



Safe assemblages: thinking infrastructures beyond circulation in the times of SARS-CoV2

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Abstract

The ongoing covid-19 pandemic has prompted discussions, both politically and analytically, that frame its security problematic as an infrastructural dilemma that unfolds between the public health-related need for interrupting the movement of people and calls to keep economic processes of production, distribution and consumption going. Moving beyond this diagnosis, we argue that infrastructural responses to the crisis in the European Union have resulted in the creation and invocation of economic and socio-material assemblages that are expected to steer societies through the crisis, which we term ‘safe assemblages’. In empirical terms, we discuss the cases of the creation of economic emergency funds which we view as economic assemblages that guarantee payment connectivity for struggling businesses, and of the invocation of the ‘home’ as an assemblage that minimises contagion risks while maintaining social connectivity through digital means. In theoretical terms, we suggest expanding current theorisations of the role of circulation in security infrastructures, referring to Foucault, by a consideration of assemblages as a third component that mediates the relationship between circulation and its interruption.

Keywords Assemblage · Covid-19 · European Union · Infrastructures · Political economy · Security

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Introduction

The coronavirus outbreak has generated a number of repeated discourses that oscillate between lockdowns, closing schools and closing borders on the one hand, and debates about (re)opening the economy and ending curfews and travel restrictions on the other. Hence, the most encompassing articulation of the current crisis seems to sound like this: how to minimise physical sociability, in order to relieve medical systems and create a window of opportunity for the development and distribution of anti-virus treatment and vaccines, and at what economic cost. In other words, virus containment measures invariably threaten the economy, whereas economic activity as usual directly threatens public health. Governing the crisis thus takes the form of a dual challenge to (national) public health infrastructure and to economic circulation, both in the European Union (EU) and beyond.

Within literatures on global health and infrastructures alike, the dilemma of crisis governance has mostly been captured as an interplay of disabling and enabling good and bad forms of circulation (Collier and Lakoff 2015; Voelkner 2011; Opitz 2016). As the current crisis has made clear, economic circulation pertains to, and presupposes, not only the circulation of commodities, of capital and the securing of supply chains, but also, and crucially, the mobility of people: commuters and border crossers travelling to work; consumers shopping around; tourists indulging in long-haul travel and intensive social contacts; and business people (and, it has to be added, academics) who travel very long distances in a very short time, meeting very many people. It is this mobility of people in and beyond the EU which political representatives, in unison with public health experts, identify as the major force spreading the virus. Conversely, businesses have been sending SOS messages, warning of a major economic downturn due to large-scale lockdowns of shops and restaurants, decreased demand for commodities, stalled global travel activity, the interruption of supply chains and the closure of production plants. While these detrimental effects present themselves as seemingly irreconcilable dilemmas for political decision-makers, we argue that these debates have so far overlooked the development of new structures that are central to managing the pandemic.

Below we propose an alternative perspective on the governance of the current global pandemic by foregrounding the emergence of new formations that have been largely neglected in debates on security arrangements in public health and in the political economy. Moving beyond research on infrastructural circulation, which, echoing Foucault, has long debated the relationship between different forms of circulation and how circulation and its interruption might be seen as a single play, we argue that it is particular economic, social and socio-technical forms, which we will term *assemblages*, that require increased attention in order to understand how infrastructures are put to work in crisis governance. Thus, much like the logic of stockpiling intervenes in the play of circulation and its interruption—like when states create food stocks, fuel storages, or nowadays stockpiles of medical equipment as assemblages of things to be used as a last



reserve when scarcity makes circulation stutter (Folkers 2019)—we argue that the current covid-19 pandemic has brought about economic, social and material assemblages that crucially inform the interrelation between circulation and interruption. In order to demonstrate that the logic of assemblage is a generalisable response of strategies to govern the covid-19 crisis beyond the circulation of medical items, vaccines and vaccination equipment as well as beyond the interruption of contagion dynamics, we focus on two assemblages created, invoked and put into effect in the European Union in order to govern the pandemic: economic funds legally created to support crisis-struck companies suffering from reduced sales of services and products, so that they can get through the crisis; and the invocation of ‘home’ as strategically positioned in the fight against the pandemic, with the dual task of reducing the physical mobility of people and creating a social constituency that will safely steer society through the pandemic.

