

LEARNING FROM CRISES? – SOME PHILOSOPHICAL AND POLITICO- ECONOMIC CONSIDERATIONS IN THE LIGHT OF THE COVID-19 PANDEMIC*

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Historia magistra vitae est
(Cicero, De oratore, II 36)

1. The current COVID-19 pandemic

As Boettke et al. (2007, p. 363) emphasize “Disasters, whether man-made or natural, represent a ‘natural experiment’ for social scientists”. They refer to a very famous quote from John Stuart Mill (1849, pp. 74–75) concerning the value of free economics for the recovery after crises:

“This perpetual consumption and reproduction of capital affords the explanation of what has so often excited wonder, the great rapidity with which countries recover from a state of devastation; the disappearance, in a short time, of all traces of the mischiefs

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done by earthquakes, floods, hurricanes, and the ravages of war. An enemy lays waste a country by fire and sword, and destroys or carries away nearly all the moveable wealth existing in it; all the inhabitants are ruined, and yet, in a few years after, everything is much as it was before.”

Crises are part of human existence, confronting political actors with, by definition, unexpected military, health, economic, or political challenges.¹ Added to these are exogenous² crises such as earthquakes, floods, storms and other natural events. The evidence of historical political discontinuity attests to the fact that (endogenous) crises generate limited learning. Nevertheless, the present paper analyzes possible learning effects from history in general and crises in particular. The current COVID-19 pandemic provides a vivid case study for this purpose; it is a “complex problem” (Pennington 2020, p. 5 with respect to the fundamental distinction between complex and simple phenomena by Hayek). The spread of SARS-CoV-2 resulted in a global health crisis that generated a range of observable political action. It led to the closure of intra-European borders, causing infrastructural and personal problems, especially in border areas such as between Germany and France. Even within the Federal Republic of Germany, the governmental measures ensured that in some cases domestic travel was not possible. From an economic point of view, it is particularly problematic that the goal of “infection control” is viewed as a higher priority by political actors compared to other targets. Every measure ordered to achieve the goal of “infection control”, however, is accompanied by economic, social, and psychological (and thus also health-related) costs (for effects on the labor market see, e.g., Coibion et al. 2020; for psychological effects and health risks see, e.g., Rubin, and Wessely 2020). A study by Armbruster and

¹ Especially for economic crises since 1929 see, e.g., Braun and Erlei (2014).

² With respect to the exogeneity or endogeneity of a crisis, we refer to the cause in the sense of a crisis determined by human action or by nature. Braun and Erlei (2014) uses the differentiation concerning the theoretical fundament of the explanation of economic crises. However, the consequences of exogenous disasters can also be favored endogenously, for example through incentives to settle in risk areas.

Klotzbücher (2020) shows an increasing demand for mental health-related hotlines in the first week after the first lockdown in May 2020 in Germany that was particularly triggered by feelings of loneliness and mental problems. From the viewpoint of those who criticize the lockdown measures, too little attention is paid to these negative effects; in particular, the economic optimality condition

$$\textit{Marginal Utility} = \textit{Marginal Costs}$$

does not seem to be met.

Overall, a governmental measure, which can be understood as an intervention in the market (see Mises, 1957a) or in the personal freedom of choice of individuals, must fulfil two central conditions. The first condition refers to the adequacy of purpose. The government must decide on the basis of a normative assessment, in the case of the COVID-19 pandemic, the protection against infection. In view of this primary goal, the interventions must be effective from an empirical perspective, which obviously can only be examined *ex post*. The aim of the second condition is to protect the citizen from state expansion, in accordance with the *principle of proportionality* (e.g., Alexy 2000), which applies in constitutional law. But not only in comparison to earlier bastions of freedom, the measures within the COVID-19 crisis seem to be surprisingly. Also, during the crisis, measures and recommendations changed with high frequency. One prominent example is the topic “masks”. At the beginning of the crisis, the official statements did not provide for any masking obligation or recommendation (e.g., BR 2020). It was even claimed that masks had no effect in terms of infection protection (e.g., BR 2020) which intuitively caused irritation. In this context, it is reasonable to assume that the shortage of masks (Bender et al. 2020) led the government not to make any recommendations. It could also be assumed that the government had little confidence in the citizens to take responsibility for the production of masks on a decentralized level in the first months of the pandemic in 2020. Sudden changes in the objectives pursued could also be observed with respect to the effectiveness of the measure. Initially, the declared government goal was to achieve a

flattening of the curve of new infections (“flatten the curve”). When the terrible pictures from Italy were shown, e.g., on German TV, the measures became more restrictive. However, despite all the justified criticism, it must be borne in mind that decisions in a crisis have to be made under immense pressure and omnipresent uncertainty.³ Our analysis will therefore also aim to show the difficulty of implementing optimal decisions in terms of public-health aims, especially which burden people’s freedoms.

