

## How do state authorities act under existential uncertainty?

### Hypotheses on the social logic of political decision-making processes during the Coronavirus pandemic

#### Abstract

After a critical examination of the rational model of politics, this article discusses an alternative explanatory model in order to better understand and explain state response patterns and decision-making processes for containing the Coronavirus pandemic in its various phases from a sociological perspective. In doing so, I draw on central considerations of political sociology and organisational studies in order to reconstruct the social logic of the (non-)action of state authorities with special regard to the case examples of Germany and Austria (action under radical uncertainty, expert delegation, isomorphism of state action, path dependency of decisions, promissory legitimacy, collective morality of the “anxiety community” as a social driver of pandemic management). The article concludes with some general considerations on the vaccination exit strategy as well as on the problem of strategic ignorance and the logic of performative-symbolic action by state decision-makers.

**Keywords:** Coronavirus crisis, political sociology, anxiety community, performativity, strategic ignorance

#### Acknowledgement

I appreciate the thoughtful comments of the reviewer and the editor. I would also like to thank Martin Sprenger, Jakob Gasser and the participants of numerous online conferences and workshops (19th Weimar Colloquium “Constructions of Reality” in Benediktbeuern, AdHoc Group “Sociology and Crisis” at the DGS/ÖGS Congress “Post-Corona Society? Pandemic, Crisis and its Consequences” in Vienna, CovReflections#19 and Center for Interdisciplinary of China Research, Kookmin University Seoul) for helpful comments on an earlier version.

#### 1. Introduction

Why do policy-makers and state authorities act one way and not another during the Coronavirus pandemic? What can political sociology contribute to answering the question of the social logic of political decision-making processes? This article does not want to problematise, from the perspective of comparative research, which pandemic regime (elimination vs. mitigation) is “more successful”. Instead, I focus on governmental measures in the course of the Coronavirus crisis from a perspective of a sociological observer. From a sociological-analytical perspective, it is hardly possible to judge the success or failure of government measures in the Corona

\* *Klaus Kraemer* (klaus.kraemer@uni-graz.at), University of Graz, Austria.

crisis. The question of success and failure of political decisions is a question of a political-normative valuation. How can one empirically evaluate the success or failure of governmental measures in the Coronavirus crisis – by the cumulative number of Coronavirus deaths, the daily confirmed COVID-19 cases, the testing intensity, the number of patients in intensive care, or the vaccination rate? Or does success or failure also depend on how long kindergartens and schools are not in lockdown during the pandemic? Or do governmental protagonists seek a “balance” (Anders Tegnell, state epidemiologist of the *Public Health Agency* of Sweden) between health protection, civil rights and liberties, and collateral damage? In contrast to oversimplified answers, it must be kept in mind that it is always a matter of the political-normative judgement between the direct effects of containment measures and their unintended effects in the economy, culture and society (collateral damage) and the extent to which these direct and unintended effects can be “measured” in a valid way.

The question of success is a normative one, i.e., a question of value judgement and cannot be answered by social sciences, but only politically. Here, I follow Max Weber's (1949, 4) methodological approach and his aversion to a “professorial type of prophecy”. Beyond Weber, I would like to distinguish between the role of experts and researchers. Experts have well-founded expertise in specialised scientific fields of knowledge. Beyond this, they make normative statements in public arenas and concrete recommendations for political decisions, even if they have no proven scientific expertise on the issues in question (e.g. virologists comment on the economic and social consequences of containment measures or sociologists comment on the dangerousness of a virus). Researchers present what could be done without pretending that value judgements can be decided scientifically. They exercise scientific restraint on political or value questions. As soon as a sociologist slips not into the role of an expert but into the role of a scientist, he or she can observe the practices of scientific and political experts (Luhmann, 1990).

## 2. Whiteout in the Coronavirus crisis

A whiteout is a meteorological phenomenon that can be observed in the polar regions but also in the Alps in wintertime. It is characterised by weather conditions in which the contours and landmarks in snow-covered terrain become almost indistinguishable. The visibility of the terrain is greatly reduced. The horizon disappears from view while the sky and topography appear featureless, leaving no points of visual reference by which to navigate. There is an absence of contours because the light arrives in equal measure from all possible directions. This is a condition of diffuse light when no shadows are cast due to a continuous white cloud layer appearing to merge with the white snow surface. No surface irregularities are visible. There is no visible horizon. Visual references, e.g., the horizon, terrain features, and slope aspect, are significantly reduced or completely blocked. This leads to

an inability to perceive the contours of the environment and to position yourself relative to the surroundings. In severe conditions, an individual may experience confusion, loss of balance, and an overall reduction in the ability to operate. People travelling in a whiteout is at significant risk of becoming completely disoriented and losing their way. Even people who are familiar and have experience with the area often have no choice but to literally “drive on sight”, especially when the visibility radius tends towards zero.

**Figure 1: Whiteout, Stadelstein, Eisenerzer Alps, Austria, 01.03.2020**



Source: author's own photo

In a metaphorical sense, the spring of 2020, i.e., the phase of the rapidly escalating Coronavirus crisis, can be described as a whiteout to which science, politics and society were exposed without warning, more or less overnight. Three features characterise this event: exogenous shock, singular extraordinariness and radical uncertainty. First, such an event that collapses overnight is a societal shock. Those events are not endogenously triggered, such as by eruptive political upheavals, collapsing financial markets or military disasters, but rather exogenously. An exogenous shock (cf. Fligstein & McAdam, 2012, 99) can be understood as a socially unpredictable event in the nonhuman environment of social order. Second, it is a singular event that disposes of the normality of the social order. Typically, events are

rarely addressed in the social sciences, even though they consistently influence social orders. Normally, these are recurring events, i.e., events that have already taken place in the past in a similar or quite comparable manner. Such events are socially unsurprising. In our case, the special feature of the Coronavirus crisis “event” is its singularity, unpredictability and incomparability, notwithstanding the fact that historical knowledge about previous epidemics and pandemics is quite available (McNeill, 1976; Spinney, 2017). The Coronavirus crisis was a completely extraordinary event that forcefully challenged the “normality” of all practices in politics, economy and culture. The extraordinary nature of the shock has become the “new normal” overnight in all “subsystems” (Luhmann, 1995), “sectors” (Scott & Meyer, 1983), “organisational fields” (DiMaggio & Powell, 1983), “fields” (Bourdieu & Wacquant, 1992; Fligstein & MacAdam, 2012) or “orders of worth” (Boltanski & Thévenot, 2006) of society without exception, on all “onstage” and “backstage” areas of social interaction in everyday life (Goffman, 1974). Third, it is an event that is characterised in a very special way by uncertainty that can hardly be improved because of its shock, singularity and extraordinariness. In the spring of 2020, everything was unforeseeable: the duration of the pandemic (*temporal*), its geographic spread (*spatial*), the occurrence of infection, the course of the disease and the mutations of the virus (*factual*), and last but not least, the effectiveness and usefulness of the nonpharmaceutical interventions (NPIs) taken (lockdowns, restrictions on outdoor activities, playground, kindergarten and school closures, park and border closures, face masks for ordinary people in shopping malls, banning people from meeting, etc.) as well as the extent of the unintended consequences of lockdown policies (collateral damage) (*social*).

Sociological research has tended to focus on the micro, meso and macro levels of social orders. The concepts of “action” and “structures” are used as theoretical anchors to investigate not only the persistence of social orders but also social change. In contrast to the historical sciences, however, the category of “event” does not play a significant role in sociology, with the exception of the sociology of disaster (Matthewman, 2015; Tierney, 2019; Drabek, 2019; cf. the example of the Coronavirus crisis Pfister, 2020), which examines the part-time disruption of all routines and social orders by internal or external shocks. An example is the work of Pierre Bourdieu, who throughout his life focused on the question of how the persistence of social orders could be explained sociologically. Nevertheless, using the example of the university field during the Paris May Revolte of 1968, Bourdieu (1990, 157) examined the fact that a simmering structural crisis of the social order that has been developing over a longer period of time can erupt in a “critical moment” and even result in a breach with the “doxa”. At such a moment, according to Bourdieu, the conventional normality of the social world collapses. Moreover, at this tipping point, the view of the social world that has been perceived as legitimate up to now is challenged, and “everything” seems to become “possible”. The future then becomes, Bourdieu (1990, 182) continues, “truly contingent,

future events truly indeterminate, the moment truly instantaneous, suspended, its consequences unpredicted and unpredictable.” Unlike Bourdieu, however, the “critical moment” of the Coronavirus crisis has no endogenous social background that could be attributed to any structural crisis of social institutions. However, the “critical moment” of the Coronavirus crisis is quite similar to what Bourdieu argues in a very different case study (1990, 173ff.) characterised by “synchronisation”. Synchronisation means that across all “functionally differentiated subsystems” (Luhmann, 1995) or “relatively autonomous fields” (Fligstein & McAdam, 2012), at the critical moment of crisis, the previously valid, generally accepted social order is replaced by a new social perception of social reality. All everyday routines and interactions under conditions of copresence, institutions and organisational practices, institutional arrangements and path dependencies, i.e., everything that has always been studied in sociology to investigate the stability and persistence of social orders, have become problematic and questionable overnight across subsystems or fields at the “critical moment” of the Coronavirus crisis. This also applies, by the way, to all collectively shared interpretive patterns (Berger & Luckmann, 1966), value ideas (Weber, 2001), and all “fictional expectations” of the future (Beckert, 2016) that actors draw on in normal times to “construct” and define social reality, i.e., to be able to orient themselves meaningfully in the world and to act. At the critical “whiteout” moment, it seems as if the hardy social facts (Durkheim, 1982) of the social world are turned upside down and even the most unquestioned obviousness of everyday face-to-face interaction would become anomic (Romania, 2020; Klein & Liebsch, 2020; Lindemann, 2020). In the following, I would like to problematise the practices of the state elites, especially in Germany and Austria, in the course of the Coronavirus crisis from the perspective of political sociology.