In a nutshell, we argue that the analysis of security infrastructures not only has to transcend the juxtaposition between circulation and its interruption, seeing the two instead as flip sides of the same coin, but also has to be extended with an analysis of a third component beyond circulation and interruption. For it is precisely this third component which, since the outbreak of the pandemic and in the exemplary forms of financial emergency funds and the ‘home’, is supposed to provide *safety*, that is, economic, social and emotional (and ultimately political) trust, reliability and confidence—hence our suggestion to term that third infrastructural component ‘safe assemblages’. We will conceptually develop this notion through a three-step discussion of Foucauldian inspirations in the theorisation of security infrastructures, especially public health. Our discussion will bring into conversation viewpoints debating the relationship between circulation and interruption that foreground the relationship between differently marked forms of circulation, and from there we will develop the argument that Foucault’s view on security infrastructures after *Discipline and Punishment* invited a contemplation of the role of socio-material assemblages that co-constitute the interplay of different forms of circulation. We will then transpose this triadic model of security infrastructure—consisting of circulation, containment and assemblages—from Foucault’s example of the delinquent milieu as an unsafe assemblage to today’s invocation of financial funds and the home as ‘safe’ assemblages.

Empirically, the paper refers mostly to political reactions to the covid-19 crisis by the EC and by the German government in the months following March 2020, when crisis response in Europe took shape. While the EC’s communications are a self-evident source for this article, given the economic interdependencies within the EU, communications by the German government are analysed because Germany displays a highly differentiated case of crisis management. As Germany is the political economy that profits most from European market integration and economic circulation, it can be expected that the measures it has taken respond to a particularly sensitive (maybe bordering on alarmist) assessment of the pandemic’s impact on economic circulation. Based on different forms of infrastructural governance we develop an analytical envisioning of a form of life that might be emerging from the covid-19 crisis as societally valued, and politically and economically privileged.



The paper is structured as follows. In the next section, we will engage in a conceptual discussion of contributions to studies on infrastructural security (with a particular focus on public health infrastructures) that have brought up questions on the role of circulation, differentiations of circulations, and their interruptions. The aim of this section is to demonstrate that the present pandemic challenge can be related to this discussion in terms of a rising order of analytical levels: first, in terms of a juxtaposition of circulation and its interruption; second, in terms of a distinction made between different types and desirabilities of circulation; and third—which will be our contribution to that debate—in terms of the production or creation of immobilities and fixities as structured assemblages that inform the infrastructural functions as challenged by the pandemic. This latter suggestion will in particular rely on a reading of Michel Foucault's notion of 'system of incarceration' that we combine with Andreas Folkers' research on stockpiling as an infrastructural strategy.

The third section will dissect the two examples that we have picked for this paper, namely, the polity-led creation of economic emergency funds for struggling enterprises, both at the EU level and by the German government, and the public focalisation on the 'home' as a crucial site to govern the pandemic, not only through interruptions or substitutions of social circulation, but also through the production of 'home' as a social substrate to which particularly strong expectations regarding the governability of the crisis are attached. The fourth section concludes the paper by summarising the main conceptual and empirical results of the discussion and hypothesising the advent of a renewed form of liberal life, epitomised in the 'home', which hinges not only on circulation but also on *connectivity*, understood as the parallel and strategically potential (that is, not always realised) accessibility of crucial infrastructural services that, however, come with infrastructural demands (such as being prepared to work at home).

Theorising infrastructures beyond circulation: good circulation, bad circulation, and safe assemblages

At first glance, there seems to be a more or less clear conceptual juxtaposition between the enabling of economic flows and circulation (often discussed in an idiom of globalisation and transcendence of borders) and the containment of a pandemic, to which sporadically (but more so in the current situation) a conceptual apparatus of 'state of exception' or 'state of emergency' has been applied. Most radically, this latter approach has manifested itself in Giorgio Agamben's (2020) much discussed notion of the 'camp' as containing human beings and reducing them to a condition of 'bare life', stripped of all political and civic rights and under total control—an argument that has, scandalously directly, been taken up by protest movements against the lockdown measures, such as the 'Querdenker' movement in Germany, wherein individuals wearing Yellow Stars in a bid to appropriate the positions of the victims of the Holocaust have been spotted.¹

¹ <https://www.washingtonpost.com/world/2020/12/09/germany-coronavirus-protests-radicalization-surge-illnace/> (last accessed on 17 August, 2021).



