring timely treatment may have significant public health consequences. Between March 11 and April 21, 2020, 42% fewer patients were admitted to VA inpatient facilities compared with the preceding 6 weeks, … Many patients may be avoiding hospitals to minimize risk of SARS-CoV-2 infection."
8	Olszewski, Erin Marie. Perspectives on the Pandemic: The (Undercover) Epicenter Nurse in the New York Elmhurst Hospital. Episode Nine. https://www.youtube.com/watch?v=UIDsKdeFOmQ	NY Elmhurst public hospital fails to separate COVID-contracted patients from the rest of patients (minutes 10-11). Antimalarial drug hydroxychloroquine works – interview with physician in charge.

[41] https://www.nytimes.com/2020/03/25/world/europe/Spain-coronavirus-nursing-homes.html
[42] https://www.reuters.com/article/us-health-coronavirus-italy-doctors/italys-medics-at-end-of-our-strength-as-they-too-fall-ill-idUSKBN21A29Z

9	Miltimore, Jon. How States Turned Nursing Homes Into 'Slaughter Houses' by Forcing Them to Admit Discharged COVID-19 Patients. www.fee.org May, 7, 2020[43]	Gov. Andrew Cuomo sounded indignant when a reporter asked if anyone had objected to New York's policy of forcing nursing homes to admit recently discharged COVID-19 patients. "They don't have the right to object," Cuomo answered before the reporter finished his question. "That is the rule, and that is the regulation, and they have to comply with it." New Jersey, Massachusetts, and California—three states also hit particularly hard by the novel coronavirus—passed similar policies to free up hospital beds to make room for sicker patients. Policies resulted in numerous fatalities in the nursing homes.

[43] https://fee.org/articles/how-states-turned-nursing-homes-into-slaughter-houses-by-forcing-them-to-admit-discharged-covid-19-patients/
See also https://www.newsmax.com/newsmax-tv/nursing-homes-virus/2020/05/05/id/966207/ ; https://www.nbcnews.com/news/us-news/coronavirus-spreads-new-york-nursing-home-forced-take-recovering-patients-n1191811

2. Adverse side-effects: suicides and more

Deaths were caused by interruption of normal social life and the routine regular social interactions. Loss of social economic status caused many more "deaths of despair, deaths due to drug, alcohol, and suicide". The extent of human life loss has never been calculated and never been taken into consideration in the decision-making process. Anyhow, societies have never been informed about these considerations and calculations.

#	Article, chapter in the book	Short description
1	Peterson Stephen, Westfall John M., Miller Benjamin F. 'Projected deaths of despair during the Coronavirus Recession," Well Being Trust. May 8, 2020. WellBeingTrust.org.[44]	More Americans could lose their lives to deaths of despair, deaths due to drug, alcohol, and suicide, …. Deaths of despair have been on the rise for the last decade, and in the context of COVID-19, deaths of despair should be seen as the epidemic within the pandemic. The goal of this report is to predict what deaths of despair we might see based on three assumptions during COVID-19: economic recovery, relationship between deaths of despair and unemployment, and geography. Across nine different scenarios, additional deaths of despair range from 27,644 (quick recovery, smallest impact of unemployment on deaths of despair) to 154,037 (slow recovery, greatest impact of unemployment on deaths of despair), with somewhere in the middle being around 68,000.
2	Hill RM, Rufino K, Kurian S, et al. Suicide Ideation and Attempts in a Pediatric Emergency Department Before and During COVID-19. *Pediatrics*. 2021;147(3): e2020029280 https://doi.org/10.1542/peds.2020-029280	"Rates of positive suicide-risk screen results from January to July 2020 were compared with corresponding rates from January to July 2019. Results indicated a significantly higher rate of suicide ideation in March and July 2020 and higher rates of suicide attempts in February, March, April, and July 2020 as compared with the same months in 2019. … Months with significantly higher rates of suicide-related behaviors appear to correspond to times when COVID-19–related stressors and community responses were heightened, indicating that youth experienced elevated distress during these periods."

[44] http://psych-history.weill.cornell.edu/pdf/WBT_Deaths-of-Despair_COVID-19-FINAL-FINAL.pdf

3	Sher Leo. The impact of the COVID-19 pandemic on suicide rates *QJM: An International Journal of Medicine*, 2020, 1–6 https://doi.org/10.1093/qjmed/hcaa202	"Social isolation, anxiety, fear of contagion, uncertainty, chronic stress and economic difficulties may lead to the development or exacerbation of depressive, anxiety, substance use and other psychiatric disorders in vulnerable populations including individuals with pre-existing psychiatric disorders and people who reside in high COVID-19 prevalence areas. Stress-related psychiatric conditions including mood and substance use disorders are associated with suicidal behavior. COVID-19 survivors may also be at elevated suicide risk. The COVID-19 crisis may increase suicide rates during and after the pandemic. Mental health consequences of the COVID-19 crisis including suicidal behavior are likely to be present for a long time and peak later than the actual pandemic." See also 4.2 section 'Adverse side effects: suicides and more'.

4. Economic impact of lockdowns

Significant economic damage was caused by lockdown policies, not by the virus itself. The harsher governmental response was implemented, the longer time was spent at home due to lockdowns – the heavier losses were observed. Enormous 'stimulus' packages which follow the Keynesian way to cause short, in the best-case medium-run economic effect are pretty good for reporting (see PR China last decade and Western countries experience before mid-1970-ties stagflation).[45] The stimulus packages significantly distort the picture of real consequences of the depression caused by lockdowns,[46] making official statistics of GDP dynamics much less dramatic.

#	Article, chapter in the book	Short description
1.	Bannister Geoffrey, Finger Harald, Kido Yosuke, Kothari Siddharth, Loukoianova Elena. Addressing the Pandemic's Medium-Term Fallout in Australia and New Zealand. IMF Working Papers WP/20/272 https://www.imf.org/-/media/Files/Publications/WP/2020/English/wpiea2020272-print-pdf.ashx	"… we turn attention to the pandemic … fallout on medium-term potential output through scarring. Taking Australia and New Zealand as examples, we show that the pandemic will likely have a large and persistent impact on potential output, broadly in line with the experience of advanced economies from past recessions."
2.	Janaskie Amelia, Earle Peter. The Devastating Economic Impact of Covid-19 Shutdowns. AIER October 10, 2020 https://www.aier.org/article/the-devastating-economic-impact-of-covid-19-shutdowns/ https://www.aier.org/wp-content/uploads/2020/10/DevastatingEconomicImpact.pdf	"To this point, the destruction caused by state and Federal Covid-19 lockdowns has largely been expressed in aggregates. … the tradeoffs of stay-at-home orders were immediate and severe: a massive spike in unemployment, rivaling the Great Depression; similarly historic drops in GDP, and others. By looking at disaggregated data, though, the devastation of lockdowns becomes all the more apparent. … Although the pandemic itself may have caused some degree of economic retrenchment, the U.S. policy response at all levels tended to emulate the policies of vastly less market–oriented economies although far better examples were readily available. predictably, in industries that are most sensitive to lockdown – small firms generally, where most job creation takes place"

[45] See below, part VII (7.3) IMF Policy Response to COVID-19 (Stimulus packages).
[46] We wish to thank Louis Houlbrooke from the *New Zealand Taxpayers Alliance* for drawing our attention to this obvious but so important phenomenon.