### 3. Hypotheses

In the spring of 2020, Jürgen Habermas (2020) commented on the shock of the Coronavirus crisis with the following words: “There has never been so much knowledge about our not-knowing”. The relevant political decision-makers were confronted literally overnight with a situation in which they had to act, but without knowing what would be the best to do. In other words, it was a particularly exposed decision-making situation without a historical blueprint or “best-practice” examples. Because of the “existential uncertainty” (Habermas, 2021) of the whiteout moment, it was impossible to know what the “right” measures to contain the pandemic were and which ones were effective but at the same time proportionate. The whole dilemmatic constellation is reflected in the circumstance that political decision-makers have to demonstrate decisiveness and the capability to act to prevent the impression of tentativeness, weakness in decision-making or even loss of control from arising in the first place. In such a situation, no tried and tested organisational and experiential knowledge is available. However, the pressure to make decisions is strong, and time is running out. For this reason alone, it is unlikely that decisions

will be made only after thorough evaluation and deliberation of alternative options for action and after consultation with further multidisciplinary advisory boards. Policy-makers must react quickly if they want to avoid the impression of being hesitant or even inactive. However, at the critical moment, it does not matter whether the measures taken are particularly evidence-based, politically balanced and legally proportionate. Disaster sociology (Kreps, 1985; Matthewman, 2015; Tierney, 2019; Drabek, 2019) has been studying how social orders react to catastrophic events for many years. However, such niche and insider sociological knowledge is not known to policy-makers or their advisory staff. If, contrary to expectations, political decision-makers had access to this knowledge, the follow-up question would immediately arise as to whether this knowledge is judged to be relevant. In the following, I would like to present and discuss nine hypotheses on why policy-makers acted one way and not another in the Coronavirus crisis. With these hypotheses, I would like to reconstruct the social logic of political decision-making processes over time but also take into account synchronous processes. The diachronicity and synchronicity of these processes can only be depicted very incompletely in the form of hypotheses. The following eight hypotheses serve the sole purpose of systematising the social logic of decision-making processes a little more precisely. National peculiarities between Germany and Austria would also have to be taken into account more precisely, even though they are certainly of particular relevance to better understand decision-making paths in the course of the pandemic.

*H1: 'We do not truly know, but it could be pretty bad. That is why we are doing everything to protect you.'*

In March 2020, a national state of emergency was declared to avert a general health crisis. For reasons of protection against threats to public health, decision-makers follow a priority safety principle, to which, in the first phase of the pandemic, all other governance targets are subordinated without exception. This safety principle is driven by the apprehension that the pandemic could take a catastrophic course if “everything” is not done to contain the spread of the virus.

At the critical moment of the Coronavirus crisis, the normative guiding principle of “saving human lives” is self-explanatory and self-legitimizing. Under the impact of disturbing media images from China (Wuhan) and Northern Italy (Bergamo), as well as unsettling press reports of impending triage from Spanish hospitals, a situation assessment is rapidly taking hold that SARS-CoV-2 represents far more than an individual or age-group-specific health risk. The virus is interpreted as a completely new threat, not only to the individual but also to society, which creates “existential insecurity” (Habermas, 2021). Political decision-makers are under enormous pressure to act and are being put to the test. Against the backdrop of a threat scenario that sometimes takes on dystopian dimensions, decision-makers are demonstrating resolve. Emmanuel Macron sees the French society “at war” and calls for a “general mobilisation” against the virus (Le Monde, 2020). Angela Merkel speaks of a

“catastrophe of the century” (Bundesregierung, 2020), and Austrian Chancellor Sebastian Kurz warns in March 2020, against the backdrop of a circulated horror scenario of more than 100,000 deaths in Austria alone, which soon “each of us (will) know someone who has died of Coronavirus” (Kleine Zeitung, 2020). Restrictive nonpharmaceutical interventions (NPIs), such as mandatory stay-at-home orders, physical distancing measures, school, kindergarten and business closures (“lockdown”) or restricting cross-border travel and face masks, seem inevitable and efficient to reduce COVID-19 (“save”). Anything other than a lockdown policy that follows the apprehension principle of “security first” seems neither rationally justifiable nor ethical. A leaked internal strategy paper of the German Federal Ministry of the Interior from spring 2020 paints a disaster scenario (FAZ, 2020a): “The worst case must be made clear in an unambiguous, resolute and transparent manner with all the consequences for the population in Germany”. To achieve the “desired shock effect”, the following is recommended: “Many seriously ill people are brought to hospital by their relatives, but are turned away, and die agonisingly struggling for air at home. Suffocation or not getting enough air is a primordial fear for every human being.” The assumption that children are hardly affected should be countered: “If they then infect their parents and one of them dies in agony at home and they feel they are to blame because, for example, they forgot to wash their hands after playing, it is the most terrible thing a child can ever experience” (translation: kk) (for Austria cf. Der Standard, 2020).

In the initial phase of the pandemic, it is obvious that scientific knowledge about the actual infection rate, the infection dynamics and the individual risk of infection, differentiated by health-related sociodemographic and socioeconomic characteristics is insufficient (see, for example, the early criticism by Schnell & Smid, 2020). In addition, decision-makers have no experience managing a pandemic. Under these conditions of nonknowledge combined with widespread existential insecurity, it is obvious that the rationality of decision-makers shrinks to appealing to an insecure population to follow government containment measures at all costs. The state elites insist on doing “everything possible” to protect the people from the virus. It is significant that the normative postulate, “We will do everything to protect you” remains both absolute and vague.

After some initial doubts about which strategy would be more successful in containing the virus, the corridor of political action is rapidly narrowing. The logic of agency follows a pattern of justification that can be summarised as “health” before “freedom” and “security” before “collateral damage”. This is the moment of national solidarity (*nationaler Schulterschluss*) that makes a controversial assessment of the threat situation almost impossible. Political decision-makers appeal to the solidarity of the national community (*ationale Solidargemeinschaft*) to follow the state’s instructions and to take “responsibility for others”. Under such conditions, the debate about the sufficiency and proportionality of the measures to contain the pandemic is mutated into a discourse even before it can deliberatively develop. In contrast



to the type of *debate*, a *discourse* is not characterised by controversial positions that could legitimately be justified and debated. It is a well-known social phenomenon, but one that has received too little sociological attention, that in the moment of the shock of an existential threat, conflicts of values and interests are discursively suspended until further notice. An historical exception is Emil Lederer's (2014, 102) reflections on the July crisis of 1914, who noted that the "distant objectivity" of the "little group [...] of the 'impartial' observer by profession" – meaning the social sciences – "in all countries [...] had shrunk into nothing" [own translation – kk]. In the case of the Coronavirus crisis, it becomes apparent that public discourse quickly shrinks to the difference between objectively and normatively sayable and non-sayable discourses. The dominant narrative of an undifferentiated threat stimulates an apocalyptic interpretation of the pandemic and triggers a media alarm and fear communication in which hardly anything is put into proportion. SARS-CoV-2 is interpreted as a particularly aggressive, pathogenic "killer virus" that endangers the young as well as the old and pre-diseased persons. A narrative framing the pandemic is quickly established, which suggests that the risk of infection for all individuals is "equally distributed", i.e., socially "structureless", while at the same time ignoring the "social structure of human contacts" (Streck, 2021) (on the "tunnel view" of the media perception of the pandemic in Germany in the spring of 2020, cf. Gräf & Hennig, 2020; on media fear communication cf. also Aslam et al., 2020). The risk of infection as well as the risk of severity of the course of the disease are very unequally distributed, to the disadvantage of the low socioeconomic status groups, as numerous studies from the US and the UK have already very clearly shown in the first year of the pandemic (Wachtler et al., 2020a, 2020b). The dystopian scenario of a collectively threatened society in which all individuals are affected by the virus in the same undifferentiated way unfolds into an all-encompassing discursive power that aligns the space of legitimacy with the norm of absolute health protection and places all those under general suspicion of "egoistic", "hedonistic" and "lacking in solidarity" behaviour who come to divergent assessments of pandemic risks.

*H2: 'We do not truly know. That is why we follow the recommendations of virology and epidemiology experts.'*

In the singular moment of shock (H1), political decision-makers organise scientific pandemic advice according to the principle of expert selection. In view of the sheer existential uncertainty about the pandemic, decision-makers follow the recommendations of virology and epidemiology experts, who are quickly ascribed with an all-superior interpretative competence in both scientific and political fields. The basis of the virology monopoly of interpretation is scientific findings on the molecular structure of the virus. These findings are combined with the alarming assumption that not only the risk of infection but also the risk of disease could be more or less equally distributed across all individuals. This monopoly on inter-



pretation is underpinned by hypothesis-based epidemiological simulation models and mathematical forecasts of the exponential spread of infections (Ferguson et al., 2020; an der Heiden & Buchholz, 2020, on the social performativity of such models; cf. Rhodes & Lancaster, 2020).

More precisely, the first phase of the pandemic is characterised by a double primacy. Virology and epidemiology experts are ascribed unrestricted scientific primacy in the interpretation of the initially very poor data situation, the classification of COVID-19 in relation to all other disease risks, and the prediction of future infection incidence. Political decision-makers refer to their forecasts and model calculations. By executive regulations, they adopt far-reaching nonpharmaceutical measures, which are urgently called for by medical and scientific experts, as it is hoped that this will contain the incidence of infections.

This scientific primacy is complemented by a primacy of politics. Contrary to the basic assumptions of sociological differentiation theory (Luhmann, 1995) and the neoliberal thesis of the current comparative political economy (Streeck, 2016), a (relative) primacy of politics is to be assumed, especially in the first phase of the Coronavirus crisis: After all, political decision-makers determine for all other national “fields” or “subsystems” which measures and rules are to be applied under pandemic conditions (on “selective lockdowns” (cf. Kraemer, 2021a)). To be more precise, the critical moment of the Coronavirus crisis is a primacy of the executive over the legislative and judiciary, which can be described as a “provisional state of exception” in the sense of Carl Schmitt (2004, see also Agamben, 2005). The scientific primacy of virology is reflected in the fact that political decision-makers refrain from convening an advisory, interdisciplinary pandemic council that brings together different disciplines to explore possible strategies for containing the pandemic, including its psychosocial, health and economic consequences. The narrowing of advisory expertise in the spring of 2020 to a few medical and scientific-mathematical disciplines leads to the pandemic being interpreted as primarily epidemiological rather than as an overall social and societal crisis. Thus, the economic, psychological, social and health-related follow-up costs of the containment measures for many months remain below the relevance threshold of political decision-makers. They refer to exclusive virology primacy when measures are to be “tightened” or “loosened”. In contrast, heterodox experts are ignored (cf. Great Barrington Declaration, 2020) or, at best, are given secondary attention (cf. in Germany Schrappe et al., 2020ff., in Austria Sprenger, 2020). Such heterodox experts advise a more careful balancing of (expected) positive and negative consequences of the lockdown measures and plead, for example, for putting the presumed successes of containing infections through school closures in relation to the unintended effects on educational development and the psycho-social health of the younger generation. Heterodox experts come under pressure to justify themselves as soon as they criticise the measures as “disproportionate” or not evidence-based and problematise the political-media “fear communication” that often tips over into the apocalyptic. Sometimes they

are accused of “playing down” or even “denying” the threat. The social mechanism of public disqualification and de-legitimisation of divergent expertise quickly takes hold, even when only an evidence-based assessment of the threat situation is called for and consideration of possible alternative actions is demanded, also taking into account the unintended consequences of the measures. The limitation of advisory expertise to *orthodox experts* (cf. No-Covid Strategy 2020) is criticised by *heterodox experts* in the further course of the pandemic, for example in Germany by Schrappe et al. (2020). In turn, a differentiation must be made between heterodox experts and *pariah experts*, who stand outside a controversy about scientifically justifiable judgements that is considered legitimate and disseminate pariah knowledge about the pandemic in alternative media (“fake facts”) (on the pariah concept in sociology see Weber (1978, 399ff.), on “lay-rebellion” see Berger & Luckmann (1966, 116ff.).