However, a burgeoning literature on infrastructure has pointed out that this conceptual juxtaposition might erase more subtle entanglements of the state of emergency and the necessity to secure flows, circulation and traffic (Aradau 2010; Meiches 2015; Opitz and Tellmann 2015; Nolte and Yacobi 2015). For instance, Collier and Lakoff (2015) argue, for the example of the concept of ‘vital systems security’, that scenario planning in the US regarding potential pandemic dynamics targets the functionality of infrastructures held to be vital for the governance of state and society, including not only public health infrastructures but also those for scientific research, business (notably, pharmaceutical companies and their interaction with government authorities), and government itself:

A number of ‘pandemic preparedness’ initiatives were established that employed tools of vital systems security. These included: syndromic disease surveillance programs that, in contrast to classical epidemiological case reporting, could detect the onset of an unanticipated disease event (Fearnley 2008); the smallpox vaccination program, which sought to immunise first responders against a bioterrorist attack (Rose 2008); federal investment in biotech to develop drugs and vaccines against anthrax and other ‘select agents’; and plans for the smallpox vaccination program in the event of a deadly mutation of the bird flu virus, which included advanced contracts between the US government and drug companies to guarantee an adequate vaccine supply in the case of a deadly outbreak. (Collier and Lakoff 2015: 44)

Hence, according to the authors, ‘it is crucial to distinguish between the Schmittian state of exception and the government of emergencies through the techniques of vital systems security’ (Collier and Lakoff 2015: 45). While state of exception theories foreground the suspension of democratic routines and rights, the notion of ‘vital systems security’ does not necessarily invoke a total control and lockdown of large segments of the population or the suspension of routine political procedures, and thus ‘hardly threatens the pillars of liberal government’ (Collier and Lakoff 2015: 46; for a similar argument, see Amoore 2013).

The shift towards securing circulation has also been emphasised within the field of global health (Elbe 2009). Christian Enemark (2017) argues that during the Ebola outbreak in West Africa in 2014, cross-border circulation of medical professionals was ensured while mass quarantine was enforced on parts of the population. Nadine Voelkner’s account relating to Burmese migrant communities in Thailand highlights the ‘productive interplay of a range of human and non-human elements’ in the governance of ‘pathogenic circulation’ (Voelkner 2011: 253). Sven Opitz (2016) describes how preparation planning by international organisations such as the WHO does not only use a range of technologies to control the spread of disease but problematises materialities of global traffic: infrastructures and objects of mobility are the main concern of WHO’s International Health Regulations (IHR), which outline the preparations for a global pandemic and have been amended after the first SARS pandemic (ibid.: 265). These scenarios seek to handle the ‘problem space’ of infrastructures by taking measures against the mobility of people, but enabling the circulation of goods. They also envision the use of technologies such as thermal screening to single out carriers of disease and prevent its spread while reducing



interferences with trade and traffic to a minimum. Actual responses to the current pandemic however have shown that these imaginaries of liberal government have not stood the test of time: as public health offices in Europe quickly reached the limits of their capacities to trace contagion, whole populations have been repeatedly involved in measures directed at slowing down the pandemic, mostly referred to as 'lockdowns'. Accordingly, crisis response measures in many European societies and beyond have involved the immobilisation and isolation of almost the entirety of the population, rather than select groups which could be directly targeted. Government measures around the globe thus include severe restrictions on individual movement enforced by the police and sometimes even the military.

To add another complication to the analysis of Collier and Lakoff, the situation is not just one of an acute public health crisis. Economic processes, not only processes of state-focused 'liberal governance' of public health or the pharmaceutical industry, also appeared, meaning that the perceptions of the current crisis have a dual centre. Supply chains that used to function smoothly were disrupted. The closing of a single factory in a Chinese province led to shortages of medicine and other urgently needed goods. When just-in-time delivery failed, Europe's lack of storage and its inability to produce critical items became an issue of national security. The European Commission thus announced assistance to European manufacturers to increase the output of personal protective equipment and also made exports of such equipment destined for outside the European Union subject to an export authorisation by member states.²

The issue is thus not only how to govern a crisis of public health and ensure the security of the health system and the population, but also to accommodate the potentially devastating economic effects of that crisis. What comes to the fore is a tension between, on the one hand, an imaginary of smoothly functioning infrastructures that can be planned, which are characteristic of the modernist infrastructural imagination (Larkin 2013; Angelo and Hentschel 2015) and which the concept of 'vital systems security' never leaves behind, and on the other hand a dual threat to the security of such systems coming from the involvement of entire populations in the crisis that creates detrimental effects for the political economy. Observing responses to the covid-19 crisis thus calls for a renewed conceptual approach to the notion of infrastructure as a decisive conceptual component of vital systems security.

This is what the present section is tasked with. We will first argue that the focus on infrastructures allows us to maintain the important analytical focus on the *securing* of flows, intercommunication and exchange, while also accounting for the most dominant aspects in the current pandemic: the *interruption* of flows, intercommunication, and exchange which is framed as vital for the survival of contemporary societal forms of life. Second, we will add to the interruption of circulations for which the infrastructural perspective enables us to see the motif of the distinction between *different types of circulation*, which usefully complicates any simple juxtaposition between circulation and interruption. While these perspectives have been already, at least partly, suggested in the research literature following Foucault's understanding

² https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/public-health_en (last accessed on 17 August, 2021).



of the security of populations through circulation, we will add another conceptual differentiation to the discussion, arguing that what requires more attention is the dynamics and potentialities of what we refer to as ‘assemblages’—social milieus, storages, funds—that emerge as effects of the dynamism of security infrastructures between circulation and confinement.