3	Karabarbounis Marios, Laski Reiko, Lee James and Trachter Nicholas. Economic Impact of COVID-19: The Effect of Lockdown Measures on Unemployment.[47] Federal Reserve Bank of Richmond. September 4, 2020	«In this article, we studied the effect of lockdown measures on unemployment. Using time spent at home — which is a broad measure of mobility — and spatial variation, we find a positive relationship between the amount of time spent at home and the unemployment rate.»
4	Ettlinger Michael, Hensley Jordan. COVID-19 Economic Crisis: By State. University of New Hampshire. Carsey School of Public Policy. January 27, 2021 https://carsey.unh.edu/COVID-19-Economic-Impact-By-State	*Here the reader will find US state-by-state data supporting evidence and conclusions of previous article (Karabarbounis, Laski, Lee and Trachter, 2020).*
5	Lauren Bauer, Kristen Broady, Wendy Edelberg, and Jimmy O'Donnell Ten Facts about COVID-19 and the U.S. Economy. Hamilton Project (Brookings Institute) September, 2020. https://www.brookings.edu/wp-content/uploads/2020/09/FutureShutdowns_Facts_LO_Final.pdf	"Small business revenue is down 20 percent since January. 7 Layoffs and shutdowns—and not reduced average hours—are driving declines in total hours worked. …The number of labor force participants not at work quadrupled from January to April. …The number of people not in the labor force who want a job spiked by 4.5 million in April and has remained elevated. …Low-income families with children were most likely to experience an income shock.
6	Goodman Nathan P., Coyne Christopher J., Devereaux Abigail. Infectious Diseases and Government Growth. *The Independent Review*, Summer 2021. https://www.independent.org/publications/article.asp?id=13287	"The costs of government responses to health crises will be understated because the long-term effects are long and variable and only become evident in the future. Expansions in government power are reversible but are often sticky due to changes in people's ideology regarding the appropriate role of the state in relation to the citizenry, and to political economy factors such as vested interests and legal precedents regarding acceptable behaviors by the state (Higgs 1987). Moreover, expansions in state power associated with responses to infectious disease can expand into other areas of life and persist for decades after the public health crisis ends."

[47] https://www.richmondfed.org/publications/research/coronavirus/economic_impact_covid-19_09-04-20

5. Mandatory vaccination

The real choice is not to vaccinate or not to vaccinate, but to rely on voluntary vaccination or to coerce to vaccination. Given clear lack of conclusive evidence (statistical or qualitative) of significant advantages of compulsory vaccination compared to voluntary, one ought to consider the inevitable threats of coercion. One such threat is that all anti-vaccination initiatives and movements can be traced back to compulsory vaccination, starting from the very first movement inflamed by the United Kingdom Vaccination Act of 1853. Second, coercion to vaccination badly harms the same basic personal rights which had "secured to every man the fruits of his own industry" (A. Smith) and therefore caused both modern economic growth and permanently rising demand for (and provision of) healthcare services – including vaccination itself. Third, any decision to enforce compulsory vaccination creates numerous incentives harming public good (e.g., encourages pharmaceutical industry to invest in political lobby rather than in R&D etc) – and weakens incentives to run educational programs etc.

#	Article, chapter in the book	Short description
1	Hawgood B.J. Waldemar Mordecai Haffkine, CIE (1860-1930): prophylactic vaccination against cholera and bubonic plague in British India. J Med Biogr. 2007 Feb;15(1):9-19. https://doi.org/10.1258/j.jmb.2007.05-59 PMID: 17356724.	One of the most important missions in the vaccination history was complete without coercion, while government of British India involvement in the vaccination on some stage both harmed badly the Vladimir Havkin (Waldemar Haffkine) personally and disturbed his work.
2	Saint-Victor Diane S. and Omer Saad B. Vaccine refusal and the endgame: walking the last mile first. *Philosophical Transactions: Biological Sciences*, 5 August 2013, Vol. 368, No. 1623, Towards the endgame and beyond: complexities and challenges for the elimination of infectious diseases (5 August 2013), pp. 1-9. https://www.jstor.org/stable/41938026	"History of vaccine refusal … The integral role played by the smallpox vaccine in reducing disease prevalence compelled the English government to pass the Vaccination Act of 1853, which established compulsory vaccination throughout London [18]. The anti-vaccination movement gained momentum immediately after the passage of the 1853 law; prior to 1853, incidence of smallpox had been quite low, with some fluctuations, for quite some time [19]. The Anti-Vaccination League in London formed in 1853. In 1856, a popular pamphlet denouncing compulsory vaccination was widely circulated throughout Europe"
3	Barrett Scott. The Smallpox Eradication Game. Public Choice, Jan., 2007, Vol. 130, No. 1/2 (Jan., 2007), pp. 179-207 https://doi.org/10.1007/s11127-006-9079-z	"Every tightening in the laws, however, only increased social resistance. Eventually a new approach was tried. The 1898 Vaccination Act gave parents the right to refuse to vaccinate their children…"

4	Fine-Goulden, Miriam. Should children vaccination be compulsory in the UK? *Opticon 1826*, Issue 8, Spring 2010[48]	"Childhood vaccination is not compulsory in the UK, yet levels of immunization are generally high. … It is a reasonable argument that all children should be vaccinated for the protection of society; however, vaccination policies outside the UK demonstrate that compulsion does not guarantee high rates of immunization, and that education and engagement can be highly successful. … A policy of targeted education and support is likely to enhance public trust, as well as be more successful and economical than coercion."
5	Philipson Tomas. (1996). Private Vaccination and Public Health: An Empirical Examination for U.S. Measles. The Journal of Human Resources, Summer, 1996, Vol. 31, No. 3 (Summer, 1996), pp. 611-630 https://doi.org/10.2307/146268	The people's readiness to vaccinate their children significantly increase with rise of prevalence of disease (here – measle) in the specific state. Thus, more information on the disease's threat, faster reaction (to vaccinate the child). This observation basically coincides with Lawler, 2017 – where people react on experts' recommendations.
6	Paul Katharina T., Loer, Kathrin. Contemporary vaccination policy in the European Union: tensions and dilemmas. *Journal of Public Health Policy* (2019) 40:166–179 https://doi.org/10.1057/s41271-019-00163-8	The paper presents five case studies from the European Union (EU). Healthcare in all five countries is heavily dominated by Government. Austria and Netherlands have voluntary immunization programs. In Germany "Vaccination has been voluntary since the mid-1960s, but recently, parents have been required to provide proof of a medical consultation on vaccination in order to access public childcare." French immunization Program has long featured … mandatory vaccinations. Italy has partly mandatory vaccination program. Authors specially point out rise of anti-vaccination movement in France since 1990-ties.