This selection of experts has far-reaching consequences for the social logic of political decisions. The state actors see themselves in a decision-making situation that offers no real scope for decision-making at all. Political decision-makers can openly contradict the recommendations “without alternatives” of orthodox experts at the price of losing their own reputation. Even a gradual departure from restrictive lockdown measures and school closures is perceived as “irresponsible” in the first phase of the Coronavirus crisis. Exemplary are the restrictive ad hoc recommendations of the *National Academy of Sciences Leopoldina* (2021) (see critically Hirschi, 2021; Beck & Nardmann, 2021). In this context, Bogner (2021) speaks of an “epistemic dissolution and normative totalisation” of the (orthodox) expert role. Similarly, Merkel (2021) criticises that a scientific understanding of politics always becomes visible as soon as the competing pluralism of modern sciences is “simplified” and narrowed down to “indubitable” findings of science.

However, expert selection also affects the way scientific data on the pandemic are collected. As early as spring 2020, Schnell & Smid (2020) criticised that the focus of the *Robert Koch Institute* (RKI) in Germany on the daily or cumulative number of confirmed COVID-19 cases was problematic. It is incomprehensible why the RKI would forego representative surveys on the spread of the infection and instead rely on unreliable survey instruments. Schnell and Smid suggest that professional pandemic management is not possible without a solid database. They recommend regularly conducted, representative prevalence samples (proportion of infected persons in the population), panel studies (progression of the disease within persons), post-mortem samples (actual cause of death) and social research on SARS-CoV-2 restrictions (a random sample of the general population, including the elderly and economically disadvantaged individuals) to analyse social factors affecting attitudes relating to SARS-CoV-2 restrictions and their effect on behaviour as well as the social gradient on economic and social consequences) to better understand the pandemic and its dynamics. Neither has the RKI's lack of data changed in the second pandemic year (Schrappe, 2021). In the summer of 2021, the *Kiel Institute*

for the *World Economy* (IfW) also spoke of “serious failures to collect reliable Corona data” in Germany (Der Spiegel, 2021).

The RKI's data policy remains focused on absolute case numbers and incidences, without even putting these in relation to the supply (availability of the testing infrastructure) and demand conditions (testing occasions and constraints) of testing. At the same time, until well into the second year of the pandemic, a politically extremely powerful mathematical-epidemiological modelling positivism dominated more or less uncontested, which – not only in mass media communication, but especially also in the political consultation process – believed that the predicted “future present” (Luhmann, 1976, cf. also Esposito, 2007) of the pandemic could already be anticipated as an objective scientific fact. In this context, Müller (2021) problematised the considerable forecasting uncertainties of the mathematical-epidemiological models that were so politically influential in the first year of the pandemic (as an example, see Ferguson et al., 2020). For Müller, these models are based on the theoretically simplifying assumption of an exponential spread of the virus. In particular, braking or saturation effects have been overlooked, especially heterogeneity and cluster effects in local contact networks (cf. Britton et al., 2020; Neipel et al., 2020; Großmann et al., 2021). Such social network effects are sociologically relevant (not every person spreads the virus in the same way). The socio-spatial evasive behaviour of people should also be taken into account.

Under the radar of mathematical modelling positivism, however, much of what constitutes a pandemic *in society* remains unobserved, such as different settings in everyday social life, the socially unequal distribution of transmission and disease risks, or the persistence of social institutions and the social inertia of “local” cultural practices, even in emergencies. Rhodes et al. (2020) have shown that mathematical modelling of Ebola, H5N1 influenza (“bird flu”, 2003) and H1N1 (“swine flu”, 2009) made similar assumptions to avert the expected disaster. To prevent a worst-case scenario, it was also recommended in these cases that the virus be “controlled” “at source” through “containment” or even that it be “eliminated” without taking note of the local social conditions that make it at least very difficult to control and contain the spread of a virus. In any case, it is important to realise that many factors influence the impact of a pandemic on a society, most of which are social.

A pandemic is a complex epidemiological reality that can obviously quickly overwhelm not only single scientific disciplines but also political decision-makers in a structural sense. The political controllability of a pandemic reaches its limits simply because a pandemic is much more than a “natural” disaster. A pandemic takes place in the complex social world of everyday human behaviour. In the social world, it is obviously not possible to rigorously stop certain human behaviours to “eliminate” a virus. The social world is not only complex but also inherently contingent. That is why political decision-makers are faced with the almost insurmountable problem

of how to restrict people's everyday social life in the first place, not only in public places but also in private places, to “control” a pandemic.

Because of the lack of experience in coping with a pandemic, the complexity and contingency of the pandemic are pressed into an apodictic causal scheme by the state authorities, who are assumed to be able to contain the spread of the virus. It is unclear whether policy-makers believe in “simple solutions” or whether they are doing “anything” without knowing what measures would be helpful or effective in containing the pandemic. It is also possible that the issue of the scientific evidence of measures is not questioned much. They simply act to dispel any doubts about the usefulness and proportionality of government measures. Examples of such a suggestive causal scheme are appeals such as “face masks save lives”, “contact tracing stops the virus”, “school closures break infection chains” and “lockdowns stop the exponential spread of the virus”. Such action-oriented causal schemes are born out of an emergency. In addition to the uncertain effectiveness and with no impact assessment of such unspecific nonpharmaceutical instruments, another weakness of pandemic management is the selective choice of experts and an inadequate data policy, which raises the question of evidence-based pandemic management that could self-reflexively make its own blind spots visible to prevent institutional ignorance (McGoey, 2019) from arising in the first place.

*H3: ‘We do not truly know. That is why we are adapting the measures of neighbouring countries.’*

The primacy of virology expertise (H2) is followed by the social contagion or herd principle of state authorities. It is remarkable that the decision paths and portfolios of measures are similar in almost all EU countries. Everywhere, one follows the causal scheme of “border closures-school closures-lockdowns-restrictions of outdoor activities-obligation to wear face masks”. In the social sciences, especially sociology and organisational theory, it has been shown that deviation from a decision path or even a change of path is risky and unlikely (DiMaggio & Powell, 1991). In all countries, the containment measures are justified with scientific evidence, also, remarkably, in the “special case” of Sweden, but there are reverse signs and roles between orthodox and heterodox experts to justify the Swedish strategy principally has been based on recommendations, individual responsibility and voluntary measures. The same also applies to a non-masking obligation in public areas or the non-closures of schools for children under 16, retail shops, restaurants and ski resorts.

The special case of Sweden cannot be examined in more detail below. Nevertheless, it is of particular sociological relevance in order to be able to explain the special institutional conditions of a deviation from the orthodox social logic of pandemic management in the vast majority of countries of the European Union. At this point, it should only be pointed out that the central authority of pandemic management

in Sweden was not the national government, but the national health authority with its more multidisciplinary focus on the pandemic and collateral damage. In addition, further influencing factors would have to be examined, which probably have to do with the socio-cultural (trust of the people in the state institutions and trust of the government in the people) and political order (particularities of the national legal framework, no politicisation of pandemic policy) of Swedish society (cf. in contrast the very critical assessment of the less restrictive Swedish strategy by Brusselsaers et al. 2022, who, however, only consider the first year of the pandemic).

A change of path is unlikely because it would require special justification. Thus, the first lockdowns in Italy in March 2020 trigger a chain reaction in neighbouring countries. The rapid diffusion and the astonishing homogeneity of the measures taken can be interpreted with Abiel Sebhatu et al. (2020) as imitation under conditions of radical uncertainty about the effectiveness of particular measures. The crucial factor is not so much the country-specific framework conditions, the institutional peculiarities of the political system and culture or the capacities of the public health system, but rather the comparison with neighbouring countries ("proximity"), which observe each other and, thus, put themselves under domestic political pressure to act. This imitation effect (cf. on the social mechanism of imitation, Tarde, 1903) is institutionally underpinned by the fact that all EU countries are members of the World Health Organisation (WHO), which has developed guidelines and recommendations for national pandemic plans. This institutional isomorphism (DiMaggio & Powell, 1983) is certainly also reinforced by the fact that national decision-makers, in contrast to South Korea for example (e.g., SARS-CoV1 and H1N1 pandemic), have no previous experience in dealing with a pandemic (cf. Capano et al., 2020).

*H4: 'We do not truly know. We follow the decision-making path we once chose.'*

H4 is the continuation of H3. As shown, containment measures of neighbouring countries are adopted nationally. Imitation becomes a path-dependent action by national state authorities and decision-makers. An initial containment strategy based on lockdowns and school closures leaves a permanent mark (or imprint) on a wide variety of organisations and social fields and prejudices the behaviour of decision-makers and state authorities as the pandemic progresses, even if the external conditions of the pandemic change. Against this background, a change in the path of pandemic management is unlikely. Once a decision has been made to use an instrument to contain the virus, it is also likely that such an instrument will be chosen again as soon as the virus spreads in the second, third or fourth wave, without carrying out an evidence-based evaluation of the respective measure and the unintentional impacts in relation to other possible smart measures. As long as one does not leave the decision-making path, one then lurches from lockdown to lockdown, from partial lockdown (*lockdown light*) to sectoral lockdown (*lockdown hard*) and from *lockdown for the unvaccinated* to *lockdown for all* (Austria, November

2021) without critically evaluating, in an open and unbiased way, whether this can actually minimise physical contact or whether these are instead shifting into uncontrollable private spheres (elusiveness).

The imitation effect between nation-states (H3) also continues within nation-states. This stimulates convergence of the once-preferred containment strategy between different decision-makers from the state to the regional and local levels. Federal structures of the political and administrative system favour the inconsistency and contradictoriness of containment measures, how I will argue in H5 using the examples of Germany and Austria. However, federalism also works in the sense of a “race” between regional and national decision-makers to further “tighten” or “loosen” containment measures. This race is driven by legal-institutional constraints and normative expectations (coercive and normative isomorphism, DiMaggio & Powell, 1983). The competition between measures has the effect of consolidating the path. In Germany, for example, the general obligation to wear masks in public places, in pedestrian zones or at outdoor weekly markets, which was initially only introduced in some states (*Bundesländer*), was quickly adopted by other states. The interplay of imitation and path dependency is also evident in other measures, such as school closures and the lockdowns of the second and third waves but also in the implementation and diffusion of the *Digital Green Certificate* that makes access to restaurants, bars, museums, sporting events or even the workplace dependent on individual vaccination, immunity or test status (*3G*, *2G*, *2G-Plus* and *3G-Plus*). Proactive decision-making pioneers animate imitation, internationally and nationally. Thus, over time, there is an increasing convergence of initially gradually different containment strategies. The path dependency of pandemic management is equally evident in the phases of “tightening” and “loosening” measures.