From circulation to interruption and confinement

In Collier and Lakoff’s (2015) account of the security of vital systems infrastructure, they focus on the dimension of circulation, while largely omitting the dimensions of interruption and containment. Arguably, this tendency inscribes their article into a burgeoning literature on ‘critical infrastructures’, which often foregrounds the functionality of critical infrastructures as lying in their circulative capacities (on the example of financial markets, see Muellerleile 2018). Yet, it might also have to do with their reading of Foucault, which focuses on the biopolitical grounds of liberal governance. In the first volume of the *History of Governmentality*, Foucault (2007: 66) envisages biopolitical governmentality as a power mechanism that works differently from both sovereign law and disciplinary social control, arguing that liberal governmentality is all about the enabling and channelling of flows and circulations. Yet, Foucault also warns on various occasions that it would be a misunderstanding to conceive of the relationship between the three modalities of power as one of mutual exclusivity, as Collier (2009) himself suggests in an earlier contribution. A Foucauldian approach, instead of explaining the constellation ‘in terms of’ biopolitics and liberal governmentality alone, will thus ask about the features—or, as Collier put it, the ‘topology’ (2009)—of this seemingly contradictory entanglement. This requires adding the rationality of interruption and containment to a notion of infrastructure that mostly focuses on circulation, and thus the rationality of biopolitical governmentality. Such a conceptualisation is the first and indispensable step to dissecting the peculiarity of the present public health *and* political economic crisis constellation, as a constellation in which seemingly contradictory infrastructural rationalities, such as of circulation and flow and of interruption and containment, become mutually entangled.

This argument is conceptually supported by Foucault’s work on the prison complex. To begin with, it should be pointed out that even from a purely governmental perspective, for Foucault (2007) circulation does not necessarily exclude the possibility of impeding the ‘natural’ operation of flows were this not desired (see the next subsection). Still, it is helpful to demonstrate how his earlier work on the disciplinary modality of power might be understood in terms of security infrastructure, underscoring certain facets absent in his later theorisation of security as governmentality (Foucault 2007). In *Discipline and Punish*, Foucault (1995) analyses institutions of incarceration and containment which, according to him, herald a new rationality of social control. It targets the potentially deviant and delinquent individual as the site where control is executed through disciplining the body: through isolation, exercises, testing, and categorisation into groups. With a view to the notion of infrastructure, one might argue that the modern prison (along with the boarding



school, the hospital, the asylum, the barracks, etc.) serves as a material infrastructure that not only enables new concrete forms of social conduct but also claims total relevance for a given society—much like other infrastructures do, according to the ‘infrastructural imaginary’ of modernity (Larkin 2013). The prison is, so to speak, a permanent possibility to resort to if necessary, thus becoming a standing, if often neglected and denied, feature of the infrastructural setup of modern societies (see Fassin 2018). Moreover, according to Foucault, the prison and other institutions of incarceration, notwithstanding the immobilisation they effect, are part of institutional networks that enable social transitions and mobility. The ‘carceral’ (Foucault 1995: 293) does not end at the prison’s gate, but involves the police, informants, social workers and ultimately the social milieu of ‘delinquent’ groups among which a certain form of circulation and exchange is enacted. The prison serves as an institutional pole for effecting the movement of individuals between their social milieus and the prison through entanglements with different components of the authorities. The prison, in other words, moves *and* immobilises individuals, and urges *and* interrupts their flow. Applied to the present pandemic condition, the conceptual question resulting from this discussion is how the enabling or safeguarding of circulation corresponds to restrictions and immobilisations as its flip side.