[48] https://www.ucl.ac.uk/opticon1826/archive/issue8/articles/Article_Biomed_Sc_-_Fine-Goulden__Vaccination_Publish.pdf

7	Cave Emma. Voluntary vaccination: the pandemic effect. Legal Studies, Vol. 37 No. 2, 2017, pp. 279–304 https://doi.org/10.1111/lest.12144	Author staunchly advocates compulsory immunization. She cites Convention on the Rights of the Child and her principal argument is: "The CRC rejects a traditional approach based on the natural sociobiological authority of parents over children, and adopts a liberal social-constructive". The author's claim maybe relevant legally (we share her interpretation of CRC, especially article 9 of the Convention), but moral grounds of this approach look very vulnerable.
8	Malone, Kevin M, Hinman, Alan R. Chapter 13 'Vaccination mandates : the public health imperative and individual rights' in the 'Law in public health practice' New York : Oxford University Press, 2003. P. 262-284.[49]	Authors developed precedent-based arguments natural for common law judicial culture. Previously accepted – that is, not rejected – solution should be reproduced again and again. The argument is well fit for judicial discussion but quite challengeable in ethical discussion: who proved that the previous decision was morally justifiable?
9	Amin, A.N.E., Parra, M.T., Kim-Farley, R. et al. Ethical Issues Concerning Vaccination Requirements. Public Health Reviews, Vol. 34, No 14 (2012) pp. 1-20. https://doi.org/10.1007/BF03391666	Authors propose a set of utilitarian criteria[50], then, this criterion is declared ethical basis for evaluation of vaccination, including compulsory Authors also cited (p.4) John Stuart Mill[51] principle to prevent harm to others. Irrespectively the reasoning in support of compulsory vaccination, authors eventually arrive at the relatively moderate conclusion on the desirability to minimize compulsion promoting better understanding of the issues by the public and increasing the use of non-compulsory vaccination strategies.

[49] https://www.cdc.gov/vaccines/imz-managers/guides-pubs/downloads/vacc_mandates_chptr13.pdf

[50] Citing Childress JF, Faden RR, Gaare RD, Gostin LO, Kahn J, Bonnie RJ, Kass NE, Mastroianni AC, Moreno JD, Nieburg P. Public health ethics: mapping the terrain. The Journal of Law, Medicine & Ethics. 2002 Summer; Vol. 30 No 2 pp. 170-8. https://doi.org/ 10.1111/j.1748-720x.2002.tb00384.x. PMID: 12066595.

[51] "The only purpose for which power can rightfully be exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral, is not sufficient warrant."

10	Savulescu J. Good reasons to vaccinate: mandatory or payment for risk? *Journal of Medical Ethics* Published Online First: 05 November 2020. https://doi.org/10.1136/medethics-2020-106821	"Mandatory vaccination, including for COVID-19, can be ethically justified if the threat to public health is grave, the confidence in safety and effectiveness is high, the expected utility of mandatory vaccination is greater than the alternatives, and the penalties or costs for non-compliance are proportionate. … I defend a payment model … opportunity for altruistic vaccinations can be preserved by offering people who have been vaccinated the opportunity to donate any cash payment back to the health service."
11	Lawler, Emily C. (2017). Effectiveness of vaccination recommendations versus mandates: Evidence from the hepatitis A vaccine. Journal of Health Economics Vol. 52 (2017) pp. 45–62 https://doi.org/10.1016/j.jhealeco.2017.01.002	"Using provider-verified immunization data I find that recommendations significantly increased *hepatitis A* vaccination rates among young children by at least 20 percentage points, while mandates increase rates by another 8 percentage points."
12	Olivia M. Vaz, Mallory K. Ellingson, Paul Weiss, Samuel M. Jenness, Azucena Bardají, Robert A. Bednarczyk, Saad B. Omer Mandatory Vaccination in Europe. *Pediatrics* Feb 2020, 145 (2) e20190620; https://doi.org/10.1542/peds.2019-0620	The authors claim evidence of significant increase of coverage under mandatory vaccination. However, in both cases presented by the authors coercion is associated with less than 4% increase in coverage.

V. Decision making

1. Pro-lockdown apologetics

Actually, no scientific discussion took place as blatantly admitted in the pro-lockdown open letter of the UK Chief Medical Officers (CMOs):

> "Whilst it is always helpful to have more data and more evidence, we caution that in this complex and fast-moving pandemic, certainty is likely to remain elusive. 'Facts' will be differently valued and differently interpreted by different experts and different interest groups. A research finding that is declared 'best evidence' or 'robust evidence' by one expert will be considered marginal or flawed by another expert."

The UK CMOs (and many public health officials elsewhere) essentially suggest prolonging the state of emergency indefinitely, while compromising only a little in the scope of the emergency:

> "This might mean moving flexibly between (say) 90% normality and 60% normality".

#	Article, chapter in the book	Short description
1	Professor Chris Whitty; CMO, England; Dr Frank Atherton; CMO, Wales; Dr Gregor Ian Smith; CMO, Scotland; Dr Michael McBride; CMO, Northern Ireland; Professor Patrick Vallance; Chief Scientific Officer, Subject: COVID-19 policy response (an open letter) 20th September 2020[52]	British *National Health Service* Chief Medical Officers are determined to ignore evidence in policy choice because: Whilst it is always helpful to have more data and more evidence, we caution that in this complex and fast-moving pandemic, certainty is likely to remain elusive. "Facts" will be differently valued and differently interpreted by different experts and different interest groups. A research finding that is declared "best evidence" or "robust evidence" by one expert will be considered marginal or flawed by another expert. The authors essentially suggest prolonging the state of emergency indefinitely, while compromising only a little in the scope of the emergency: "This might mean moving flexibly between (say) 90% normality and 60% normality". They are ready (even!) not to require mandatory outdoor mask wearing (see par 4). The authors of this letter are quite confident that *their own* valuations and interpretations will be accepted without suspicion and reservations.

[52] https://blogs.bmj.com/bmj/2020/09/21/covid-19-an-open-letter-to-the-uks-chief-medical-officers/

2	Sergei Guriev, Georgy Egorov, Ruben Enikolopov, Katia Zhuravskaya, Oleg Itskhoki, Konstantin Sonin et al. 'Tight lockdown and active anti-crisis measures are necessary' (in Russian original: "Необходим жесткий карантин и активные антикризисные меры")[53] March 27, 2020	Group of Russian 'mainstream' economists, partly affiliated with anti-Putin opposition, advocates 'import' of harsh measures from the West, 'generous' anti-crisis economic policies and repeal of 'anti-sanctions' imposed by the Russian Government on the population (food import restrictions) as a revenge, after sanctions imposed by Western countries on some regime officials. Sergei Guriev facing moderate danger of prosecution in 2013 immediately left Russia, clearly expressing his lack of trust in the authorities' capacity to act reasonably and in lawful manner.[54] His trust in the same authorities' capacity to implement harsh anti-pandemic measures without grave abuses, mysteriously stayed unshakable. The Government swiftly applied harsh lockdown measures, recommended by the authors soon after the letter publication, while 'anti-sanctions' stayed in place.
3	Ferguson Nail M. et al Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. Imperial College London March 16 2020.[55] (this report appears also in the section *2.1. Forecasts*)	"Adding household quarantine to case isolation and social distancing is the next best option, although we predict that there is a risk that surge capacity may be exceeded under this policy option (Figure 3 and Table 4). Combining all four interventions (social distancing of the entire population, case isolation, household quarantine and school and university closure) is predicted to have the largest impact, short of a complete lockdown which additionally prevents people going to work." "Our most significant conclusion is that mitigation is unlikely to be feasible without emergency surge capacity limits of the UK and US healthcare systems being exceeded many times over. In the most effective mitigation strategy examined, which leads to a single, relatively short epidemic (case isolation, household quarantine and social distancing of the elderly), … In addition, even if all patients were able to be treated, we predict there would still be in the order of 250,000 deaths in GB, and 1.1-1.2 million in the US."