*H5: ‘We do not truly know. We act pragmatically and weigh up the legal feasibility, interest-political enforceability and proportionality of the measures.’*

At some point, the state authorities must leave behind the extraordinary crisis logic of the critical moment and place the primacy of virology expertise (H2) as well as the adapted decision path (H3) in a relationship to other, also conflicting logics of action. This relating of the measures from the first early phase of the pandemic to other material interests (e.g., economic prosperity, security of supply, political acceptance and stability) and value ideas (e.g., health protection, psychosocial well-being, civil and democratic rights, equal educational changes) is contradictory and inconsistent. Sooner or later, this social constellation will lead to the end of unspecific lockdowns and stay-at-home orders, general bans on shops and businesses and school closures across the country. Now, the time of eruptive, short-tempered ad hoc crisis management is beginning, which alternatively declares situational “tightenings” and “loosenings” of containment measures. “Tightenings” are justified as “without alternative”. On the other hand, “loosenings” are defended on the grounds that a balance between virology recommendations, interest-based negotiations and

value-based preferences is unavoidable to maintain the social acceptance of the measures among the population. This erratic back and forth between tightenings and loosening shows the return of society from the “provisional state of exception” (Schmitt, 2004).

The transition from the critical moment of the Coronavirus crisis with far-reaching executive powers to an ad hoc crisis management of back and forth is sociologically unsurprising: the sovereignty of state authorities and their top-down control powers sooner or later reach their limits in “functionally differentiated capitalist society” (Schimank, 2015). The political enforcement of virology primacy is at best possible in the “provisional state of emergency” of a critical moment. In constitutional democracies with capitalist economies and institutionalised conflict regulations, a strict virology containment regime is not at all possible in the long run for legal, political-institutional, infrastructural and political-economic reasons. Constitutional and administrative courts will sooner or later examine the legality and proportionality of lockdowns and stay-at-home orders. In political systems with federalist structures, packages of measures are undone and modified. Border closures are reversed so that international supply chains are not interrupted and the security of supply for the population continues to be guaranteed. Additionally, the economy is quickly “restarted” after the shock of the critical moment has given way to a “new normality”. Even in times of pandemics, the stability of governmental institutions and social welfare depend on economic output (Goldscheid, 1976). If it is not possible to stabilise economic output, then not only people's employment opportunities but also the longer-term refinancing opportunities of the welfare and health system are at risk. This would also put the political order in a precarious position (on output-oriented legitimacy, cf. Scharpf, 1997). Even in countries that have been hit particularly hard by the pandemic and where national governments have mandated drastic measures to contain infections, there has been no hard lockdown – perhaps with the exception of the spring shock of 2020 – that would have reduced physical contact and mobility of economic actors to an absolute minimum. The state order and the welfare system depend on capital accumulation and functioning markets with as little friction as possible. Under these conditions, the impression can quickly arise that pandemic management is inconsistent and engaged in situational actionism. Contradictory and patchwork measures (*Flickenteppich*) suspended the lockdown already decided in Germany in Easter 2021 (*Osterruhe*) and the nightly stay-at-home order (*Ausgangssperre*) instead imposed shortly afterwards are examples.

*H6: ‘We do not truly know. We act as long as people accept it.’*

In addition to the logic of imitation (H3) and path dependency (H4), state authorities follow the principle of votes. At the centre is the question of the electorate's willingness to comply with pandemic management measures. Can political decision-makers expect high approval ratings among the electorate if measures are



strengthened or weakened? Or should they fear the opposite? H6 is an apprehensive question about the acceptance of containment measures.

At the critical moment of Coronavirus shock (H1), the legitimacy problem is suspended for a short time. When an unknown danger with catastrophic, unforeseeable consequences threatens, all measures to protect the lives of citizens are self-legitimizing. In the provisional state of exception of the Coronavirus crisis, the question of the legitimacy of state authorities does not arise at all at first, even in the case of measures that are decided more hastily than deliberately. However, as soon as the shock of the critical moment passes and pandemic management becomes the “new normal”, the well-known conflicting goals of diverging interests and values around private and public goods break out in the political field (H5). Now, not only containment measures but also the relaxation of regulations again require legitimisation, especially when they come into conflict with competing legal claims and collective goods (human and civil rights, educational opportunities).

In the Coronavirus crisis, too, state authorities require legitimisation after the critical moment has been overcome. However, this is less input-oriented or output-oriented legitimacy in the sense of Fritz W. Scharpf (1997). On the one hand, the provisional state of exception of the Coronavirus crisis shows that input legitimacy is “blue-sky thinking” of legitimacy (cf. basically Vobruba, 2020, 132), as numerous civil rights and liberties are restricted. On the other hand, the effectiveness of individual containment measures such as lockdowns, school closures or nationwide antigen or PCR mass testing of asymptomatic persons on the spread of the virus or the hospitalisation rate can hardly be estimated. In short, the concrete performance output of pandemic management is uncertain, although virological and epidemiological knowledge about SARS-CoV-2 has steadily increased since the beginning of the pandemic. Therefore, there is not much to suggest that output legitimacy will take the place of input legitimacy in the pandemic. In any case, it is remarkable that pandemic management is not made a controversial issue in national election campaigns (cf. national elections in Germany, September 2021). Rather, high approval ratings among the population for pandemic management in the first year (Ahrendt et al., 2021) are based on the promise of political decision-makers to do everything in their power to protect the people from the virus (H1).

The legitimacy of state authorities thus does not depend so much on whether the rules of procedure that apply in normal times are also observed at the critical moment of the Coronavirus crisis (*input legitimacy*). Nor does their legitimacy depend so much on whether the goals of the containment measures defined by political decision-makers are truly achieved (*output legitimacy*). It is obviously less a matter of strict procedural compliance (*input legitimacy*) or of target fulfilment (*output legitimacy*) but rather of people believing in the future-oriented promise of state authorities to do everything possible to prevent the virus from getting out of control. The legitimacy of state authorities in the Coronavirus crisis stands and

falls with the promise of overcoming the pandemic if only all citizens follow the measures and behave in solidarity with the national community, which means conforming to the measures (on the concept of “promissory legitimacy”, see Beckert, 2019).

*H7: ‘We do not truly know. We must do something to alleviate doubts about the governance of the crisis.’*

State authorities follow the principle “We will do something!” as soon as the number of incidents rises again. This principle becomes the maxim of political decisions to signal determination in the fight against the virus. Doubts about the ability to act must not be allowed to arise in the first place. The anxious focus is always on the approval ratings (H6). The uncertainties are obvious as to which measures may be more or less suitable to contain the spread of the virus. However, the political logic of “we are doing something” is aimed at giving the impression that one would not protect the population resolutely and consistently (H1). “We are doing something” means that what matters most is not evidence-based knowledge but action. Action before knowledge is evident as soon as specific measures such as lockdowns and school closures are repeatedly adopted, even though it is uncertain whether they are effective and even in the second year of the pandemic, there are no solid scientific evaluations of nonpharmaceutical measures.

In the course of the pandemic, political decision-makers repeatedly and demonstratively invoke the effectiveness of nonpharmaceutical measures, even with scientific support (cf. model calculations by Dehning et al., 2020), although the scientific data is unclear and the expected effects of many nonpharmaceutical measures are uncertain or overestimated (Bendavid et al., 2021). In the systematic review of public health measures by Talic et al. (2021), the authors come to the disillusioning result that a “meta-analysis was not possible for the outcomes of quarantine and isolation, universal lockdowns, and closures of borders, schools, and workplaces.” For Glasziou et al. (2021), the lack of evidence-based studies on the actual effects of nonpharmaceutical interventions is one of the “scientific tragedies of the pandemic”. The authors summarise: “It might be reasonable to conclude that a bundle of PHSMs [public health and social measures] are modestly effective, but individual components cannot be reliability assessed owing to a lack of adjustment for confounders or the use of randomised or factorial trials.” A similar conclusion is reached by Bulfone et al. (2021), who report on the state of research on outdoor transmission of SARS-CoV-2.

In addition, on the one hand, policy-makers are accused of being hesitant, slow and not proactive enough in containing the pandemic. On the other hand, there are warnings against disproportionate measures. Moreover, the efficiency of non-pharmaceutical measures is judged differently by experts after the critical shock moment of the pandemic (H1) has been overcome. During the pandemic, it is

repeatedly shown that orthodox experts and mathematical modellers regard stricter measures as unavoidable, while heterodox experts tend to question the effectiveness of single measures and put them in relation to the unintended consequences. For example, it is argued that certain measures have a counterproductive effect as soon as the incidence of infection is merely shifted from public to private indoor spaces. Alternatively, in the course of the fourth wave of infection in Germany (November 2021), the closure of Christmas markets is mandated, even though the incidence of infection outdoors is negligible, according to aerosol researchers. Nightly stay-at-home orders for the unvaccinated or “2G rules” in retail stores, museums, galleries, concerts and zoos are justified by policy-makers, as the pandemic has become a “pandemic of the unvaccinated”. In contrast, virology experts argue that the self-protection and protection of others by double vaccination would drop off much faster than originally assumed. Additionally, sterile immunity through vaccination was an unrealistic assumption. Against this background, even vaccinated people would continue to contribute to the transmission of the virus (Chemaitelly et al., 2021, Cohn et al., 2021, Nordström et al., 2021).

Even far beyond the first year of the pandemic, measures are repeatedly justified almost exclusively on the basis of biological-medical expertise and mathematical-epidemiological modelling, without integrating evidence-based knowledge about the unintended effects of these measures. Against this background, scientific evidence paradoxically functions as a legitimation resource for political decision-makers, prejudicing an under-complex and distorting perception of the problem. The selective use of evidence goes hand in hand with symbolic politics. Nevertheless, the social rationality of symbolic politics is to demonstrate the ability to act. Policy is symbolic as soon as it is not foreseeable whether specific measures will actually contain the incidence of infection. For state authorities, symbolic politics is essential in the Coronavirus crisis since doubts about their capacity to “change tack” and “control” the virus in the face of rising incidences must not be allowed to arise in the first place. Anything else would erode the symbolic-practical authority of political decision-makers. Doubts about the capacity of state authorities to prevent “contagion” of the population would damage their “power prestige” (Weber, 1978, 910) or “political capital” (Bourdieu, 2019).