Lessons from the crisis need not to wait until it is completely resolved, as we experience ebbs and flows in infection rates, hospitalizations, and mortalities. When infection rates decreased in several countries (June 2020)⁴ restrictive measures were partially withdrawn, with patterns of “normal” following revisions of governing interventions. Some early lessons can be learned, such as measures to secure medical and public protective goods such as masks. But this is a specific response to a specific aspect of the present crisis, and such political decisions might be more a result of short-term vote-maximization aims (Downs 1957) rather than a learned lesson. Future pandemics can be broadly predicted, as Bill Gates now famously argued in his 2015 Ted Talk, but the characteristics of future health crises are much harder to predict. Moreover, the variety of crisis causes is wide: nuclear accident, widespread power failure, environmental disaster poisoning food or drinking water. The aim of this paper is to contribute to a better understanding of political and individual behavior in crises, to discuss the degree of learning capacities, and to draw conclusions regarding meta-level governing preparedness for future decision-making in the midst of crises.

Our essay follows the structure below: Section 2 of our paper provides a Public Choice-approach to explain governmental reactions to crisis situations that seems to be “irrational” *prima facie*. Sections 3 and 4 focus on the crucial problem of “learning from crises”. Specifically, section 3 presents our analytical

³ The close link between uncertainty and the information problem is e.g., emphasized by Cowen (2003), who uses the term *Unknowledge* with respect to G.L.S. Shackle.

⁴ <https://www.economist.com/leaders/2020/05/23/lifting-lockdowns-the-when-why-and-how>.

framework to study the topic and defines relevant terms that build the pillars of the analyses. We try to answer the fundamental question if and if yes, under which conditions, learning from history is possible. In section 4 we discuss the findings in the light of COVID-19 Pandemic and identify relevant topics which could have implications for future crises. Section 5 summarizes our findings.

2. Governmental responses to crises

The question arises as to how sudden reversals of government policy are caused and how these can be explained against the background of economic theory. To explore this, we build on Public Choice theory (especially Schumpeter 1950; Downs 1957; Buchanan and Tullock 1962; Tullock 1967; Niskanen 1975) in general and the rent-seeking approach (e.g., Krueger 1974; Tollison 1982, Ekelund and Thornton 2020) in particular. We understand a government in the sense of Max Weber's (1968 [1978], p. 54) famous definition of a "state" as an administrative institution that "successfully upholds the claim to the *monopoly* of the *legitimate* use of physical force in the enforcement of its order".

With respect to the economic theory, the members of a government are interested in maximizing their own benefits (Downs, 1957, pp. 27-28). This is only possible for them if they get enough votes, so this is the most important secondary condition. However, our analysis is based on a broader understanding concerning information than early Public Choice theory which assumes at least implicitly perfect information. We build our analytical framework on a more "Austrian-public choice approach to political economy" (Boettke and López 2002, p. 112). Therefore, we accept the fact that information is incomplete and asymmetrically distributed. Furthermore, knowledge is obviously decentral (Hayek 1945). Our analysis of political behavior in crisis situations therefore focuses particularly on the discretionary potentials for government, which results from the incomplete information and the high degree of uncertainty in such a situation (see also Pennington 2020; Follert 2020; Bagus et al. 2021; Gleißner et al. 2021). By

assuming these conditions, we aim to contribute to building the bridge between Austrian economics and the Public Choice approach (towards this see e.g., Boettke 1999; Ikeda 2003). Moreover, we assume on the one hand that different interest groups try to realize advantages from the given situation (“rent seeking”), especially to make it easier for its members to obtain several subventions through state aid measures because of the uncertainty (Daumann and Follert 2020). On the other hand, we assume an average population which, due to the incomplete information that is additionally asymmetrically distributed, most citizens are not able to assess future environmental conditions with sufficient accuracy with regard to the consequences for its individual life situation. These factors obviously result in certain ex post distortions of decision-making (e.g., Slovic 1987; Sjöberg 2000) that could lead in a mass hysteria that is not caused by facts (see Bagus et al. 2021). In such a situation, several citizens desire a powerful reaction by the government. German Federal Health Minister, Jens Spahn (2020, translated by the authors), answers the question if there is “a longing for authoritarian solutions? [Eine Sehnsucht nach autoritären Lösungen?]” within the population as follows:

“More like a human trait, an insecurity. There’s this virus that you don’t know, the pictures of the coffins in Italy and the worry about your own family. There are many who want to take drastic action. [Eher ein menschlicher Zug, eine Unsicherheit. Da ist dieses Virus, das man nicht kennt, die Bilder von den Särgen in Italien und die Sorge um die eigene Familie. Da wünschen sich viele ein möglichst drastisches Durchgreifen.]“

However, these words should not be interpreted as what some economists call “irrational”. Although, an individual tries to maximize his or her (expected) utility, uncertain factors may be misinterpreted due to incomplete information (e.g., Emrich and Follert 2019). Given this uncertainty and a “overestimated” (subjective) perception of the potential danger we follow Chamlee-Wright and Storr (2010a) who link citizen’s expectation and governmental action as a response to disasters like, e.g., Hurricane Katrina. Within this approach it seems to be reasonable to assume that

government anticipates public expectations and that government uses this situation to increase its own power.

This simple model will be illustrated by the sudden exit from nuclear energy in Germany (see Follert and Daumann 2020). For decades, activists have been demonstrating against conventional energy production. This lobby has become increasingly professional over time. Nevertheless, in 2010, the “Merkel government” decided to extend the duration of German nuclear power plants. On March 11, 2011, a terrible nuclear disaster occurred in Fukushima, Japan. Because of this event, the German government made a 180-degree turn and suddenly decided to abandon nuclear power in June 2011 (e.g., Breidthardt 2011). The accident in Fukushima has not changed any (objective) conditions regarding the reliability of German nuclear power plants. The fact that the “Merkel-government” has now taken a completely different course must therefore have a different explanation. We attribute this to the subjectively perceived uncertainty among the population. Due to the frightening pictures and the lack of information of the average citizen regarding the reliability of the power plants, the perceived danger changed abruptly. In this changed situation of perception, activists and lobbyists could try to bring their idea of an “ecological” energy possibly closer to the government. Under this influence and pressure, a government, according to our approach, anticipates the growing perception of danger among the population and tries to secure votes by acting accordingly.

In addition to these sudden political changes of course, patterns of interventionism (Mises 1957a) can always be identified in reaction to crises, which favor new crises. In recent economic crises in particular, expansive monetary policy, and increased regulation of certain sectors (banking, auditing, stock trading) have regularly been observed. *Ex post*, it is usually forgotten – or suppressed – that these measures are the initial spark for a new crisis. This could be recognized after the “dotcom bubble”, for example, when expansive monetary policy and centralist interest rate planning caused the real estate bubble (e.g., Schnabl and Hoffmann 2008). Rapp (2015, p. 86) therefore, characterizes the recent international financial crisis as a “crisis of socialism”:

“Even though capitalism is often blamed for causing this crisis, it must rather be characterized as a crisis of socialism. Financial crisis’s breeding ground is the centrally planned low interest rate policy of central banks in the aftermath of the “dotcom bubble”.”

We can state at this point that from a political-economic point of view, two particular types of governmental behavior can be observed within the recent crises: Sudden changes of direction, and interventions in markets that create new problems.

Representative governments are primarily incentivized to be responsible to public desires. From a public choice perspective, governments have little incentive to learn from crises, because their decision-making responds to short-term public perceptions of immediate risks, as opposed to long-term social welfare. By intervening based on short-term risk perceptions, they legitimize their public standing, but potentially endanger long-term goals. From the perspective of evidence-based decision-making, the question arises whether learning from past mistakes is actually possible. This question is analyzed in the following section.

3. Learning from history? the philosophical perspective

3.1 Some key assumptions

Can lessons be learned from the COVID-19 crisis and, if so, which lessons? More broadly, this case study is used to probe whether we can learn from human history (see, e.g., Kolmer 2008, p. 26; Koselleck 1989; Sellin 2008). We try to answer this question from the following perspective:

First, for the consideration of political decision-making, an “actor” is needed, and we assume a methodological individualism (e.g., Vanberg 1975; Schumpeter 1998, p. 88):

1. Individuals are the creative forces in history; only to them can goals and actions be assigned. The contract theory

perspective does use the fiction of a corporate actor (Homann and Suchanek 2005), but still, every conceivable case depends upon individual actions. Social phenomena are therefore completely dependent on the individuals who constitute them – this applies even to valuable human achievements such as a state constitution. Social groups are constructions (see especially, Meran 1979, p. 42; Ritsert 1976, p. 89).

2. On the level of anthropology, humans are characterized by diversity in psychological and physical terms. This should be emphasized in particular regarding the term “democracy”, a quite complex concept. Left-wing politicians tend to associate democracy with equality, as Hayek (1979, p. 5) recognized.