[53] https://www.vedomosti.ru/society/news/2020/03/27/826407-guriev-i-sonin-prizvali-vvesti-karantin
[54] https://www.nytimes.com/2013/06/01/world/europe/economist-sergei-guriev-doesnt-plan-return-to-russia-soon.html; https://cn.nytimes.com/opinion/20130610/c10guriev/en-us/
[55] https://www.imperial.ac.uk/media/imperial-college/medicine/sph/ide/gida-fellowships/Imperial-College-COVID19-NPI-modelling-16-03-2020.pdf

2. Dissenting opinions: lockdowns do more bad than good

"After the initial panic surrounding COVID-19, the objective facts now show a completely different picture – there is no medical justification for any emergency policy anymore. The current crisis management has become totally disproportionate and causes more damage than it does any good."

Open letter from medical doctors and health professionals to all Belgian authorities and all Belgian media

"Current lockdown policies are producing devastating effects on short and long-term public health. The results (to name a few) include lower childhood vaccination rates, worsening cardiovascular disease outcomes, fewer cancer screenings and deteriorating mental health – leading to greater excess mortality in years to come, with the working class and younger members of society carrying the heaviest burden."

The Great Barrington Declaration

#	Article, chapter in the book	Short description
1.	Caduff Carlo. What Went Wrong: Corona and the World after the Full Stop. *Medical Anthropology Quarterly*, Volume34, Issue 4 December 2020 Pages 467-487 https://doi.org/10.1111/maq.12599	"…article examines the global response to the Covid-19 pandemic. … that has normalized extremes and is based on the assumption that biological life is an absolute value separate from politics. The author suggests that today's fear is fueled by mathematical disease modeling, neoliberal health policies, nervous media reporting, and authoritarian longings… The pandemic response has produced a substantial rise in the number of people who now live with untreated illness… A virus causes disease, not hunger. It is not the pandemic, but the response to it that threatens the livelihood of millions of people. The poor marginalized, and vulnerable bear the brunt of the pandemic response."

2.	Open letter from medical doctors and health professionals to all Belgian authorities and all Belgian media. September 5th, 2020. https://www.aier.org/article/open-letter-from-medical-doctors-and-health-professionals-to-all-belgian-authorities-and-all-belgian-media/	"We call on politicians to be independently and critically informed in the decision-making process and in the compulsory implementation of corona-measures. We ask for an open debate, where all experts are represented without any form of censorship. After the initial panic surrounding covid-19, the objective facts now show a completely different picture – there is no medical justification for any emergency policy any more. The current crisis management has become totally disproportionate and causes more damage than it does any good. We call for an end to all measures and ask for an immediate restoration of our normal democratic governance and legal structures and of all our civil liberties."
3.	The Great Barrington Declaration https://gbdeclaration.org/	"… we have grave concerns about the damaging physical and mental health impacts of the prevailing COVID-19 policies, and recommend an approach we call Focused Protection.…Current lockdown policies are producing devastating effects on short and long-term public health. The results (to name a few) include lower childhood vaccination rates, worsening cardiovascular disease outcomes, fewer cancer screenings and deteriorating mental health – leading to greater excess mortality in years to come, with the working class and younger members of society carrying the heaviest burden. ... Keeping these measures in place until a vaccine is available will cause irreparable damage, with the underprivileged disproportionately harmed."

4.	Prof. Sunetra Gupta; Prof. epidemiology, the University of Oxford; Prof. Carl Heneghan; Director, Centre for Evidence Based Medicine, the University of Oxford; Prof. Karol Sikora; Consultant oncologist and Professor of medicine, University of Buckingham; Sam Williams; Director and co-founder of Economic Insight Subject: a targeted and evidence-based approach to the COVID-19 policy response (an open letter) 21st September 2020[56]	"…existing policy path is inconsistent with the known risk-profile of COVID-19 and should be reconsidered. The unstated objective currently appears to be one of suppression of the virus, until such a time that a vaccine can be deployed. This objective is increasingly unfeasible … and is leading to significant harm across all age groups, which likely offsets any benefits. … Instead, more targeted measures that protect the most vulnerable from COVID, whilst not adversely impacting those not at risk, are more supportable. Given the high proportion of COVID deaths in care homes, these should be a priority."
5	Ghate Onkar. A Pro-Freedom Approach to Infectious Disease. Ayn Rand Institute (ARI) June, 20 2020. https://newideal.aynrand.org/wp-content/uploads/2020/06/A-Pro-Freedom-Approach-to-Infectious-Disease-June-21-2020.pdf	"A Pro-Freedom Approach to Infectious Disease: Planning for the Next Pandemic" is the Ayn Rand Institute's white paper on America's response to the coronavirus pandemic. … In short, had the government been forced to adopt a more surgical approach because the use of the blunt instrument of statewide lockdowns was prohibited, its actions would have been both less destructive and more effective. … This — voluntary countermeasures not coercive statewide lockdowns — is what the 2017 CDC guidelines for an influenza pandemic as severe as that of 1918 recommend, and this approach should be codified into the law for all similar pandemics."
6	Avital Ayelet et al (76 medical doctors) Open Letter https://img.mako.co.il//2021/03/01/MIHTAV.pdf March 1, 2021 (Hebrew)	"We, the undersigned doctors from Israel engaged in all branches of medical practice– in the community, public hospitals and private sector – hereby protest against the excessive harm to Israeli citizens and their rights in the course of fighting Corona." "We call for an immediate cessation of any distinction between people based on the status of immunization, a distinction that has no medical justification behind it, and causes improper and far-reaching social incitement."

[56] https://www.scribd.com/document/476987031/Open-Letter-to-the-CMOs-of-England-Wales-Scotland-and-Northern-Ireland

3. Alternative means to protect people at risk

The implemented policy relied on compulsion instead of compassion and private initiative (with very few exemptions). The governments ignored alternative ways to protect groups at risk.

#	Article, chapter in the book	Short description
	Davies Nicholas G, Klepac Petra et al. Age-dependent effects in the transmission and control of COVID-19 epidemics. *Nature Medicine*, Vol, 26, August 2020, pp. 1205–1211 https://doi.org/10.1038/s41591-020-0962-9	"The COVID-19 pandemic has shown a markedly low proportion of cases among children. We estimate that susceptibility to infection in individuals under 20 years of age is approximately half that of adults aged over 20 years, and that clinical symptoms manifest in 21% (95% confidence interval: 12–31%) of infections in 10- to 19-year-olds, rising to 69% (57–82%) of infections in people aged over 70 years."
	Ioannidis et al. Population-level COVID-19 mortality risk for non-elderly individuals overall and for non-elderly individuals without underlying diseases in pandemic epicenters https://doi.org/10.1101/2020.04.05.20054361	Individuals with age <65 account for 4.8-9.3% of all COVID-19 deaths in 10 European countries and Canada, 13.0% in the UK, and 7.8-23.9% in the US locations. People <65 years old had 36- to 84-fold lower risk of COVID-19 death than those ≥65 years old in 10 European countries and Canada and 14- to 56-fold lower risk in UK and US locations. …The COVID-19 death risk in people <65 years old during the period of fatalities from the epidemic was equivalent to the death risk from driving between 13 and 101 miles per day for 11 countries and 6 states, and was higher (equivalent to the death risk from driving 143-668 miles per day) for 6 other states and the UK. People <65 years old without underlying predisposing conditions accounted for only 0.7-2.6% of all COVID-19 deaths (data available from France, Italy, Netherlands, Sweden, Georgia, and New York City).
	Walmart Reserves Daily Pickup Hour for Those Most At-Risk[57]	Private initiatives and solutions to care for people at risk
	Dierbergs changing store hours, offering reserved shopping times for at-risk groups https://bit.ly/2MUzCtG	

[57] https://corporate.walmart.com/newsroom/2020/04/14/walmart-reserves-daily-pickup-hour-for-those-most-at-risk

	Holander Zeev. COVID-19 pandemic, facts and rational approach, strategy and missed opportunities. April, 10 2020 https://anochi.com/covid-19/ (Hebrew)	"Divide the Israeli public into two risk groups, one (1) the entire population under 60 years old without underlying diseases. The second (2) everyone older than 60 or … with underlying diseases … Allow Group 1 an almost completely normal economic and commercial life with restrictions related to personal hygiene. Enable a full closure on Group 2. Protect and serve Group 2 … by deliveries … food, drug and more."