In the Coronavirus crisis, the prestige of state authorities and their national “internal prestige” (Kraemer, 2021b) is closely linked to a general sociological phenomenon that can be described by Heinrich Popitz (1992, 223) as the “order value of order”. In terms of Popitz (all quotations *ibid.*; translation: kk), it could be argued that state decision-makers create security based on order as soon as they enforce generally obligatory rules and succeed in convincing citizens to participate in the implementation of these rules in everyday life. Rules establish the reliability of expectations as soon as people know “what is and what others may and must do”. People follow the rules as soon as they have a “certainty that all those involved will actually behave with some reliability as expected of them”, and they can “count

on transgressions being punished as a rule". The order value of the measures stands and falls with the practical-symbolic recognition of the measures, i.e., with the fact that people know "where they stand". The more plausible the measures appear in everyday life, the greater the approval of the people and the more unquestioned the social order value of the measures. The social order value of pandemic management, thus, does not depend on the scientific level of evidence of the measures and their factual containment success but rather on whether people follow the "we are doing something" measures in everyday life in a very practical way. With Popitz, one can argue that people's willingness to follow is high as soon as they can "foresee what one has to do to gain advantages, to find recognition". Media staging may stabilise the order value of order in the extraordinary shock moment of the Coronavirus crisis (H1) (cf. the press conferences of *RKI* President Wieler and Health Minister Spahn in Germany and Chancellor Kurz and Health Minister Anschober in Austria in March and April 2020). However, this is less about the charismatisation of an extraordinary crisis in the sense of Weber (1978, 241), as Maurizio Bach (2021, 95) assumes, but more about the trivialisation and banalisation ("baby elephant" in Austria Spring 2020) of the self-evident (hand hygiene, respiratory etiquette, "stay in your social bubble").

Since the pandemic proceeds in eruptive waves that are neither foreseeable nor calculable, even in the second year, the order value (Popitz) of containment management is also uncertain and unstable. Low incidence and mortality rates increase the order value and thus the prestige value of state authorities, whereas high ratios devalue them. Which key figures (weekly confirmed COVID-19 cases per million people, confirmed deaths per million people, hospitalisation rate, case fatality rate) are interpreted as "high" and "low" depends on the time of comparison and, above all, on the reference group chosen. The reference group for assessing "national success" in containing the virus is the international state system, in our case the EU. However, due to the incalculability of the pandemic, the prestige of state authorities (H7) can quickly turn negative. What is still considered a successful Coronavirus strategy today may turn out to be a blind alley or fallacy tomorrow (see, for example, the failure of the no-covid strategy in Australia and New Zealand). However, a reverse trend is also possible. In the spring of 2020, Sweden recorded a very high mortality rate compared to the EU. Since the summer of 2020, however, the weekly confirmed COVID-19 deaths are almost nowhere as low across Europe as in Sweden, despite the absence of restrictive containment measures including fines (mandatory face masks, general lockdowns and school closures) (Our World in Data 2022). The almost euphoric estimation of the CEO of McKinsey Germany about the government's Coronavirus management in May 2020 ("We are the gold standard", FAZ 2020b) had become obsolete with the second lockdown in autumn of the same year. Against this background, it cannot be ruled out that there is no linear-causal relationship between the stringency of containment measures and incidence and mortality rates.

*H8: 'We do not truly know. We build on the signal effect of state regulations and appeal to people to cooperate and follow the rules.'*

I have argued that the capacities of state authorities to contain the virus are limited in several ways. At the beginning of the Coronavirus crisis, politics, science and society were confronted with a collective whiteout phenomenon. For political decision-makers, fundamental uncertainty is particularly precarious. It is unclear what is sensible to do to protect the population from an unknown virus with a presumably catastrophic potential. It is also uncertain what tomorrow will bring. Soon, the state Coronavirus management is confronted with a familiar complex decision constellation of diverging interests and competing value ideas (H5), which was suspended for a short time at the critical moment of the Coronavirus crisis (H1). As soon as the critical moment is overcome – and thus the initially unchallenged, extraordinary expert monopoly of virologists and pandemic modellers (H2) is relativised – state authorities follow the decision paths for containing the pandemic that are perceived nationally and internationally to which there are no alternatives (H3 and H4). In addition, state authorities are always dependent on the allowance of the ordinary people, if only to dispel doubts about the usefulness and effectiveness of single containment measures (H6). Against this background, it is comprehensible that state authorities follow the logic of “we are doing something” to signal to the public that everything will be done “to control the virus” (H7). Containment measures are decided upon without solid scientific evidence, i.e., without questioning whether the selected measures will actually be helpful. The state authorities demonstrate steely determination so that there is no doubt about their prestige and reputation. As soon as the number of incidents declines, this is causally attributed to the success of the measures.

State authorities are faced with the dilemma that extensive containment measures, such as contact restrictions and stay-at-home orders, naturally also include the private sphere of life. However, such measures cannot be effectively controlled in the lifeworld. The principle of action – “we are doing something” – is not aimed at actually policing people's compliance with containment measures. Police surveillance and state coercion are hardly possible across the board to control whether people actually comply with private contact restrictions and stay-at-home orders. “We're doing something” is, above all, a powerful symbolic-performative speech act that is intended to encourage the people to become involved and to enforce a jointly shared construction of reality (Bourdieu, 2019) of the state's pandemic management. In other words, in the course of the pandemic, performative speech acts by political decision-makers aim to stimulate insights into or compliance with everyday life, where legally controlling adherence to containment measures would overburden authorities. Typical examples are private contact restrictions, the “stay ban” (*Verweilverbote*) on park benches along the Rhine in Düsseldorf (March 2021), compulsory masks outdoors (e.g., Museumsquartier and Danube Canal in

Vienna, March 2021) or on the toboggan runs in the Sauerland (Germany, January 2021), night curfews (*Bundesnotbremse*, Germany, April 2021), and state appeals such as “Do not travel!” (Maas, Minister of foreign affairs, Germany, May 2020) or “Refraining from travelling abroad is a civic duty” (Seehofer, Minister of the Interior, Germany (January 2021)), even though borders have not been closed. In the course of the pandemic, performative speech acts create grey zone effects of vagueness. One does not truly know what one is allowed to do or what one should refrain from doing. Government regulations are often vague, as it remains unclear what is allowed and what is not. For example, in March 2020, in Austria, it was initially unclear whether people were still allowed to do outdoor sports, go for walks or hike in the mountains despite *hard lockdowns*. Performative speech acts, however, not only generate grey zone effects but also anticipatory behavioural changes (prevention paradox), as seen, for example, in the significantly lower mobility behaviour for private purposes, household visits and community-based occasions in the first lockdown. During the second and third lockdowns, however, such effects can be observed to a much lesser extent. In this context, exemplary reference should be made to Ross et al. (2021), who have investigated the advancing *lockdown fatigue* on the basis of British aggregate mobility data. Specifically, the authors describe the return of private mobility behaviour and private visitation behaviour to the pre-COVID baseline levels in summer 2020 and estimate the extent of violations of contravening policy restrictions during the first half of 2021. Despite mandatory restrictions on outdoor activities, the third lockdown in Austria, for example, hardly restricts private mobility, which is commented on in the Austrian press with the words “lockdown only on paper” (Jungwirth, 2021). However, even in this case, it is unclear to what extent anticipatory behavioural changes or violations that contravene policy restrictions have a dampening or amplifying effect on the (reported) infection rate.

#### 4. Outlook: Promises and disillusionment of the vaccination exit strategy

Since the beginning of the pandemic, government institutions and decision-makers have been pursuing the exit strategy of vaccination to resolve the whiteout situation of the Coronavirus crisis. Vaccination is expected to provide effective health protection for older and vulnerable population groups (obesity, cardiovascular diseases, diabetes, hypertension, chronic kidney disease, cancer, and immunosuppression conditions), who are predominantly affected by the pandemic. The exit strategy is also not only aimed at systemic protection through hospital care to avert an overload of intensive care, but the vaccination of the population is also intended to guarantee “light at the end of the tunnel” for everyone. In political and public communication, the exit strategy is not infrequently associated with a promise of salvation (“vaccinate for freedom!”, “game changer”): only the vaccination of the entire population would eliminate the lack of a need for lockdowns and Coro-

navirus measures, dissolve the “vacuum of expectations” (Kraemer, 2021a) in the economy, culture and society and allow a return to the “old normal.”

All relevant scientific studies show that approved mRNA vaccines are currently the most effective medical measure to prevent severe courses after infection with SARS-CoV-2. However, the effectiveness under everyday conditions depends on the vaccine used, the time since the last vaccination, age, immune status, symptoms, viral load, social behaviour and other factors. With the new virus variants Delta and Omicron, concerns have arisen in the second pandemic year about a diminishing protective effect of vaccination after only a few months and limited effects on preventing transmission of the virus (Chemaitelly et al., 2021, Cohn et al., 2021; Nordström et al., 2021). This puts the political promise of redemption to the proof and relativises the ambitious expectations of the exit strategy, communicated both politically and in the media. Additionally, the initial promise of freedom of the vaccination strategy – that the virus could be “eliminated” as soon as *herd immunity* was achieved (*sterile immunity*) – has since proven to be exaggerated and unrealistic. In this context, it is noteworthy that EU countries with a comparatively high vaccination rate, such as Denmark, the Netherlands, Ireland, Iceland and Norway, are again recording a significant increase in SARS-CoV-2-positive cases in late autumn 2021, which is again to be contrasted with nonpharmaceutical instruments (Our World in Data 2022).

Many EU countries have moved towards putting moral and practical pressure on unvaccinated people to increase vaccination rates since autumn 2021. In doing so, state authorities pursue, in the words of the chairperson of the *German Ethics Council*, Alena Buyx, the strategy of “high-escalation”, which is obviously oriented towards basic assumptions of behavioural economics (*nudging*). For example, with the introduction of digital vaccines and immunity certifications (*Digital Green Certificate*) within the European Union, access of unvaccinated individuals to public transport, sports events, gyms, pools, and museums, restaurants and shops beyond basic needs up to commercial skiing areas and cross-country ski tracks has been gradually prohibited (in Germany and Austria, *2G – lockdown for the unvaccinated*), whereby the execution of access bans is not controlled by state authorities but delegated to private for-profit providers. At this point, I would like to refer to Milan et al. (2021, 385) who show how such certification systems “bring together rhetorical performance with technical performativity to create and justify concrete mechanisms of discrimination, inequality and exclusion”. It is noteworthy that unequal treatment of vaccinated and unvaccinated persons is not primarily justified epidemiologically but narratively (*pandemic of the unvaccinated*). The epidemiological proportionality of exclusionary 2G rules depends on the question of whether full vaccination actually significantly reduces the risk of SARS-CoV-2 transmission. Current studies show that the risk of hospitalisation due to COVID-19 is (thus far) significantly lower in doubly vaccinated persons than in unvaccinated persons. However, a full two-dose vaccination does not provide long-term protection. Con-



trary to the “pandemic of the unvaccinated” narrative, fully vaccinated individuals may very well be infectious and spread the virus with increasing probability over time (Mallapaty, 2021, Mizrahi et al., 2021, Singanayagam et al., 2021). Mallapaty (2021) concludes: “Unfortunately, the vaccine’s beneficial effect on Delta transmission waned to almost negligible levels over time”. In addition, Singanayagam et al. (2021) summarise:

“Vaccination reduces the risk of the delta variant infection and accelerates viral clearance. Nonetheless, fully vaccinated individuals with breakthrough infections have peak viral loads similar to unvaccinated cases and can efficiently transmit infection in household settings, including to fully vaccinated contacts.”