Distinctions between infrastructural circulations

The close entanglement of flows and immobilisations leads to the second complication of the conception of modern security infrastructures as privileging circulation. As Claudia Aradau has noted, modern security thinking is based on a differentiated understanding of legitimate and illegitimate mobilities: ‘Within the physiocrat political economy, governing circulation entailed the integration of populations within productive circuits of capitalism and the proscription of “mobs” that were not part of the processes of capitalist production and circulation’ (Aradau 2016: 569). This conception of a duality of legitimate and illegitimate circulation, which must therefore be controlled and restricted, can also be found in contributions to research on infrastructures in the ‘new mobilities paradigm’ (Sheller and Urry 2006). Recent suggestions in critical security studies have referred to this body of literature, aptly arguing that ‘while contemporary liberal politics actively encourages and enables mobility for the sake of our modern lifestyle and the economic benefits that it yields, it also seeks to render the flows of such mobility knowledgeable and controllable’ (Beauchamps et al. 2017: 1). From the perspective of security studies, the gist of the ‘new mobilities’ literature is a notion of mobility that does not equal that of movement alone (see also Aradau 2016), but also entails stationary components (like, for instance, infrastructures supporting air, rail and road travel) and, crucially, accounts for the effecting of immobilisation as a flip side of the enabling of movement. Hence, rather than claiming a general tendency towards more mobile societies (as in Sheller and Urry 2006), the ‘new mobilities’ research emphasises the complex entanglement of movement, stationariness, and immobilisation, as in Tim Cresswell’s (2010) formulation of ‘constellations of mobility’. For instance, Guittet (2017: 212) points out that research on migration and securitisation is an apt example of the uneven



politics of mobility, as infrastructures are not encountered equally (Pallister-Wilkins 2019; Cowen 2014; Nolte and Yacobi 2015). Refugees and migrants have been unable to use the same pathways and means of travel that privileged business people's, academics' or tourists' use. While infrastructures provide the means to travel fast and smoothly for some, they might become a dead end to others. Under pandemic conditions, the uneven access to infrastructural functionality and its double function as enabling and inhibiting mobility have become more apparent to groups of people who are used to frictionless travel and just-in-time delivery. Yet, one should not generalise from their (usually privileged) experience that mobility and immobilisation exclude each other, because the production of the one, as of the other, hinges on the distinction between legitimate and illegitimate forms of circulation.

Applied to the present pandemic condition, the distinction between legitimate and illegitimate sorts of circulation turns out to be much more complex than, say, a simple confrontation of desired economic flows with undesired viral spread. Discussing the effects of variolisations and vaccinations against smallpox in France and Britain at the turn of the 19th century, Foucault (2007: 59) argues that these new measures, especially the former,

did not try to prevent smallpox so much as provoke it in inoculated individuals, but under conditions such that nullification of the disease could take place at the same time as this vaccination, which thus did not result in a total and complete disease. With the support of this kind of first small, artificially inoculated disease, one could prevent other possible attacks of smallpox.

The logic of valorisation and vaccination thus followed the trajectory of circulation of the virus itself in order to forestall it (a point that in research in the wake of Foucault has been debated as the logic of 'preemption'—see Bröckling 2012). The relationship between legitimate and illegitimate circulation thus further adds to the complexity of security infrastructures—already characterised by the simultaneity and complementarity of circulation and interruption—as it invokes the task of finding the hinge through which legitimate and illegitimate forms of movement define and constitute each other. In the present condition, for instance, contact-tracing applications on mobile phones are led into the battle against covid-19 as a form of what is proclaimed legitimate—although not uncontested—digital circulation that is meant to cancel out the effects of the illegitimate circulation of the virus through exactly replicating the pattern of the virus's mobility. Moreover, since these applications and their technologies rely heavily on the means of the tech industry, the virus circulation's illicitness indirectly equips that industry with legitimacy.

From infrastructural circulation and interruption to infrastructural assemblages

In this section, we suggest an understanding of infrastructural governance that goes beyond a focus on (the distinction between good and bad) circulation that has also been guiding for the analysis of governmental interventions under the rubric of quarantine. The current understanding of quarantine employs concept of suspicion based on spatial proximity, as Sven Oritza describes:



In this governmental logic, the attribute of the ‘social’ has become tantamount to nothing more than material connections. Quarantine, is applied to potential carriers of contagious disease who have been in contact with actual carriers and whose potential for establishing connections with other bodies shall be interrupted. It provides for moments of disconnectivity by means of spatial separation until bodies can, again, be securely released into circulation. (Opitz 2016: 276)