4. Country cases: patterns to adopt

Country cases evidence show that good practices of moderate and rational government response on COVID-19 Pandemic (South Korea, Taiwan, South Dakota) were generally ignored while responses based on political and bureaucratic special interests' games outcomes (Italy, first and foremost) have become the standard pattern reproduced by a huge majority of Governments and resulted in the clearly observable empowerment of Public Healthcare Bureaucracy (see also sections 4.1. and 5.5.)

#	Article, chapter in the book	Short description
1	Dighe et al. Response to COVID-19 in South Korea and implications for lifting stringent interventions BMC Medicine (2020) 18:321 https://doi.org/10.1186/s12916-020-01791-8	Whilst early adoption of testing and contact tracing is likely to be important for South Korea's successful outbreak control, other factors including regional implementation of strong social distancing measures likely also contributed. The high volume of testing and the low number of deaths suggest that South Korea experienced a small epidemic relative to other countries. Caution is needed in attempting to replicate the South Korean response in populations with larger more geographically widespread epidemics where finding, testing, and isolating cases that are linked to clusters may be more difficult.
2	Zastrov Mark. Nature – NEWS 18 March 2020. South Korea is reporting intimate details of COVID-19 cases: has it helped? https://doi.org/10.1038/d41586-020-00740-y	Extensive contact tracing has slowed viral spread, but some say publicizing people's movements raises privacy concerns.
3	Frank Daumann and Florian Follert: COVID-19 and Rent-Seeking Competition: Some Insights from Germany. *New Perspectives on Political Economy*. Vol. 16. No. 1-2, 2020 pp. 52-69 https://www.cevroinstitut.cz/data/nppe-16.pdf	COVID-19 [Government of Germany quite typical reaction with lockdown and huge 'stimulus package' Immediate Federal Economic Assistance (Corona Soforthilfen)".] stimulates rent-seeking competition between different interest groups that try to take advantage from the uncertainty of the crisis (on the uncertainty of the COVID-19 pandemic see Altig et al., 2020) and the given incomplete information.

4	Dillon Meagan and Boisvert Eugene. South Australia to end coronavirus lockdown three days early after pizza worker's 'lie' Posted Fri 20 Nov 2020 at 3:12am, updated Fri 20 Nov 2020 at 7:14am https://www.abc.net.au/news/	The rumours circulation caused by mistake or lie of hotel staffer caused hard lockdown in South Australia. Three days later authorities had realized, that the initial source of information – the staffer's claim was badly wrong so lockdown was lifted, business was reopened with restrictions

5. Factors behind the decision making

Rational approach mandates to search for reasonable explanations even when we are facing decisions that seem obviously unsubstantiated. Abandonment of known solutions and previously prepared plans by many governments urges to ask: "Why nearly all countries did it?" The main rationale that can be found behind 'irrational choice' of politicians is strong coinciding interest of left politicians[58] and social bureaucrats to extend discretionary power and funding for welfare state bodies (Tullock, 1965; Niskanen, 1971; Jasay, 1985).

The unique choice of Sweden can be explained (at least, partly) by unusual vulnerability of the acting government, while the opposition was not very interested in the COVID crisis. Social Democrats (SDP) – Green Party (MP) ruling coalition relies on support of 116 MP-s only, lacking 59 seats to gain a minimal majority (in 349 seats Riksdag). Ruling coalition hadn't any formal support agreement with left and social-liberal parties, who prevented Moderate Party from changing the government after 2018 general elections. SDP faces not-so-loyal 154 mandates-strong opposition (Moderates, Sweden Democrats, Christian Democrats) which did not signal its support to harsh measures. Thus, the government could not make "the bold" decision and eventually had arrived to the need to explain why it did not imposed lockdown and to advocate its choice – while the latter choice was most probably forced by the political circumstances.

#	Article, chapter in the book	Short description
1	Italy National Plan for Preparedness and response to an Influenza Pandemic. Ministry of Health, 2006 [59]	Lockdown was not even mentioned among the range of measures.
2	Occupational Safety and Health Administration "Pandemic Influenza Preparedness and Response Guidance for Healthcare Workers and Healthcare Employers" U.S. Department of Labor, OSHA 3328-052007[60]	State-wide Lockdown not even mentioned. Quarantine measures is mentioned in the context of self-quarantine: "Public health measures of hand washing, respiratory hygiene, staying home when ill, respecting quarantine, isolation, "snow day" and travel, and public gathering limitations. … Education (on public health measures, infection control guidelines, home care, self-triage [to determine when medical care is necessary])." So "travel and public gathering limitations" are the only measures reminding 2020 lockdowns.

[58] Means politicians supporting Big Government, Welfare state and clearly prioritizing 'caring' functions over classical limited government narrow functions (Defence, Public order, Justice). "A State, then, has one of two ends in view; it designs either to promote happiness, or simply to prevent evil" – see Humboldt W. von, 'The Sphere and Duties of Government (The Limits of State Action)' Chapter III (1854 ed.) (1792). So 'Left politician' could be defined as a 'Happiness promoter' http://goo.gl/Hh6MlT

[59] http://www.salute.gov.it/imgs/C_17_pubblicazioni_511_allegato.pdf

[60] https://www.osha.gov/Publications/3328-05-2007-English.html

3	Israel government Plan of preparation to Influenza pandemic, 2007[61]	Lockdown was mentioned in the plan at the end of the sequence of possible response measures, just as a means of last resort. The plan was based on the active (leading organizational) role of the military with broad inclusion of local authorities at the cost of limitation of the power of the Health Ministry.
4	Kohn Sivan, Barnetta Daniel J., Leventhal Alex, Reznikovich Shmuel, Meir Oren, Laor Danny, Grotto Itamar, Balicer Ran D. Pandemic influenza preparedness and response in Israel: A unique model of civilian-defense collaboration. *Journal of Public Health Policy* Vol. 31, 2, 256–269 https://doi.org/10.1057/jphp.2010.17	"The value of military structures in responding to pandemic influenza has become widely acknowledged in recent years. In 2005, the Israeli Government appointed the Ministry of Defense to be in charge of national preparedness and response for a severe pandemic influenza scenario. The Israeli case offers a unique example of civilian-defense partnership where the interface between the governmental, military and civilian spheres has formed a distinctive structure. The Israeli pandemic preparedness protocols represent an example of a collaboration in which aspects of an inherently medical problem can be managed by the defense sector". *The unique experience and the model of response, manifesting one of Israel big and obvious advantage, was abandoned in 2020 without public discussions and without any explanations.*
5	Tondo Lorenzo. Salvini attacks Italy PM over coronavirus and links to rescue ship in Palermo. Far-right leader calls on Giuseppe Conte to resign if he cannot defend borders. *The Guardian*. Mon 24 Feb 2020 15.37 GMT[62]	'"Yesterday, I also wanted to inform the opposition forces of the measures we were taking," said Conte during an interview with Italian Tv La7. "I spoke to Giorgia Meloni [leader of the Brothers of Italy party] and I was unable to reach Berlusconi, who called me back today. The only leader I have not managed to reach is Salvini**.** I called him yesterday and sent him a message. He did not reply. If he had the decency to answer, I would have explained to him why stricter measures could not have been implemented before."'