## 5. Conclusion: Collective anxiety morality, performativity and ignorance

The rational model of politics is problematic for several reasons in explaining state authorities in the various phases of the Coronavirus crisis. The central problem of the rational model of politics is the assumption that state authorities make strictly evidence-based decisions under pandemic conditions. At the “critical moment” (Bourdieu, 2019) of the pandemic, state authorities act under conditions of radical uncertainty (“whiteout”), i.e., without fixed reference points or roadmaps for rationally justifiable decisions. In the shock moment of the Coronavirus crisis, “simple thinking” (Vobruba, 2019) or “collective dissociation” (using the example of economic actors, cf. Kraemer, 2021a) is by no means widespread only among the population but also among state elites. Nevertheless, the pandemic has made visible what is less manifest in normal times. There is always a gap between the plural (orthodox and heterodox) scientific production of knowledge and the social logic of political decision-making. In the course of the pandemic, this gap has been bridged by the exclusive reliance of policy-makers on influential orthodox (virological and epidemiological-mathematical) experts, while dissenting, heterodox, interdisciplinary experts (e.g., Public Health) have been considered less relevant or even ignored.

However, how do state decision-makers react to this radical uncertainty? State authorities do not want to be confronted with the stigma of failure to act or overextension. Therefore, according to the causal scheme “lockdowns save lives”, they take a multitude of nonpharmaceutical containment measures without knowing if and in which manner these ad hoc measures are at all helpful in the desired way to contain the spread of the virus. As has been critically noted repeatedly in the course of the pandemic, policy-makers are flying blind on data. As a rule, nonpharmaceutical measures are not or only insufficiently justified by a scientific, interdisciplinary evidence review. There is also no solid assessment of the consequences of unintended effects (e.g., school closures) that goes beyond virology expertise and mathematical-physical modelling. The social logic of policy measures follows the principle of social isomorphism, nationally and internationally. Measures that have

been decreed in other countries are adapted nationally and regionally. It follows that in the course of the pandemic, it remains vague which goal (flattening the curve, elimination, mitigation, system protection of intensive care, high level of contamination) is actually to be achieved with which measures.

In the course of the pandemic, it becomes apparent that knowledge about virology and epidemiology can be ambiguous and only preliminary. This virulent evidence problem translates into a manifest decision-making problem for policy-makers. If evidence-based reasons for decision-making are uncertain, then the question of how to organise consent or at least acceptance of the people and willingness to follow up arises all the more. This decision-making problem becomes more acute as soon as the provisional nature of all (non)knowledge about the pandemic leads to a structural and organisational overextension of pandemic management. Examples of those overextensions are contact restrictions in private households that are uncontrollable, mandatory face masks outdoors and private (mobile apps) or governmental reporting systems of positively infected persons and contact tracing strategies, which prove to be increasingly impractical or may even collapse in the course of the pandemic.

The rational model of politics is not helpful in explaining the activities of state authorities under conditions of knowledge gaps. How can we explain state authorities in the Coronavirus crisis beyond the rational model? The final thesis is that state authorities in the Coronavirus crisis are not legitimised by transparent scientific evidence but by symbolic-performative action and activities. This symbolic-performative action aims to justify political decisions of pandemic management in terms of “promissory legitimacy” (Beckert, 2019), to maintain the acceptance of the population and to dispel or delegitimise latent or manifest doubts about the meaningfulness of particular measures. The symbolic-performative action is culturally underpinned by a new collective morality of an “anxiety community” (*Befürchtungsgemeinschaft*, Groebner, 2021, 161). This collective morality is based on a worst-case scenario. It is inspired by the best intentions. It sees all people, even regardless of age, equally threatened by the virus. It urgently warns against excessive optimism in coping with the pandemic and strongly recommends taking prophylactic measures that are as restrictive as possible, while unintended collateral damage of the pandemic policy remains below its perception threshold for a long time. In the course of the pandemic, this collective morality has developed extraordinary discursive power not only among functional elites in politics, science and the media but also in large parts of the population that aligns the social space of legitimacy with the norms of the unconditional “protection of life” (Habermas, 2021). They also place under general suspicion of “egoistic” behaviour and “lacking in solidarity” all those who deviate from an alarmistic judgement of pandemic risks and argue for putting those in proportion to socioeconomic and sociopsychic collateral damage and especially other serious health risks.

Paraphrasing a famous phrase of Max Weber (1958, 280) on the social impact of “world images” – created by ideas – on social orders, this collective morality can be interpreted as a cultural “switchman” of containment measures, thereby providing “tracks” along which political, economic, social and cultural practices can be pursued in a legal and morally legitimate manner in times of pandemic. All other activities are negatively classified as “endangering” public health and, thus, “irresponsible”. Viewed this way, pandemic management can almost be interpreted as the culturally inevitable “no-alternative” institutionalisation of a collective anxiety morality that simplifies the complexity of the pandemic in a complex society and embeds it in an action-guiding, linear-causal explanation of the world. This collective morality appears with a self-referential gesture of superiority, which is justified by the absolute protection of the health of the community of citizens. This suggests that all individuals, with no difference – not even of age and health vulnerability status – are threatened by the virus. Against this background, appeals to citizens' personal responsibility are rejected as *negligent* and *irresponsible*. This collective morality is quick to assign blame (*the unvaccinated*). At the same time, it is linked to the promise of care. It takes on neo-paternalistic-authoritative undertones (on “benevolent paternalism” in the Coronavirus crisis, cf. Münch, 2021) as soon as the inconsiderate are to be nudged into correct behaviour. Nevertheless, the collective morality of the anxiety community is not uncontroversial. In the various phases of the pandemic, collective morality must prove itself again and again. Depending on the course of the infection, it is sometimes more, sometimes less caught in the crossfire of competing value ideas that call for greater consideration of the balance between danger prevention and civil liberties. In other words, pandemic management is continuously put to the test. Such tests can only be successfully overcome if people's trust in the pandemic management of state authorities does not erode (cf. on trust in the countries of the EU, Ahrendt et al., 2021) and, at the same time, the distrust of political elites in the “(un)reason” of citizens does not take over.

In the course of the pandemic, political decision-makers are repeatedly faced with the almost insuperable dilemma of not being able to assess whether (*knowledge problem*) or to what extent individual containment measures are effective (*causality or accountability problem*), which unintended consequences (e.g., economy, education system, mental health) are to be expected and how the emerging conflicts of interest and values should be moderated and decided (*evaluation problem*). Despite these ambiguities and uncertainties, the scientific community, the media and the public expect state authorities to act resolutely and consistently. To avoid the impression of ad hoc activity, hesitation or even disorientation, state actors resolve this dilemma by communicating pandemic management as “effective” and “successful”. Along these lines, Milan et al. (2021, 385) argue that the digital vaccine and immunity certificate (*digital green certificate*) introduced across the EU, for example, is intended to dispel “disbelief regarding existential uncertainty” about

the spread and transmission of the virus, signal safety via one's own immunity status, and "regardless of the efficacy or utility of the actual interventions involved", demonstrate activities to contain the virus, and performatively create an "impression of effectiveness on the part of government, while discouraging critique and resistance". The authors also show that the immunity certification

*"constitutes the production of certainty through performance by using an engineering definition of immunity to achieve the political acceptance of new systems of inclusion and exclusion. By doing so, it also actively distracts both attention and resources from the real goals of protecting people from infection and mitigating the spread of the COVID-19 virus."* (Milan et al., 2021, 385)

In his sociology of the state, Bourdieu (2019) insisted that the symbolic power of state authorities does not emerge from discursive processes of deliberative opinion-forming or even from an evidence-based evaluation of available scientific knowledge. If one follows Bourdieu, then state authorities monopolise symbolic power primarily through performative speech acts. Against the background of the above considerations on the political sociology of the Coronavirus crisis, the question inevitably arises whether "strategic ignorance" (McGoey, 2012, 2019, cf. Moore & Tumin, 1949, Abbott, 2010), not "fact-based" and reflexive expert knowledge, is an effective organisational resource for state authorities to monopolise symbolic power. In times of existential uncertainty, strategic ignorance would then be a "productive" resource to dispel doubts about the effectiveness and proportionality of state measures, to organise consent and to create social silence.

How will the pandemic end? When will society return to a state of normality in social life? Robertson & Doshi (2021) argue that one could learn from the history of pandemics that the end of the current respiratory viral pandemic "will not simply follow the attainment of herd immunity or an official declaration, but rather it will occur gradually and unevenly as societies cease to be all consumed by the pandemic's shocking metrics". Pandemic ending is more of a question of "lived experience, and thus is more of a sociological phenomenon than a biological one." They suggest that an event as extraordinary as the Coronavirus pandemic will be over when we turn off our screens and decide that other issues are once again worthy of our attention. Unlike its beginning, the end of the pandemic will not be televised." Following Bourdieu and McGoey, I have argued that state authorities communicate simple statements publicly and are always right, even when they seem overwhelmed by the biological-social complexity of a global pandemic crisis. This general validity that claims to be able to "contain" or even "control" a pandemic is culturally underpinned by the collective morality of an anxiety community that yearns for security and care. At some point, when all actors are exhausted, the perception of the crisis will gradually shift. Then, the state authorities will herald a return to the old perception of the normality of health risks.