“As seems to be the fate of most terms expressing a political ideal, ‘democracy’ has been used to describe various kinds of things which have little to do with the original meaning of the term, and now is even often used where what is really meant is ‘equality’.”

Individual decision making depends upon the vast diversity of individuals’ mental and physical abilities, limitations, and well as patterns of preference. The ability to process information is determined by individual talents and experiences; individually selected data material is therefore interpreted differently (Hayek 1945; 1952; 1973). A subjective perception of reality requires that human actions must always be based on more or less later applicable expectations. At the same time, this means that individual ends, cognitive limitations and a subjective interpretation of the recorded information lead to individually different actions in a supposedly objectively identical framework (e.g., Hayek, 1969, p. 171; 1945). If this were different, human bartering would not be possible, which in our modern monetary economy also explains the emergence of prices (Mises 1998 [1949], pp. 328–329). An exchange derives from the heterogeneous expectation of

future events and subjective values. Only in this way it is possible for the exchange that a good – more precise, the property rights – that follows the principle of reciprocity in the sense of “gift and return” (for further insights see, e.g., Mauss 1966) to provide both parties to the exchange with benefit.⁵ At the same time, the heterogeneous expectation means that the value of a good varies between the exchange partners; a good therefore has no objective value attached to it as a characteristic (Mises 1928, pp. 156–157; Mises 1998 [1949], pp. 18–21).⁶ In particular, the value of a good is determined by comparison with its subjective scope of possibilities, from which the alternative uses of money or time result (e.g., Mises 1998 [1949], p. 94; Rapp, Olbrich, and Venitz 2018, p. 66), as well as by the preferences and the degree of fulfilment of these by the good (e.g., Menger 2007, p. 52). It can therefore be concluded that subjectivity can concern both the preferences of an individual and his or her expectations (Lachmann 1977, p. 28).

3. The interaction of individuals who pursue their own goals and who may well be in conflict with each other constitutes a social phenomenon that is characterized by mutual adaptation of individuals, forcing them to use existing knowledge in a decentralized manner and to search for new knowledge. This phenomenon, described by Hayek (1969) as an order of action, has a processual and also irreversible character, since the very knowledge underlying the actions changes. In addition, however, the framework conditions of this interdependent action also change, namely the rules on which it is based – the so-called rule order – are also subject to change. A theoretical approach can therefore only succeed with a diachronic approach at best – an approach that

⁵ The amazing thing about exchange is that each partner feels like a winner. Friedrich Nietzsche (Fragmente 1875-1879 Band 2, p. 322, translated by the authors) emphasized: “The one who exchanges thinks he is the deceiver, but the one with whom he exchanges believes the same of himself.” Also, Menger (2007, p. 180) points out the “general feeling of pleasure” that results from an exchange.

⁶ On value theory, see fundamentally Menger (2007, chapter III).

takes into account the processual character of this entire phenomenon in its chronological dimension.

3.2 *What is human history?*

After these preliminary considerations we want to define what is meant by “history”. With Cicero (Jordan 2005, p. 38; 2016, p. 19) one can distinguish between *res gestae* and *historia rerum gestarum*. The first one describes the “accomplished deeds and events that have happened”, that is, the social phenomenon outlined above in its chronological course and thus, in the sense of Ammon (2011), the object of experience. The *historia rerum gestarum* is the description and explication of the same, i.e., a procedure that transforms the object of experience into an object of knowledge. The latter is of course always subjective, and the interpretation of past events is done from the perspective of the present with all the corresponding consequences (Jordan 2016, p. 20). For our further considerations we refer to the “accomplished deeds and events that have happened”.

3.3 *What is learning?*

Starting from the chosen ontological position, it is only logical to relate the phenomenon of learning to the individual. Because of our preliminaries, a society or another being that is superior to the individuals cannot learn per se. To clarify learning, we want to refer to the deductive-nomological explanatory scheme of Hempel and Oppenheim (1948) and, following Popper (1969) and Watkins (1952; 1953), transform it for the purpose of studying social phenomena as follows (see also Daumann 2018):

- any individual *I* is in any situation *S* (basic conditions),
- the individual *I* acts rationally,
- in a situation *S* it is rational to perform the action *A*.

In order to identify the action *A* as a utility-maximizing alternative action, a corresponding knowledge is required – the instrumental

knowledge. In addition to knowledge about the target-appropriate design of the applicable measures, this also includes an idea of their effects on the target variable. The knowledge regarding the applicable measures is limited by incomplete information of the person to the cumulative knowledge which a person has acquired in the course of his life, which also means, however, that regularly a positive correlation between information level and lifetime can be determined. However, the increase in information is only relevant for recurring or similarly structured decisions (Hayek 1945; 1967; Polanyi 1958).