[61] https://www.health.gov.il/Subjects/emergency/preparation/DocLib/tora/BIO_TORA_PANDEMIC_FLU.pdf
[62] https://www.theguardian.com/world/2020/feb/24/salvini-attacks-italy-pm-over-coronavirus-and-links-to-rescue-ship

6	Radio Sweden, January, 19, 2017. Löfven: "The Moderates have lost their political compass"[63]	2014 General Elections resulted in shortage of mandates for both – Left parties and for traditional four-party non-socialist coalition to form the Government. Then, Moderates and other non- socialist parties had thrown their support (from outside) behind incumbent SDP – MP coalition, to show their resolution to prevent Sweden Democrats from participation in the Government. SD tapped as 'ultra-right' by mainstream political scientists. This resoluteness of Moderates has eroded since that, and by 2017 new leaders of the party were ready to consider some form of cooperation with SD. Socialist leader, prime minister Löfven was outraged and attacked Moderates for their intention not to serve SDP's best interests. SDP – SD relations was and still are extremely hostile. Both parties portray each other as a 'fascist' [64]
7	MPs condemn scheme allowing them to jump NHS queues. The Independent, December, 15, 2003[65]	These three reports (7-9) show: 1. UK National Health Service's special attention to acting MPs and special (without delays) medical services for them (some sort of bribery) 2. Vulnerability of the Conservative's leader B. Johnson, who was elected directly by party members, but not enjoyed undisputable support of the party's parliament faction, as his initial (hard core) support in 1st round was 114 of 313 MPs. So even after very successful December 2019 elections his leadership was not reliably secured as it looked at first sight.
8	Murphy Katherine. Scandal: MPs get free VIP service at NHS hospital to protect them from members of public. Express, 2015[66]	
9	Stewart Heather. Boris Johnson elected new Tory leader. Boris Johnson wins Tory leadership as it happened Tory leadership election: full results. July 23. Guardian, 2019.[67]	

[63] https://sverigesradio.se/sida/artikel.aspx?programid=2054&artikel=6612001

[64] Sweden Democrats reminded SDP history's controversial periods, especially cooperation with Nazi Germany Government and, worse, accommodation by SDP of some elements of totalitarian ideology, like race biology, harassment and persecution of anti-Nazi journalists and more. They had exploited the movie, casted before 2018 elections: "One people, One Party – The history about the Swedish Social Democratic Party" https://www.youtube.com/embed/W56ZKUVECWs

[65] https://www.independent.co.uk/life-style/health-and-families/health-news/mps-condemn-scheme-allowing-them-to-jump-nhs-queues-82560.html

[66] https://www.express.co.uk/news/uk/601891/Politicians-MP-NHS-London-St-Thomas-Hospital-VIP-Patients-Association-Katherine-Murphy

[67] https://www.theguardian.com/politics/2019/jul/23/boris-johnson-elected-new-tory-leader-prime-minister

10	Dionne, K., & Turkmen, F. (2020). The Politics of Pandemic Othering: Putting COVID-19 in Global and Historical Context. International Organization, 74(S1), E213-E230. https://doi.org/10.1017/S0020818320000405	"As COVID-19 began to spread around the world, so did reports of discrimination and violence against people from marginalized groups. We argue that in a global politics characterized by racialized inequality, pandemics such as COVID-19 exacerbate the marginalization of already oppressed groups."
11	Delingpole James Woke 'Hug a Chinese Person' Propaganda Didn't Age Well. Breitbart, Marc, 18, 2020[68]	*Chinese workers, who had returned to Italy after the Chinese New Year celebration in 2020, routinely weren't enforced to keep quarantine to avoid inflaming racism. Ideologized response to COVID-19 campaigns caused more damage than made good – irrespectively of organizers' intentions*
12	ISTAT. Cinesi in Italia. Popolazione residente in Italia proveniente dalla Repubblica Popolare Cinese al 31 dicembre 2019. I dati tengono conto dei risultati del Censimento permanente della popolazione. Elaborazione su dati ISTAT.[69]	Chinese (PRC) citizens' distribution statistics coincides well with statistics of initial distribution of COVID-19 infection.
13	Bagus, Philipp; Peña-Ramos José A.; Sánchez-Bayón, Antonio. 2021. "COVID-19 and the Political Economy of Mass Hysteria" Int. J. Environ. Res. Public Health 18, no. 4: 1376. https://doi.org/10.3390/ijerph18041376	"Using the background of COVID-19, we study past mass hysteria. Negative information which is spread through mass media repetitively can affect public health negatively in the form of nocebo effects and mass hysteria. … mass and digital media in connection with the state may have had adverse consequences during the COVID-19 crisis. The resulting collective hysteria may have contributed to policy errors by governments not in line with health recommendations. While mass hysteria can occur in societies with a minimal state, we show that there exist certain self-corrective mechanisms and limits to the harm inflicted, such as sacrosanct private property rights. However, mass hysteria can be exacerbated and self-reinforcing when the negative information comes from an authoritative source, when the media are politicized, and social networks make the negative information omnipresent. We conclude that the negative long-term effects of mass hysteria are exacerbated by the size of the state."

[68] https://www.breitbart.com/europe/2020/03/18/delingpole-woke-hug-a-chinese-person-propaganda-didnt-age-well/
[69] https://www.tuttitalia.it/statistiche/cittadini-stranieri/repubblica-popolare-cinese/

14	Yanovskiy M, Zhavoronkov S. Universal Suffrage: The Century of Corrupting Incentives? *New Perspectives on Political Economy* Vol.14, No 1-2, 2018, pp. 63-89 https://www.cevroinstitut.cz/data/nppe-14.pdf; https://dx.doi.org/10.2139/ssrn.3436438	"A large and growing group of voters is made up of bureaucrats, other public servants (Buchanan, 1975) and "professional" welfare recipients. Bureaucrats are interested in maximizing spending (Tullock, 1965, Niskanen, 1971) and obtaining more discretionary power, excessive authority (Jasay, 1985)."
14	Colton Emma "Fauci says new coronavirus relief bill must pass before schools reopen" Washington Examiner February 14, 2021 04:09 PM[70]	One could observe here a highly unusual and controversial attempt of CDC to put pressure on legislator in their decision making on so called 'stimulus package' 1.9 trillion dollars.

[70] https://www.washingtonexaminer.com/news/fauci-schools-reopening-stimulus-bill ; see also https://www.foxbusiness.com/politics/coronavirus-liability-schools-businesses-charities on GOP pressure to reopen schools.