## References

- Abbott, A. (2010). Varieties of ignorance. In *American Sociologist*, 41, 174–189.
- Agamben, G. (2005) [2003]. *State of exception*. Chicago.
- Ahrendt, D., Mascherini, M., Nivakoski, S., Sando, E. (2021). *Living, working and COVID-19: Mental health and trust decline across EU*. (Update April 2021). Retrieved from: [https://www.eurofound.europa.eu/sites/default/files/ef\\_publication/field\\_ef\\_document/ef21064en.pdf?fbclid=IwAR3x6F5HI9xFOq5MaXJJ79\\_U\\_VelQ6zJxzGbSm8c79sxdHNSmKU-FPLrDsU](https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef21064en.pdf?fbclid=IwAR3x6F5HI9xFOq5MaXJJ79_U_VelQ6zJxzGbSm8c79sxdHNSmKU-FPLrDsU)
- Aslam, F., Awan, T.M., Syed, J.H. et al. (2020). Sentiments and emotions evoked by news headlines of coronavirus disease (COVID-19) outbreak. In *Humanities & Social Sciences Communications*, 7, 1–9.
- Bach, M. (2021). Nationalpopulismus und Faschismus im historischen Vergleich. Zur Aktualität von Max Webers Herrschaftssoziologie. In *Berliner Journal für Soziologie*, 31, 81–100.
- Beck, S., Nardmann, J. (2021). Wissenschaftliche Rückendeckung für politische Alternativlosigkeit? Kontroversen um Expertisen in der deutschen Corona-Politik. In S. Büttner, T. Laux (Eds.), *Umstrittene Expertise. Zur Wissensproblematik der Politik* (187–214). Leviathan Sonderband 38.
- Beckert, J. (2016). *Imagined futures. Fictional expectations and capitalist dynamics*. Cambridge MA.
- Beckert, J. (2019). The exhausted futures of neoliberalism. From promissory legitimacy to social anomaly. In *Journal of Cultural Economy*, 12, 318–330.
- Bendavid, E., Oh, C., Bhattacharya, J., Ioannidis, J.P.A. (2021). Assessing mandatory stay-at-home and business closure effects on the spread of COVID-19. In *European Journal of Clinical Investigation*, 51(4), e13484. Retrieved from: <https://doi.org/10.1111/eci.13484>
- Berger, P.L., Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. Garden City, New York.
- Bogner, A. (2021). *Die Epistemisierung des Politischen. Wie die Macht des Wissens die Demokratie gefährdet*. Ditzingen.
- Boltanski, L., Thévenot, L. (2006) [1991]. *On justification. The economies of worth*. Princeton.
- Bourdieu, P. (1990) [1984]. *Homo academicus*. London.
- Bourdieu, P. (2019) [2012]. *On the state: Lectures at the Collège de France 1989–1992*. Cambridge.
- Bourdieu, P., Wacquant, L. (1992). *An invitation to reflexive sociology*. Chicago.
- Britton, T., Ball, F., Trapman, P. (2020). A mathematical model reveals the influence of population heterogeneity on herd immunity to SARS-CoV-2. In *Science*, 369(6505). Retrieved from: <https://doi.org/10.1126/science.abc6810>
- Brusselsaers, N., Steadson, D., Bjorklund, K. et al. (2022). Evaluation of science advice during the COVID-19 pandemic in Sweden. In *Humanities and Social Sciences Communications*, 9 (91). Retrieved from: <https://doi.org/10.1057/s41599-022-01097-5>
- Bulfone, T.C., Malekinejad, M., Rutherford, G.W., Razani, N. (2021). Outdoor transmission of SARS-CoV-2 and other respiratory viruses: A systematic review. In *Journal of Infectious Diseases*, 223(4), 550–561. Retrieved from: [doi.org/10.1093/infdis/jiaa742](https://doi.org/10.1093/infdis/jiaa742)
- Bundesregierung (2020). Kanzlerin Merkel zur Corona-Lage: “Alles dient dem Ziel, die Pandemie dieses Jahr in den Griff zu bekommen”. Retrieved from: <https://www.bundesregierung.de/breg-de/themen/coronavirus/merkel-zur-corona-lage-1841514>

- Capano, G., Howlett, M., Jarcis, D.S.L., Ramesh, M., Goyal, N. (2020). Mobilizing policy (in)capacity to fight COVID-19: Understanding variations in state responses. In *Policy and Society*, 39, 285–308.
- Chemaitelly, H., Tang, P., Hasan, M.R. et al. (2021). Waning of BNT162b2 vaccine protection against SARS-CoV-2 infection in Qatar. In *New England Journal of Medicine*. Retrieved from: [doi.org/10.1056/NEJMoa2114114](https://doi.org/10.1056/NEJMoa2114114)
- Cohn, B.A., Cirillo, P.M., Murphy, C.C., Krigbaum, N.Y., Wallace, A.W. (2021). SARS-CoV-2 vaccine protection and deaths among US veterans during 2021. In *Science*, 4 Nov 2021. Retrieved from: [doi.org/10.1126/science.abm0620](https://doi.org/10.1126/science.abm0620)
- Dehning, J., Zierenberg, J., Spitzner, F. P., Wibral, M., Neto, J. P., Wilczek, M., Priesemann, V. (2020). Inferring change points in the spread of COVID-19 reveals the effectiveness of interventions. In *Science* 369 (6500). Retrieved from: <https://doi.org/10.1126/science.abb9789>
- Der Spiegel (2021). Zahlenchaos beim Impfen. “Systematische Datenerhebung ist politisch nicht gewollt”. Interview mit Gabriel Felbermayr, 18.08.2021. Retrieved from: <https://www.spiegel.de/wirtschaft/gabriel-felbermayr-zu-corona-und-impfen-systematische-datenerhebung-ist-politisch-nicht-gewollt-a-1e5bb73a-7d31-4216-bd4d-38480c433009>
- Der Standard (2020). Sitzungsprotokoll der “Taskforce Corona” über zu wenig Angst in der Bevölkerung. <https://www.derstandard.at/story/2000117131591/sitzungsprotokoll-der-taskforce-corona-ueber-zu-wenig-angst-in-der-ref=article>
- DiMaggio, P., Powell, W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. In *American Sociological Review*, 48, 147–160.
- DiMaggio, P. J., & Powell, W.W. (Eds.) (1991). *The new institutionalism in organizational analysis*. Chicago.
- Drabek, T.E. (2019). *The sociology of disaster: Fictional explorations of human experiences*. Milton.
- Durkheim, É. (1982) [1895]. *The rules of sociological method*, edited with an introduction by S. Lukes, transl. by W.D. Halls. New York.
- Espósito, E. (2007). *Die Fiktion der wahrscheinlichen Realität*. Frankfurt/M.
- FAZ – Frankfurter Allgemeine Zeitung (2020a). Corona-Kommunikation: Wie bringt man den Deutschen bei, wie schlimm es wirklich ist? Retrieved from: <https://www.faz.net/aktuell/politik/inland/corona-wie-bringt-man-deutschen-den-ernst-der-lage-bei-16707527.html>
- FAZ – Frankfurter Allgemeine Zeitung (2020b). McKinsey-Deutschlandchef: “Wir sind der Goldstandard”. Retrieved from: <https://www.faz.net/aktuell/wirtschaft/unternehmen/mckinsey-deutschlandchef-cornelius-baur-die-welt-schaut-auf-deutschland-16775996.html>
- Fligstein, N., McAdam, D. (2012). *A Theory of Fields*. Oxford.
- Ferguson, N.M. et al. (2020). *Report 9: Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand*. Imperial College COVID-19 Response Team. Retrieved from: <https://doi.org/10.25561/77482>
- Glasziou, P.P., Michie, S., Fretheim, A. (2021). Public health measures for covid-19. In: *BMJ*, 375. Retrieved from: <https://doi.org/10.1136/bmj.n2729>
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. Cambridge.
- Goldscheid, R. (1976) [1917]. Staat, öffentlicher Haushalt und Gesellschaft. In R. Hickel (Ed.), *Die Finanzkrise des Steuerstaats. Beiträge zur politischen Ökonomie der Staatsfinanzen* (317–328). Frankfurt/M.

- Gräf, D., Hennig, M. (2020). Die Verengung der Welt. Zur medialen Konstruktion Deutschlands unter Covid-19 anhand der Formate ›ARD Extra – Die Coronalage‹ und ›ZDF Spezial‹. In *Magazin des Graduiertenkollegs Privatheit* (Universität Passau), 14, 14–22.
- Great Barrington Declaration (2020). Retrieved from: <https://gbdeclaration.org/>
- Groeβner, V. (2021). *Bin ich das? Eine kurze Geschichte der Selbstauskunft*. Frankfurt/M.
- Großmann, G., Backenkohler, M., Wolf, V. (2021). Heterogeneity matters: Contact structure and individual variation shape epidemic dynamics. In *PLoS ONE*, 16(7), e0250050. Retrieved from: <https://doi.org/10.1371/journal.pone.0250050>
- Habermas, J. (2020). So viel Wissen über unser Nichtwissen gab es noch nie. Retrieved from: <https://www.fr.de/kultur/gesellschaft/juergen-habermas-coronavirus-krise-covid19-interview-13642491.html>
- Habermas, J. (2021). Corona und der Schutz des Lebens. In *Blätter für deutsche und internationale Politik*, 9, 65–78.
- an der Heiden, M., Buchholz, U. (2020). *Modellierung von Beispielszenarien der SARS-CoV-2-Epidemie 2020 in Deutschland*. Robert Koch-Institut. Retrieved from: [doi.org/10.25646/6571.2](https://doi.org/10.25646/6571.2)
- Hirschi, C. (2021). Expertise in der Krise. Zur Totalisierung der Expertenrolle in der Euro-, Klima- und Coronakrise. In S. Büttner, T. Laux (Eds.), *Umstrittene Expertise. Zur Wissensproblematik der Politik* (159–186). Leviathan Sonderband 38.
- Jungwirth, M. (2021, 26. January). Lockdown nur am Papier. *Kleine Zeitung*, 11.
- Klein, G., Liebsch, K. (2020). Herden unter Kontrolle. Körper in Corona-Zeiten. In M. Volkmer, K. Werner (Eds.), *Die Corona-Gesellschaft. Analysen zur Lage und Perspektiven für die Zukunft* (57–65). Bielefeld.
- Kleine Zeitung (2020). Bundeskanzler Sebastian Kurz: “Bald wird jeder von uns jemanden kennen, der an Corona gestorben ist”. Retrieved from: [https://www.kleinezeitung.at/politik/innenpolitik/5793215/Bundeskanzler-Sebastian-Kurz\\_Bald-wird-jeder-von-uns-jemanden](https://www.kleinezeitung.at/politik/innenpolitik/5793215/Bundeskanzler-Sebastian-Kurz_Bald-wird-jeder-von-uns-jemanden)
- Kraemer, K. (2021a). Kollektive Dissoziation. Wirtschaftliches Handeln im Lockdown. In: S. Lenz, M. Hasenfratz (Eds.), *Capitalism unbound. Ökonomie, Ökologie, Kultur* (111–128). Frankfurt/M.
- Kraemer, K. (2021b). Machtprestige und Wirtschaftsnationalismus – Überlegungen zur symbolischen Ökonomie von Staatseliten. In K. Kraemer, S. Münnich (Eds.), *Ökonomischer Nationalismus. Soziologische Analysen wirtschaftlicher Ordnungen* (73–112). Frankfurt/M.
- Kreps, G.A. (1985). Disaster and the social order. In *Sociological Theory*, 3, 49–64.
- Lederer, E. (2014) [1915]. Zur Soziologie des Weltkriegs. In P. Gostmann, A. Ivanova (Eds.), *Schriften zur Wissenschaftslehre und Kulturosoziologie. Texte von Emil Lederer* (101–130). Wiesbaden.
- Leopoldina – Nationale Akademie der Wissenschaften (2021). “Coronavirus-Pandemie: Klare und konsequente Maßnahmen – sofort!”. Ad-hoc-Stellungnahme Nr. 10, 27. November 2021. Retrieved from: <https://www.leopoldina.org/presse-1/nachrichten/coronavirus-pandemie-10-ad-hoc-stellungnahme/>
- Le Monde (2020). “Nous sommes en guerre”: face au coronavirus, Emmanuel Macron sonne la “mobilisation générale”. Retrieved from: [https://www.lemonde.fr/politique/article/2020/03/17/nous-sommes-en-guerre-face-au-coronavirus-emmanuel-macron-sonne-la-mobilisation-generale\\_6033338\\_823448.html](https://www.lemonde.fr/politique/article/2020/03/17/nous-sommes-en-guerre-face-au-coronavirus-emmanuel-macron-sonne-la-mobilisation-generale_6033338_823448.html)