Opitz engages with Foucault’s genealogy of liberal government as it emphasises the inherent connection between political rationalities, space and infectious disease and thus allows an understanding of the entanglement of circulation and its interruption. Moreover, it allows a focus on a consequence of the entanglement of circulation with interruption and of the orders of circulatory (il)legitimacy that has so far gone largely unnoticed, since it mainly entered the analytical optic as a ephemeral entity, namely the formation of assemblages. Let us first note that Foucault regards the prison as part of an infrastructure which, through the play of arresting and circulating of marginalised groups (‘delinquency’), creates this social milieu in the first place. Foucault points to the emergence of a ‘type of existence’ (Foucault 1995: 266) and a ‘definite milieu’ (ibid.: 277) of delinquency from infrastructural dynamics that combine circulation and confinement. From this we take the inspiration to conceptualise infrastructures as being formative of social and material assemblages that combine a multiplicity of activities and functions related to social control. For instance, taking the foundation of a youth confinement centre at Mettrei in 1840 as an early example of the ‘system of incarceration’, Foucault notes that ‘[t]he small, highly hierarchised groups, into which the inmates were divided’ combine in themselves five different social ‘models’ (ibid.: 293): the ‘family’ with its generational power differentials; the ‘army’ with its practices of subordination and order; the ‘workshop’ aiming at organising production; the ‘school’ with its emphasis on education; and the ‘judicial model’ that insists on its prerogative to distinguish between right and wrong behaviour (ibid.: 293–94). For Foucault, the point about the projection of these five ‘models’ on one single local social constituency is twofold. On the one hand, it differentiates the ambitions of disciplinarity into ‘technical elaboration and rational reflection’ (ibid.: 295). On the other hand, it interconnects the constituency thus disciplined with other, related disciplinary institutions in society through the continuity of its disciplinary technology across institutional domains—that is to say, through ‘all the disciplinary mechanisms that function throughout society’ (ibid.: 298).

We suggest reading Foucault’s historical reconstruction of systems of incarceration as a further complication of the conception of security infrastructures as solely based on circulation. The formation of a strictly disciplined, localised and immobilised social assemblage at Mettrei is the precondition for fabricating strings of multiple, actual and potential future disciplinary relationships that will circulate the individuals of these assemblages through the ‘great carceral network’ (ibid.). In other words, it is not enough to add to an understanding of security infrastructures as solely relying on circulation, and safeguarding it, with the moments of the interruption of flows and the distinction between different forms of circulation by dint of the (il)legitimacy attributed to them. It is crucial to also consider the formation of assemblages that are not merely characterised by their immobility and confinement



(as opposed to circulation), but whose immobility and confinement are the precondition for regulating present and potential future flows of circulation.

To be clear, we are not arguing that Foucault's work on the system of incarceration should be substantially applied to the current lockdown measures, as if these could be interpreted as an instance of a 21st century 'system of incarceration'. Instead, we contend that this work harbours the important conceptual implication that an analysis of the security infrastructures meant to govern the current pandemic ought to include a perspective on the assemblages that are formed through the play of circulations, their interruptions, and their differentiated legitimacies, and that ought to be regarded as infrastructural capacities in their own right. The term 'assemblage', as it refers to Bruno Latour and Actant Network Theory, announces that what is at stake here are not only social but also material, technological and economic formations. Analysing the formation of camps intended to host members of the Roma community in Italy as a consequence of what was termed an *emergenza nomadi* in Italian politics in 2011, Ana Ivasiuc (2019: 371) refers to Latour's notion of 'assemblage' in order to describe how 'Roma camps became, from matters of fact—materiality requesting interpretation *away* from itself—complex matters of *concern* holding at once the materiality *and* its representations in one single "thing" around which a constellation of objects mediates complex negotiations between various actors, perpetually fabricating the camp and its inhabitants as ontologically dangerous'. Assemblages thus can be understood as consequences as well as vehicles and 'concerns' of political security agendas.

However, we suggest that security-related assemblages may not inevitably materialise as harbours of insecurity, but on the contrary, of security and safety. With respect to infrastructures, Andreas Folkers (2017) has argued that the general notion of modern infrastructures, and their tendency to overemphasise circulation, must be reconsidered in light of states' practices of stockpiling, that is, the concentration and accumulation of material substances deemed vital for the safeguarding of society and the continuation of the state under conditions of anticipated crisis. The stockpiling of grain, fuel, water, medical equipment and medicines has been a key infrastructural ambition of modern states in order to provide for security and control in times of shortages caused by wars, natural disasters, economic downturns, or social unrest. In the current pandemic, the logic of, in Folkers' metaphor, the 'hoard' has functioned as an important catalyst of national and international debates and conflicts, and has overall proven to be a major point of reference for the institutionalisation and legitimisation of security infrastructures. Notably, the circulation and distribution of medical kits like face masks and vaccines has been discussed in terms of states 'securing' access to those items, bringing to the public consciousness the constitutive role of accumulation as preceding circulation and distribution. This approach shows that circulation, often identified with infrastructure as such, crucially depends on the existence of centres that assemble (existentially) valuable goods—a point that might easily be extended to the assembling of service, like in the current pandemic where the establishment of vaccination centres, low-temperature vaccine storages, and the stockpiling of medical equipment is a precondition for being able to 'circulate' the vaccines. Moreover, it demonstrates that security-related assemblages need not necessarily become the site of threat perceptions, but on the



contrary, projection screens of security and safety. It is for these reasons that we suggest directing the analytical attention to infrastructural assemblages that are publicly framed not as security problems, but on the contrary as solutions to these problems.