VI. Government power expansion and abuse: consequences and ways to recovery

1. Fear mongering

Political leaders and government officials pursuing Big Government "instil fear in the population, thereby contributing to the making of mass hysteria" (Bagus et al, 2021).

#	Article, chapter in the book	Short description
	Bagus, P.; Peña-Ramos, J.A.; Sánchez-Bayón, A. COVID-19 and the Political Economy of Mass Hysteria. *Int. J. Environ. Res. Public Health* 2021, 18, 1376. https://doi.org//10.3390/ijerph18041376	"The resulting collective hysteria may have contributed to policy errors by governments not in line with health recommendations. While mass hysteria can occur in societies with a minimal state, we show that there exist certain self-corrective mechanisms and limits to the harm inflicted, such as sacrosanct private property rights. However, mass hysteria can be exacerbated and self-reinforcing when the negative information comes from an authoritative source, when the media are politicized, and social networks make the negative information omnipresent. We conclude that the **negative long-term effects of mass hysteria are exacerbated by the size of the state**
1	Schrauger Brian APRIL 6, 2020 "COVID-19 and the Jews: Today's Black Plague Could COVID-19 ignite an outbreak of antisemitism?" Jerusalem Post newspaper https://www.jpost.com/Jerusalem-Report/COVID-19-and-the-Jews-Todays-Black-Plague-623375	"Prime Minister Benjamin Netanyahu said in a television interview on March 21 is true. "We may be in the midst of not just the worst crisis in a century, but the worst since the Middle Ages. All the world's medical services are facing collapse because the number of patients will be so astronomical." Even though Israel acted quickly, he added, we "still could have tens of thousands of dead. This isn't spin."
2	Rosenberg David "Netanyahu: 'We might need to get vaccinated every six months' Israel may continue use of Green Passports even after initial six-month period. 'COVID could come back leading to endless lockdowns.' Arutz Sheva (Channel 7) Mar 01 , 2021 7:40 AM https://www.israelnationalnews.com/News/News.aspx/297683	Speaking with Galei Tzahal's Efi Triger in an interview released Monday morning, Prime Minister Binyamin Netanyahu said it may be necessary for Israelis to get vaccinated twice this year, adding that Israel is in talks with pharmaceutical giants Pfizer and Moderna for additional mass purchases of COVID vaccines. "Within one year, we may need to get vaccinated twice, so we're in talks with Pfizer and Moderna for the establishment of a vaccine factory in Israel," said Netanyahu."

2. Opposition and protests: lockdowns and compulsory vaccination

State and Local authorities' efforts to suppress protests by brute force look highly unusual for established democracies like Australia. In some countries (Czechia, Italy) the protests were supported by small right-wing parties, while in the US sizable number of elected officials (Republicans) side with the opposition to severe governmental intervention in normal economic, social life, and civic activities.

#	Article, chapter in the book	Short description
1	Australia Coronavirus_ Arrests at Australia anti-lockdown protests – BBC; News.pdf 'Heavy-handed' arrest of pregnant anti-lockdown woman riles Australians Reuters [71]	September 2020 – January 2021 No clear political affiliation detected State and local authorities efforts to suppress protests by brute force looks highly unusual for established democracy like Australia.
	US Operation Gridlock_ Thousands of conservatives block Michigan streets in protest over stay at home order The Independent [72] US Anti-lockdown protests across the country Daily Mail[73]	Conservative and libertarian – outside moral support, since April, 2020 (Michigan, California)
	UK UK police arrest 155 in anti-lockdown protests in London [74] Thousands of anti-mask protesters descend on London calling for lockdown end hours after capital's Tier 2 restrictions[75]	(17 of) October and November 2020 protests in London, 'Our Movement' has no clear political affiliation or support of any well-known political force.
	Mexico Mexican protesters clash with police over custody death – Reuters[76]	Protests against police brutality in mask wearing coercion, June 2020
	Italy Italy Widespread protests against government's Covid lockdowns[77]	October, 27, 2020. Directly supported by small left-nationalist non-parliamentary party Foeza Nuovo http://www.forzanuova.eu/, outside moral support by Lega (leading right-wing party)

[71] https://www.bbc.com/news/world-australia-54040278 https://www.reuters.com/article/us-health-coronavirus-australia-arrest-idUSKBN25U1LK
[72] https://www.independent.co.uk/news/world/americas/us-politics/operation-gridlock-michigan-protest-stay-home-order-coronavirus-governor-whitmer-a9467546.html
[73] https://www.dailymail.co.uk/news/article-8278891/Thousands-anti-lockdown-protesters-turn-protests-country.html
[74] https://www.msn.com/en-us/news/world/uk-police-arrest-155-in-anti-lockdown-protests-in-london/ar-BB1brOwx
[75] https://www.thesun.co.uk/news/uknews/12953943/anti-mask-protest-london-tier-2-lockdown/
[76] https://www.reuters.com/article/us-health-coronavirus-mexico-protest-idUSKBN23C09M
[77] https://freewestmedia.com/2020/10/27/italy-widespread-protests-against-governments-covid-lockdowns/

	Czech Republic Pro-Trump, anti-COVID-19 restrictions rally marches through central Prague.[78]	January, 9, 2021, run by antiimmigrant party Svoboda a Prímá Demokracie (SPD) Freedom and Direct Democracy); 10.6% votes and 22 mandates (of 200 in House of Representatives) http://www.spd.cz/
	Israel. Israel National News – 'You deprived millions of people in Israel of their self-worth'[79]	"Internal medicine and gastroenterology specialist and Hesder Yeshiva in Shaalvim graduate Dr. Shmuel Rochberger today addressed a letter to government ministers, advisors, and Knesset Members, accusing them of "unbelievable opacity" in what he calls their refusal to consider policy alternatives." No clear political affiliation of the anti-lockdown protesters detected. Groups like 'Model Common Sense' are clearly non-partisan. Some protests have outside moral support of 'Zehut' national-libertarian non-parliamentary group. Left parties run anti-Netanyahu protests, sometimes exploiting lockdown-caused damage among other issues.

[78] https://www.expats.cz/czech-news/article/pro-trump-anti-covid-19-restriction-rally-takes-place-in-central-prague
[79] https://www.israelnationalnews.com/News/News.aspx/292414

3. Sound policy advice for post-COVID recovery

"Since the collapse of socialism in the late 1980-ties, the following truth became clear: Proposition one: 'Socialism is a failure.' Proposition two: 'Capitalism is a success.' To judge from what goes on in Washington, the conclusion that has been drawn is: 'Therefore, the U.S. needs more socialism" – stressed Milton Friedman in 1994.[80] So, while the only reasonable policy advice on how to encourage post-COVID economic recovery necessarily relies on deep deregulation of business and healthcare, this obvious advice turned to be 'simple' only in Ronald Reagan's meaning. «…The truth is, there are simple answers – there just are not easy ones».[81]

Vastly expanded power of bureaucracy and affiliated politicians (choosing to promote compulsory universal happiness instead of protecting from very few evils) is not ready to surrender. This coalition manages to use the state budget to invest heavily into apologetics/justification of governmental intervention as a new (economic) version of '*perpetuum mobile*'. This is a short explanation of why bureaucrats in Washington etc. "need more socialism" and why the obvious policy advice is not in demand. while the Keynesian approach, discredited by stagflation in the mid-1970-ties ('stimulus' and the other wasting of money) are in great demand. [82]

#	Article, chapter in the book	Short description
1	Dye Emilie. Post COVID-19 Australia: a five-point policy proposal. Australian Taxpayers' Alliance. May, 18, 2020 https://www.taxpayers.org.au/submissions/post-covid-19-australia-a-five-point-policy-propsal	The virus has trapped Australians in their homes and left them without work. As a result, the federal government has passed the largest stimulus package Australia has ever seen. Right now, the Australian people, and the government alike, cannot afford any waste caused by inefficiency in either the tax system or the regulatory code. 1. Deregulation: Use cuts to red tape as a fiscal stimulus to jump-start the economy post-COVID-19. 2. Decentralisation of Power: Shrink the government back to its original size and put more power into the hands of the Australian people. 3. Taxation: Implement structural tax reform and get rid of government waste caused by inefficient and costly taxes. 4. Domestic Economy: Promote domestic manufacturing by making Australia globally competitive, not by instituting protectionism policies. 5. Superannuation: Keep the increased superannuation flexibility and give Australians more power over their retirement savings.