- Lindemann, G. (2020). *Die Ordnung der Berührung. Staat, Gewalt und Kritik in Zeiten der Coronakrise*. Weilerswist.
- Luhmann, N. (1976). The future cannot begin: Temporal structures in modern society. In *Social Research*, 43, 130–152.
- Luhmann, N. (1995) [1984]. *Social systems*. Stanford.
- Luhmann, N. (1990). *Die Wissenschaft der Gesellschaft*. Frankfurt/M.
- Mallapaty, S. (2021). COVID vaccines cut the risk of transmitting Delta — but not for long. In *Nature*. Retrieved from: <https://www.nature.com/articles/d41586-021-02689-y>
- Mizrahi, B., Lotan, R., Kalkstein, N. et al. (2021). Correlation of SARS-CoV-2-breakthrough infections to time-from-vaccine. In *Nature Communication*, 12, 6379. Retrieved from: <https://doi.org/10.1038/s41467-021-26672-3>
- Matthewman, S. (2015). *Disasters, risks and revelation: Making sense of our times*. London.
- Merkel, W. (2021). Neue Krisen. Wissenschaft, Moralisierung und die Demokratie im 21. Jahrhundert – Essay. In *Aus Politik und Zeitgeschichte*, 26–27. Retrieved from: <https://www.bpb.de/apuz/zustand-der-demokratie-2021/335433/wissenschaft-moralisierung-und-die-demokratie-im-21-jahrhundert>
- McGoey, L. (2012). The logic of strategic ignorance. In *British Journal of Sociology*, 63, 553–576.
- McGoey, L. (2019). *The unknowers. How strategic ignorance rules the world*. London.
- McNeill, W.H. (1976). *Plagues and Peoples*. Garden City.
- Milan, S., Veale, M., Taylor, L. et al. (2021). Promises Made to Be Broken: Performance and Performativity in Digital Vaccine and Immunity Certification. In *European Journal of Risk Regulation*, 12, 382–392. Retrieved from: [doi.org/10.1017/err.2021.26](https://doi.org/10.1017/err.2021.26)
- Moore, W.E., Tumin, M.M. (1949). Some social functions of ignorance. In *American Sociological Review*, 12, 787–795.
- Müller, B. (2021). *Zur Modellierung der Corona-Pandemie. Eine Streitschrift*. Retrieved from: [https://schrapppe.com/ms2/index\\_htm\\_files/Thesenpap8\\_add.pdf](https://schrapppe.com/ms2/index_htm_files/Thesenpap8_add.pdf)
- Münch, R. (2021). Benevolenter Paternalismus: Regieren nach SARS-C. In S. Büttner, T. Laux (Eds.), *Umstrittene Expertise. Zur Wissensproblematik der Politik* (413–432). Leviathan Sonderband 38.
- Neipel, J., Bauermann, J., Bo, S., Harmon, T., Julicher, F. (2020). Power-law population heterogeneity governs epidemic waves. In *PLoS ONE*, 15(10), e0239678. Retrieved from: <https://doi.org/10.1371/journal.pone.0239678>
- No-Covid Strategy (2020). Retrieved from: <https://nocovid-europe.eu/index.html>
- Nordström, P., Ballin, M., Nordström, A. (2021). Effectiveness of heterologous ChAdOx1 nCoV-19 and mRNA prime-boost vaccination against symptomatic Covid-19 infection in Sweden: A nationwide cohort study. In *The Lancet Regional Health Europe*, 11. Retrieved from: <https://doi.org/10.1016/j.lanepe.2021.100249>
- Our World in Data (2022). Retrieved from: <https://ourworldindata.org/coronavirus>
- Popitz, H. (1992). *Phänomene der Macht*. 2nd expanded edition. Tübingen.
- Pfister, S. (2020). Theorising – The social definition of the Corona pandemic. In *The European Sociologist*, 45(1). <https://www.europeansociology.org/issue-45-pandemic-impossibilities-vol-1/theorising-social-definition-corona-pandemic>

- Rhodes, T., Lancaster, K. (2020). Mathematical models as public troubles in COVID-19 infection control: following the numbers. In *Health Sociology Review* 29(2): Special Section on 'Sociology and the Coronavirus (COVID-19) Pandemic', 177–194.
- Rhodes, T., Lancaster, K., Lees, S., Parker, M. (2020). Modelling the pandemic: attuning models to their contexts. In *BMJ Global Health*, 5. Retrieved from: doi.org/10.1136/bmjgh-2020-00291
- Robertson, R., Doshi P. (2021). The end of the pandemic will not be televised. In *BMJ*, 375. Retrieved from: <https://doi.org/10.1136/bmj-2021-068094>
- Romania, V. (2020). Interactional Anomie? Imaging Social Distance after COVID-19: A Goffmanian Perspective. In *Sociologica* 14(1), 51–66.
- Ross, S., Breckenridge, G., Zhuang, M. et al. (2021). Household visitation during the COVID-19 pandemic. In *Scientific Reports*, 11, 22871. Retrieved from: <https://doi.org/10.1038/s41598-021-02092-7>
- Schimank, U. (2015). Modernity as a functionally differentiated capitalist society: A general theoretical model. In *European Journal of Social Theory*, 18(4), 413–430.
- Sebhatu A., Wennberg K., Arora-Jonsson S., Lindberg S. (2020). Explaining the homogeneous diffusion of COVID-19 nonpharmaceutical interventions across heterogeneous countries. In *Proceedings of the National Academy of Sciences of the United States of America*, 117(35), 21201–21208.
- Scharpf, F.W. (1997). Economic integration, democracy and the welfare state. In *Journal of European Public Policy*, 4, 18–36.
- Schmitt, C. (2004) [1922]. *Political theology: Four chapters on the concept of sovereignty*. With an introduction by T.B. Strong. Chicago.
- Schnell, R., Smid, M. (2020). Methodological problems and solutions in sampling for epidemiological COVID-19 research. In *Survey Research Methods*, 14(2), 123–129. Retrieved from: <https://doi.org/10.18148/srm/2020.v14i2.7749>
- Schrapppe, M. et al. (2020). *Die Pandemie durch SARS-CoV-2/CoVid-19 – Zur Notwendigkeit eines Strategiewechsels*. Thesenpapier 6 Teil 6.1: Epidemiologie. Retrieved from: [http://www.matthias.schrapppe.com/index\\_html\\_files/Thesenpap6\\_201122\\_endfass.pdf](http://www.matthias.schrapppe.com/index_html_files/Thesenpap6_201122_endfass.pdf)
- Schrapppe, M. et al. (2020/2021/2022). Adhoc-Stellungnahmen der Thesenpapier-Autorengruppe. Retrieved from: <https://schrapppe.com/ms2/index.htm>
- Scott, W.R., Meyer, J. (1983). The organization of societal sectors. In J. Meyer, W.R. Scott (Eds.), *Organizational environments: Ritual and rationality* (129–153). Beverly Hills.
- Singanayagam, A., Hakki, S., Dunning, J. et al. (2021). Community transmission and viral load kinetics of the SARS-CoV-2 delta (B.1.617.2) variant in vaccinated and unvaccinated individuals in the UK: a prospective, longitudinal, cohort study. In *Lancet Infectious Diseases*. Retrieved from: [https://doi.org/10.1016/S1473-3099\(21\)00648-4](https://doi.org/10.1016/S1473-3099(21)00648-4)
- Spinney, L. (2017). *Pale Rider: The Spanish Flu of 1918 and How it Changed the World*. London.
- Sprenger, M. (2020). *Das Corona-Rätsel*. Wien.
- Streeck, W. (2016). *How will capitalism end? Essays on a falling system*. London.
- Streeck, W. (2021). Wissenschaftlern folgen? Ja doch, aber welchen? In *Frankfurter Allgemeine Zeitung*, No. 8, 13.

- Talic, S. et al. (2021). Effectiveness of public health measures in reducing the incidence of covid-19, SARS-CoV-2 transmission, and covid-19 mortality: systematic review and meta-analysis. In *BMJ*, 37: e068302. Retrieved from: <https://doi.org/10.1136/bmj-2021-068302>
- Tarde, G. (1903) [1890]. *The laws of imitation*. New York.
- Tierney, K.J. (2019). *Disasters: A sociological approach*. Cambridge, UK.
- Vobruba, G. (2019). *Die Kritik der Leute. Einfachdenken gegen besseres Wissen*. Weinheim.
- Vobruba, G. (2020). Einfachdenken in der komplexen Gesellschaft. Das Volk, die repräsentative Demokratie und der Populismus. In M. Endreß, S. Nissen, G. Vobruba, *Aktualität der Demokratie. Strukturprobleme und Perspektiven* (105–155). Weinheim.
- Wachtler, B., Michalski, N., Nowossadeck, E., Diercke, M., Wahrendorf, M., Santos-Hövenner, C., Lampert, T., Hoebel, J. (2020a). Socioeconomic inequalities and COVID-19 – A review of the current international literature. In *Journal of Health Monitoring*, 5 (Special Issue 7), 3–16.
- Wachtler, B., Michalski, N., Nowossadeck, E., Diercke, M., Wahrendorf, M., Santos-Hövenner, C., Lampert, T., Hoebel, J. (2020b). Socioeconomic inequalities in the risk of SARS-CoV-2 infection – First results from an analysis of surveillance data from Germany. In *Journal of Health Monitoring*, 5 (Special Issue 7), 18–28.
- Weber, M. (1949) [1922]. *The methodology of the social sciences*. Translated and edited by E.A. Shils and H.A. Fich, with a foreword by E.A. Shils. Glencoe, Illinois.
- Weber, M. (1958) [1920]. *Essays in Sociology*. In M. Weber, H. Gerth, C.W. Mills, *From Max Weber. Essays in Sociology*. New York.
- Weber, M. (1978) [1921/22]. *Economy and society. An outline of interpretive sociology*, Roth, G., Wittich, C. (Eds.). Berkeley.
- Weber, M. (2001) [1904]. *The protestant ethic and the spirit of capitalism*. Translated by T. Parsons, with an introduction by A. Giddens. London.