To conclude this section, we suggest an intensified contemplation of a Foucauldian approach to circulation and assemblages in the area of security infrastructures, viewing the recursive effects between circulation and their interruptions and among differently legitimate forms of circulation together with the formation of assemblages from those dynamics. Furthermore, while Foucault spelled out these effects with a view to assemblages that were held to be *problematic* by contemporaries, like the milieu of delinquency in which the prison was strategically involved, we apply that analytical strategy to the formation of assemblages that are presently seen as *safe*, being equipped with the promise of steering societies out of the pandemic. This is the concern of the next section.

Safe assemblages in the infrastructural governance of the covid-19 pandemic

In this section, we provide empirical observations that support our conceptual arguments. First, we discuss the political-economic responses that were initiated both at the EU level and by the German government that take the shape of economic emergency funds for struggling enterprises. We then turn to the remarkable public focalisation on the ‘home’ as a crucial site to govern the pandemic in its capacity to interrupt and substitute social circulation and as a corona-inspired liberal form of life where safe assembles converge.

Political-economic responses

Political interventions to counter the effects of the corona crisis have been remarkably similar to those that have countered the financial crisis of 2008–2009. While during the financial crisis, the maintenance of liquidity aimed to counter the immediate effects of the financial meltdown (see Langley 2015; Westermeier 2018), in the covid-19 crisis, they aim at the consequential economic damages of public lockdowns. The unprecedented action taken by many national governments, as well as coordinated European efforts that have been worked out by the Eurozone finance ministers,³ have aimed to maintain financial flows that have run dry because businesses had to close, production was suspended, and consumption plummeted. Differing financial instruments have been mobilised to do so: credit schemes, securities of loan defaults, but also direct support for businesses and struggling households.⁴

³ Eurogroup, Report on the comprehensive economic policy response to the COVID-19 pandemic, available at <https://www.consilium.europa.eu/en/press/press-releases/2020/04/09/report-on-the-comprehensive-economic-policy-response-to-the-covid-19-pandemic/> (last accessed on 9 April, 2020).

⁴ See, for instance, Ursula von der Leyen’s speech to the European Parliament on 26 March, the declaration of the governments of the G-0 member states on the same day, or the video statement by German Chancellor Merkel on the same day.



Upholding financial flows is supposed to compensate for economic actions that have been suspended or, in other words, financial circulation is engendered with the intention to alleviate the consequences of the stalled circulation of people and goods.

As state actors use financial markets for these emergency purposes, they advance the ‘infrastructural power’ of financial markets themselves (Braun 2018). Especially within the last decade, state actors and more crucially central banks have developed tools to govern through markets to achieve their policy aims. Several issues that remained open within the financial and Eurozone crisis have now reappeared, such as the implementation of Eurobonds, or ‘Coronabonds’, in order to help Southern Europe cope with the costs of the crisis. Political commentary holds that, because the securing of financial flows from governments or the EC to businesses and employees will have to be financed through sovereign bonds, the ECB will be in a similarly powerful role of the ‘lender of last resort’ as in the recent government debt crisis.⁵

Therefore, in hindsight, some of the emergency measures to save the economy in the current period seem to have been developed and tested during the global financial crisis that started in 2008. This applies, in particular, to de facto state guarantees for struggling businesses. During the financial crisis, these guarantees or ‘umbrellas’—most of which did not have to be resorted to in the final instance—served as security for the financial creditworthiness of downgraded government bonds, and of the Euro currency. In other words, their logic of rescue was one of *providing collateral* as a means to produce trust in financial markets. With a staggering amount of over 1.8 trillion euros in their Pandemic Emergency Purchase Programme (PEPP), the European Central Bank provided early signals to create a financial stockpile that would reanimate interrupted financial flows. A very similar mechanism, aimed at creating confidence through the provision of collateral, might actually be at work in the current financial guarantees for businesses. Apart from the question whether these funds will eventually be fully tapped or not, they are meant to create immediately an atmosphere of confidence. The current crisis is thus another indication of an observation made in financial geography (Muellerleile 2018) that the societal importance of financial operations cannot be reduced to the usual economic functions, like risk hedging or capital raising. In the crisis constellation under study here, the government and EU-wide funds offered to struggling businesses follow the infrastructural logic of finance to some extent: they provide an economic guarantee that can be financially deciphered as the invocation of a ‘last resort’. Prior to any single government payment made to businesses in financial disarray, the mere announcement that these funds were available sent a signal to (financial) markets worldwide. Thus, analogous to the way that sovereign bonds provided an anchor for the possibility of financial security, with the government serving as the ultimate guarantor of financial collateral (Boy 2015), the government emergency funds serve as a signal of stability to the global political economy.