With regard to the impact on the target figure, the following should be noted: The fact that in an ex-post consideration it can turn out that the achievement of the end is not fulfilled is due to the uncertainty of the future, so that every action that is not determined by laws of nature is by definition uncertain (on uncertainty see the seminal work of Knight, 1921). Thus, the individual must at least make conditional expectations regarding the future environmental situation (e.g., Kirchgässner 2013, p. 13; further Esser 1998, p. 136). It is thus an accumulation of subjective cause-and-effect assumptions that can be used technologically – i.e., in the sense of goal-means relationships. Learning in our sense of the term thus means a change in this instrumental knowledge: previous subjective assumptions about cause and effect are supplemented or replaced by new ones. Whether instrumental knowledge is thereby increased cannot be answered.

3.4 The theoretical accessibility of the object of experience

The object of experience, the *res gestae* – i.e., the interaction of the different individuals – presents itself as a complex “system” (Hayek 1967). A complex “system” is characterized by the fact that it consists of a large number of individual entities, whose life of their own is not or only limitedly accessible, which develop dynamically, and independently and which influence each other. In our case, the entities are the individuals who act independently. Their ends and their instrumental knowledge can be grasped by an external observer, if at all, only to a very limited extent. Mises (1998 [1949], pp. 18–19) emphasizes:

“The ultimate end of action is always the satisfaction of some desires of the acting man. Since nobody is in a position to substitute his own value judgments for those of the acting individual, it is vain to pass judgment on other people’s aims and volitions. No man is qualified to declare what would make another man happier or less discontented.”

The fact that a decision cannot be questioned from an external point of view regarding its rationality is already apparent from the axiom of preference autonomy (e.g., Mises 1949 [1998], pp. 18–19; Emrich and Follert 2019, pp. 340–341). Moreover, it can be assumed that individuals influence each other through their actions and develop dynamically, by changing their instrumental knowledge. Such complex “systems” are characterized by two essential characteristics:

- A comprehensive description of this “system” or even of parts of it is not feasible (Popper 1957, pp. 53 ff.).
- The interdependence of actors and actions does not allow a clear identification of cause and effect.

Let us take an example from German history (Hillgruber 1972, p. 86): Following the Prussian-Austrian War of 1866, Bismarck explored the possibility of compensating Napoleon III by leaving Belgium and Luxembourg in his hands and thus winning his approval for a possible merger of the southern German states with the North German Federation and thus for a completion of the small German solution. The ensuing Luxembourg crisis of 1867, which was resolved by the official request of the King of the Netherlands – Wilhelm III. (Luxembourg was in personal union with the Kingdom of the Netherlands) – to the King of Prussia, whether Luxembourg could be sold to France.

This simple event alone makes it clear that not all details can be described; it is even difficult to identify all the supposedly relevant players. Moreover, it is impossible to derive corresponding cause-effect relationships. What was the cause for the failure of the enterprise (here the effect)? The hesitant approach of Napoleon III? The complex plan of Bismarck? The German national movement,

against whose voices little could be done? The request of the King of the Netherlands? All in all, this historical example already makes it clear that it is difficult to limit the subject's scope for decision making, so that a minute change in the structure of the relevant variables can already have enormous effects (so-called butterfly effect; Lorenz 1993).

In other words, complex action networks can produce both intended and unintended results, since the individual actor is certainly not in a position to identify all influencing factors, let alone to determine their direction of action. Moreover, objectives are subject to constant change over time due to socio-political factors of influence, so that conflicting objectives can often arise, if the objectives can be clearly defined at all (see Adam 1983).

3.5 *The synthesis: What does this mean for learning from history?*

Although it is basically possible to convert empirical knowledge into a strategy of imitation (Alchian 1950, p. 218), it can quickly be seen that the variables of human decision-making are too diverse for this strategy to promise lasting success. Since the multitude of actors and the complex and multifaceted, evolving framework conditions make it impossible for the same situation to be repeated in the future, the possibilities of learning from history are quite limited. Thus, no cause-and-effect relationships can be deduced meaningfully, especially since not all relevant actors and framework conditions are known. In particular, cause-and-effect relationships of the past cannot simply be extrapolated – at least with regard to human action,⁷ what is already shown by Hume (1902, p. 38):

“It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future, since all these arguments are founded on the supposition of that resemblance.”

⁷ However, there are obviously certain cause-and-effect relationships we know will always hold, e.g., the economic axioms. This is the sense in which part of the future is knowable.