[80] Milton Friedman 'Cooperation Between Capital-Rich and Labor-Rich Countries', Part 1 https://www.fff.org/explore-freedom/article/cooperation-capitalrich-laborrich-countries-part-1/ .
[81] http://www.reagan.utexas.edu/archives/speeches/govspeech/01051967a.htm
[82] See for detail below (7.3) – International Monetary Funds' monitoring of governments over the World responses on COVID-lockdown crisis.

2	Allen Darcy, Berg Chris, Davidson Sinclair, Lane Aaron M., Potts Jason. The Problem of 'Freezing' an Economy in a Pandemic (April 10, 2020). Cryoeconomics: How to Unfreeze an Economy (AIER 2020), http://dx.doi.org/10.2139/ssrn.3572365	"COVID-19 is more than a public health crisis—as economies and states falter there are deep questions about the resilience and robustness of our political and economic systems. Are we too reliant on global supply chains? If regulations don't make sense in a crisis, do they make sense afterwards? Today we are presented the opportunity to rebuild the institutions and organisations of our modern economy. If we do this right, through a process of entrepreneurial discovery and bottom-up solutions, then we will emerge with a political-economic system that acts as an engine for prosperity, and one that is more resilient and robust to future shocks. In this book we tackle those questions and fill some of the current void of ideas and thinking about economic and political recovery."
3	Allen Darcy, Berg Chris, Davidson Sinclair, Lane Aaron M., Potts Jason. Unfreeze: How to Create a High Growth Economy After the Pandemic. American Institute for Economic Research (May 1, 2020) https://www.amazon.com/Unfreeze-Create-Growth-Economy-Pandemic/dp/1630692034	
4	K (M.) Yanovskiy. Are We Ready to Lose the Opportunities Unleashed by the COVID-19 Crisis? https://dx.doi.org/10.2139/ssrn.3555084	As every crisis, current economic setback caused by the COVID-19 pandemic brings not only heavy losses for all the countries, but opportunities to succeed also. The opportunity and success do not require heavy governmental spending, but termination of various practices harming both business climate and public morale. Deep deregulation and respect of freedom of contract, termination of violation of freedom of private choice under pretext of 'fighting discrimination' will benefit the courageous society and will pave the way for lasting prosperity.

VII. Regularly updated sources (statistics, response monitoring etc)

1. Morbidity, mortality, tests

#	file name	Source	Last access and download date	Short description
		Worldometer[83]		No download
	COVID-19-geographic-disbtribution-worldwide-2020-12-14.xlsx	European Centre for Disease Prevention and Control[84]	December 14, 2020 (last update)	No latest updates
	-	COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)[85]	March, 07 2021	No download option, the data are presented by means of interactive map
	owid-covid - data_testing .xlsx	Hasell, J., Mathieu, E., Beltekian, D. et al. A cross-country database of COVID-19 testing. Sci Data 7, 345 (2020)[86]	March, 07 2021	Testing statistics around the world by March 07 2021
	Weekly_Counts _of_Deaths _by_State_ and_Select_ Causes__ 2020-2021.csv	Provisional Death Counts for Coronavirus Disease (COVID-19): Index of COVID-19 Surveillance and Ad-hoc Data Files[87]	March, 07 2021	

[83] https://www.worldometers.info/coronavirus/#countries
[84] https://www.ecdc.europa.eu/en/publications-data/download-todays-data-geographic-distribution-covid-19-cases-worldwide
[85] https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6
[86] https://ourworldindata.org/coronavirus-testing
[87] https://www.cdc.gov/nchs/covid19/covid-19-mortality-data-files.htm

2. Excess mortality

#	file name	Source	Last access and download date	Short description
1	excess-mortality-raw-death-count.csv; excess-mortality-p-scores-by-age.csv; excess-mortality-p-scores.csv	OurWorldInData. Excess mortality during the Coronavirus pandemic (COVID-19) by Charlie Giattino, Hannah Ritchie, Max Roser, Esteban Ortiz-Ospina and Joe Hasell[88]	March, 07 2021	March, 07, 2021 All countries, all population excess mortality count; excess mortality by age; excess mortality in the US
2	Weekly_counts _of_death_ by_jurisdiction _and_cause _of_death .xlsx; Excess_ Deaths_ Associated_ with_COVID -19.xlsx	CDC – Excess Deaths Associated with COVID-19 Provisional Death Counts for Coronavirus Disease (COVID-19)[89]	March, 07 2021	
3	Graphs and maps-EUROMOMO .pdf; Euro MOMO Bulletin, Week 8, 2021-EUROMOMO .pdf	European Mortality monitoring [90]	March, 07 2021	The data are not downloadable in any table format. Graphs and maps Last updated on week 9, 2021 (as pdf) and EuroMOMO Bulletin, Week 8, 2021
4	לפי 2000-2020 פטירות שבוע.xlsx; p-1.xls; p-2.xls; p-3.xls	Central Bureau of Statistics, Israel [91]	March, 07 2021	Latest Data on March, 2, 2021

[88] https://ourworldindata.org/excess-mortality-covid
[89] https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm
[90] http://www.euromomo.eu/
[91] https://bit.ly/39VFivc

3. Governments' response monitoring

#	file name	Source	Last access and download date	Short description
1	OxCGRT_latest 07032021.xlsx; Policy Responses to COVID19_ 24012021 .pdf covid-policy-tracker_codebook.md at master · OxCGRT_covid-policy-tracker · GitHub.pdf	The Oxford COVID-19 Government Response Tracker (OxCGRT) – Blavatnik School of Government[92]	March, 07 2021	Standard for 2020 governmental strategies moves (as school, businesses closures etc) are registered. US and Canada subnational level data are also available
2	covid-policy-tracker_codebook.md at master · OxCGRT_covid-policy-tracker · GitHub.pdf OxCGRT_latest 07032021.xlsx	Thomas Hale, Tilbe Atav, Laura Hallas, Beatriz Kira, Toby Phillips, Anna Petherick, and Annalena Pott (2020). Variation in US states' responses to COVID-19. Blavatnik School of Government.	March, 07, 2021	US national and state government responses (now included in general file)
3	Policy Responses to COVID19 _24012021.pdf	IMF Policy Response to COVID-19[93]	March, 07, 2021	Governmental 'stimulus' and 'aid' packages by countries; Last update March, 05 2021

[92] https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker
[93] https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19