This is also relevant for the social sciences insofar as it becomes clear that empirical research can only ever provide a selective description of a relationship between dependent and independent variables, from which hardly any implications for future action can be derived (see Mises 1957b, 8 pp. ff.; Hoppe 2007; Rothbard 2009; see also Popper 1957). In other words, an external observer (the learner) does not know all relevant acting entities. Moreover, the goals, the instrumental knowledge and the framework conditions of the known actors are not fully accessible to the external observer. Consequently, the external observer is not in a position to derive reliable cause-effect relationships or even to predict the results of this complex “system”. Hayek (1967) speaks in this context of the fact that regularities in complex systems can only be made in the form of so-called pattern explanations. However, it remains somewhat unclear what exactly is meant by pattern explanations. Certainly, a regularity is more likely to be identified through increasing aggregation. He calls a derivation of supposed regularities that goes beyond so-called pattern explanations “presumption of knowledge” (Hayek 1975).

With this the instrumental knowledge can surely only be extended as follows: It makes sense,

- to avoid complex plans, as the imponderables cannot be calculated, and
- to strive for positions in which actions can be flexibly adapted to changing conditions.

“Learning from history” is exhausted in these rather trivial insights. An analysis of individual situations such as the above mentioned can never identify all relevant cause-effect relationships. It therefore does not help us to learn from history.

4. Discussion in the light of the COVID-19 pandemic

From our analysis we can draw the conclusion that learning from history is not possible on a micro-level, i.e., concrete implications for a special decision situation. The dynamics and structural

changes in the relevant decision variables are simply too great for this. With regard to past crises, chapter 2 of this paper also shows that there may be no interest on the part of policymakers to learn from past crises. Sudden changes in policy direction allow governments to react quickly to sudden hypes and adapt their decisions to public sentiments. Crisis interventions also mean that governments can constantly reassert their legitimacy. Especially, it can be derived from past crises that public administration (like central banks) or governments can even encourage new crises, which they can then reduce through their interventions. Although this result is very unsatisfactory, some conclusions can be drawn from the analysis. In particular, the Public Choice theory emphasizes that citizens need to be alert, and the government, as their agent, should be controlled as much as possible. Moreover, at a macro-, or more general level, it is certainly possible to gain insights for future crises. With respect to the initial situation of the COVID-19 crisis it must be pointed out that the possibilities to learn from this pandemic seems to be limited. In particular, the possible learning effect must be considered in a differentiated manner. It is by no means possible to formulate concrete implications. For example, the reference to a necessary stockpile of masks does not go far enough. Although protective masks seem to be suitable for protection against droplet infections,⁸ they do not, according to general understanding, make a significant contribution to mitigating a crisis caused, for example, by a power failure. From the economic perspective of an efficient allocation of scarce resources, it can therefore hardly be considered economically sensible for each country to set up a huge depot of protective masks. Rather, the focus should be on general economic and political contexts. It is certainly possible to identify variables whose structural nature leads us to assume that they could also be important in future crises, for example, and by no means conclusively:

⁸ On the different types of facemasks, e.g., community versus healthcare masks see, e.g., MacIntyre and Chughtai (2015), who already pointed out that more future research based on a cost-benefit analysis from an economic point of view is needed.

1. *The relationship between centralism and federalism*

The current crisis reveals that collective decision-making (Buchanan and Tullock 1962) is once again problematic. Especially in countries such as Germany, which strike a middle course between centralism and genuine federalism, the decision-making process is inhibited. With Hayek (1945, p. 524), the COVID-19 pandemic shows clearly that knowledge is distributed decentrally:

“We cannot expect that this problem will be solved by first communicating all this knowledge to a central board which, after integrating *all* knowledge, issues its orders. We must solve it by some form of decentralization. But this answers only part of our problem. We need decentralization because only thus can we ensure that the knowledge of the particular circumstances of time and place will be promptly used.”

Schaltegger (2020) uses Switzerland as an example to show that there are cantons that are more strongly affected by the virus than others, for example Ticino due to its proximity to northern Italy. It is therefore not appropriate to have a policy that lays down regulations for an entire country on a scattergun basis. A decentralized control by individual regions would be more appropriate. The political actors there have precise knowledge of the decision-making variables relevant to them. This gives them an information advantage over centralized decisions, which can be used in crises. The problem of central planning, which Mises (1920; 1922) and Hayek (e.g., 1945) have already extensively analyzed, was demonstrated by the disastrous vaccine procurement by the European Commission. Collective decision-making was significantly delayed and the proclaimed economies of scale could not be realized, so that the European Union clearly lags behind other nations in the vaccination of its population (date: February 2021, see Gleißner et al. 2021). Overall, the COVID-19 crisis also shows that smaller entities can act more flexibly and know the needs of the people on the ground better, so that

voluntary transactions can develop easier than with central planning for an entire country which is another argument in favor of smaller units rather than large national territories (on this question see especially Marquart and Bagus 2017, further, e.g., Alesina 2003). For example, it is hard to understand why the same measures should be taken in a small town in Schleswig-Holstein with low incidence levels as in a so-called “hotspot” in a metropolis.

2. *The danger of an expansion of governmental power*
 What can be assumed with regard to past crises and political reactions is that governments tend to strive to use crisis situations for their own legitimation and possibly also to spread their power. In the COVID-19 pandemic, it was observed that insecure populations hardly questioned many government actions – on the contrary, some sections of the population expressly welcomed the restrictions of freedom. A governmental intervention in this area incapacitates the individuals and negates the fact that they are able to protect themselves. Besides that, a governmental intervention relieves individuals of their responsibility to take care of their own protection. Particular caution and skepticism are called for here, which does not mean that every state action should be rejected per se. However, it is important that citizens enter into dialogue with decision-makers and, as principals, control their agents, as they could use the discretionary leeway to realize their own interests.
3. *The proportionality of public intervention measures*
 The protests of numerous citizens show that in crisis situations there is often the danger that governments extend their power. With Mises (e.g., 1957a) every intervention is followed by further interventions, which sooner or later leads to socialism. Here, it is important to ensure that governments’ decision-making calculations follow methods of economic analysis. Especially, proportionality of measures means that negative effects are also taken into account. A decision can only be taken after a careful consideration of the expected costs and benefits. To this end, it is also

necessary to disclose the uncertainty in the form of simulations; what is commonplace for entrepreneurs should also apply to political decisions (e.g., Gleißner 2020). In particular, the current measures to close many retail and service businesses appear to be having a significant negative impact. To save their business models, the state gives generous financial aid. The long-term macroeconomic consequences of this intervention and the monetary policy accompanying this fiscal policy can lead to distortions, in a size which is no longer in reasonable proportion to the benefits of these measures. Moreover, as the tendency toward expansionary spending increases, more and more interest groups will try to get into the good graces of government support, setting in motion a rent-seeking spiral (e.g., Daumann and Follert 2020). The closer an election gets, the greater the tendency of political actors to give way to lobbying. The high time preference of politicians elected for one legislature therefore affects their decision-making, so that short-term goal attainment in the sense of maximizing votes takes precedence (e.g., Downs 1957). This short-term planning horizon leads to expansive fiscal policy today, but this comes at the price of a lower level of prosperity for future generations, which *ceteris paribus* also has an impact on living conditions and health care and, ultimately, on the life expectancy of future generations (e.g., Raffelhüschen 2020). When evaluating the measures, it must also at least be discussed whether protective measures could not also be taken by citizens - depending on their individual risk propensity. The owner of a restaurant can, of course, decide for himself not to open his business. In practice, it has been shown that numerous businesses have found creative solutions and developed convincing hygiene concepts, especially in the gastronomic sector. The problem of external effects can, of course, be cited as a counter-argument (e.g., Molavi Vasséi 2020). However, this does not necessarily imply state intervention (Bagus and Polleit 2020). A possible lesson from the current crisis that is important esp. for liberalism and

Austrian theory could be the insight that the desire of the state or the government for expansion and growth is an inherent problem of every crisis (see, e.g., De Jouvenel 1972). Especially, if the focus of citizens is directed to the potential risks to their own lives and there is an asymmetry of information, the principal-agent problem between the government and the citizens is intensified, resulting in discretionary margins for an opportunistic government.

4. *The interactions and cooperation between politics and science, especially the role of (normative) policy advisory*

It can be seen from the current crisis that the relationship between politics and science is quite ambivalent. Although science is an indispensable corrective even in times of crisis, it is important to ensure that scientists are not instrumentalized by political actors. The *Werturteilsfreiheit* postulated by Max Weber (1904) acquires a special significance in times of crisis, which can already be justified by incentive theory. For governments, basing a decision on scientific expertise is an almost risk-free strategy:⁹ if the prognosis is correct and the government's decision proves *ex post* to be appropriate, the government reaps the rewards, which serves its goal of maximizing voter votes. If the *ex-post* measure proves to be unsuitable, it is easy for the government to rely on the advice of the scientific community and outsource responsibility. Science is allowed to act as a policy advisor, but it is in its own interest to justify its recommendations strictly on the basis of evidence and to point out that a (normative) decision can only be made by the government, which also bears responsibility.

5. *The importance of interdisciplinarity in science*

Due to the complexity of the situation of modern crises, which are particularly difficult to control due to phenomena such as globalization from detailed division of labor, supranational organizations and mutual dependencies between economy, health and politics, an interdisciplinary

⁹ The following thought goes back to Eike Emrich.

treatment of the subject is indispensable (in the following Follert 2020; Follert et al. 2020). Currently, the discussion is dominated by medical experts. However, since crisis management is an optimization problem with several constraints, an analysis can only be carried out on an interdisciplinary basis, so that cooperation between the natural and social sciences is to be welcomed. Especially, long-term economic, social, legal, or psychological effects can only be analyzed if experts from different schools of thought work together. A global crisis shows how important teamwork and networking are within scientific community, in particular over the borders of each discipline (on the power of collective initiatives see Chan et al. 2020).

6. *The importance of entrepreneurs*

Schumpeter (1934; Kirzner 1973 and similar Drucker 1985) characterize the entrepreneurs as flexible individuals who are looking for new chances and therefore create innovations. With respect to several crisis situations, it should be obvious that they open up new opportunities for entrepreneurs in particular and often act as an accelerator of innovation, in particular in times of recovery after a crisis (e.g., Chamlee-Wright and Storr 2010b on the role of social entrepreneurship after Hurricane Katrina). It has already been observed in previous crises that innovative private individuals often do not wait until state solutions are offered, but rather move forward themselves (e.g., Boettke et al. 2007). With respect to the COVID-19 pandemic, e.g., lockdowns in many countries have led to increased sales for suppliers of modern communications technology. Virtual conferences were also held in the scientific sector. Innovations could also be observed at a smaller level. For example, seamstresses in small towns suddenly began to produce community masks for their fellow men in rapid succession. Individual entrepreneurs can thus counter the dynamics of a crisis and the changes in ordinary everyday life with a corresponding flexibility and dynamic in Kirzner's sense, while state bureaucracies often act in a sluggish manner. This shows that the entrepreneurial

models of Schumpeter and Kirzner are important prerequisites for social progress, especially in times of crisis. In this context, entrepreneurial actions are carried out by individuals, while governments or supranational organizations are often overwhelmed with complex decisions due to the lack of knowledge, which is aptly described by Huerta de Soto (2009, pp. 74-75):

“Life in society is possible thanks to the fact that individuals, spontaneously and without realizing it, learn to modify their behaviour, adapting it to the needs of other people. This unconscious learning process is the natural result of the practice of entrepreneurship by human beings.”

The importance of entrepreneurs as drivers of the market process and the role of knowledge were repeatedly emphasized by Mises and Hayek and integrated into a theoretical framework, especially by Kirzner (as an overview see Kirzner 1997). The importance of discoveries and experiments (albeit under uncertainty and the resulting dangers) are of immense importance, especially in crises without prior experience, but – as already indicated in point 1 of this section – hardly feasible for centrally organized entities.

5. Concluding remarks

An answer to the question of whether humanity can learn from crises in general and from the COVID-19 pandemic must – as mostly in science – be answered in a differentiated manner. While it can be recognized from the perspective of decision theory that learning on a micro-level is hardly possible due to structural differences of the decision situations. However, important insights from past crises can be gained at the macro level. In particular, several crises show that the more unknown the situation and the more incomplete information is, the higher the perceived danger within parts of the population. This perceived danger is anticipated by the

government, which tries to calm the voters and at the same time to increase its own power through interventions. At the same time, interventions usually cause new crises.

The global COVID-19 pandemic poses new challenges to our globalized world and shows that the uncertainty of future events requires flexible and adaptable behavior. The present analysis explores the scientific-theoretical and philosophical questions of whether learning from history in general and from the COVID-19 pandemic in particular is possible. We start from the accepted economic axioms, especially the individuality of human being and the difficulty of deriving future human behavior from the past (Mises 1957b). We show clearly that learning from the crisis is only possible to a very limited extent, since the variables of a decision problem are constantly changing. Nevertheless, learning effects can set in, but these refer more to basic conditions in crisis situations of modern times. Here, we emphasize that the importance of decentralized decision-making and the relationship between politics and science are crucial factors. Moreover, we point out the role of the entrepreneur in the tradition of Schumpeter and Kirzner within a crisis. Furthermore, we recognize that due to the asymmetric distribution of information concerning the risks that result from a crisis, such a situation could support governmental expansion and restrictions of civil rights. Overall, our paper thus contributes to the (economic) analysis of the COVID-19 pandemic and brings new aspects to the scientific discussion.

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