⁵ See commentary in *Sueddeutsche Zeitung*, online edition, 10 April, 2020, available at <https://www.sueddeutsche.de/politik/eu-corona-hilfspaket-1.4873612> (last accessed on 17 August, 2021).



While the economic support by national governments and the European Union appears as a simple compensation for interrupted financial flows, it is similarly guided by the logic of, in Folkers' metaphor, a 'hoard' that will enable circulation in the future. The funds are safe assemblages (of financial support, together with rules that govern eligibility) meant to effect relief to an economic crisis due to stalled economic circulation. This pertains, not least, to measures aiming at feeding confidence into financial markets, which (like in the 19th century) bridged the gaps created by obstacles in commodity circulation due to protectionist policies—another example of a safe assemblage (of optimistic investors). A necessary condition to enhance financial flows to compensate for estimated losses and to anticipate future income is economic connectivity, that is, the accessibility of payments even during a severe economic crisis.

While large parts of economic life were restricted as measures of containment against the spread of the virus, financial stockpiling guaranteed a minimum of economic stability as it ensured that government payments could substitute for the lack of consumption. While the mobility of commodities and persons was highly restricted, financial infrastructures sustained the global circulation of money and debt, through contactless payments, the disbursement of government aid, the granting of loans, as well as through monetary policy.

While the safeguarding of 'the economy' through the stockpiling and provisioning of financial means, enabling struggling businesses to continue receiving payments, thus rested on a specific economic form of connectivity, the political responses to the pandemic also pertained to the ways that individuals and families could make their way through the crisis. Here, another form of connectivity prevailed, namely, digital connectivity. The technical availability of fast and differentiated internet services, which politically is increasingly seen as a precondition for handling the crisis (owning a smartphone, having reliable internet access, etc.), enabled the creation and stabilisation of a type of safe assemblage. We will argue that this assemblage, enabled through digital connectivity, is currently consolidating as a form of life.

Secure liberal life—work from home

This subsection reconstructs the 'home' as a corona-inspired liberal form of life where the tendencies to create safe assembles discussed in the last subsection converge. It conceptually refers to Lobo-Guerrero's (2011) discussion on the early modern emergence of a liberal form of life in bourgeois households, which were able to maintain and refine lifestyles and subjectivities, and turn them into a social milieu, on the basis of the circulation and assetisation of insurance capital. These early modern households emerged from a combination of the circulation of insurance-related capital and a transformation of potential future economic flows of the insured life in loanable assets (that is, securities enabling credit). In other words, economic circulation and the locking in of rights to economic assets entered into a connectivity with each other that enabled a milieu assemblage. In a conceptually similar vein, we argue that the 'home' in the time of covid-19 emerges as the substrate of an



assemblage enabled by connectivity, where connectivity is understood as a capacity to calibrate the relation between circulation and its interruptions, feeding into the formation of the safe assemblage of ‘liberal life’.

The request to ‘work from home’ is currently repeated ad nauseam in politics, media and private communications as an inevitable consequence of the covid-19 crisis.⁶ This invocation provides a cue for how structural logics of containment, circulation and assemblage are bound, to secure not only individual behaviour and the dynamics of populations, but also a way of being in the social world that is regarded as fundamental in contemporary societies. Looked at from a historical perspective, ‘working from home’ realigns two spheres of social activity that bourgeois modernity tried to keep apart: the ‘private’ home and the ‘public’ office (not in the sense of a political public office, but in the sense of a commercially gainful occupation: see Habermas 1989). In the current covid-19 crisis constellation, the drastic invocation to work from home, turning matters of the everyday handling of contradicting demands (child rearing, schooling, gainful employment, etc.) into issues of public health security and public wellbeing, heralds a fundamental shift in the ways that lives are imagined, which cannot be reduced to the diagnosis of a neoliberal delimitation of commercial rationalities into private lives alone.

Thereby, current requests to work from home serve as valuable empirical entry points into the analytical envisioning of a form of life that might be emerging from the covid-19 crisis as societally valued. On the one hand, working from home is a notion that trivially presupposes a home, yet also a gainful occupation. In this regard, it replays that classical bourgeois imaginary of an interrelationship between (private) home and (public, commercial) office. Yet, at the same time, it adds the dimension of a permanent connectivity between home and office: working from home is possible only under the condition that its practitioner is within reach of communication from outside the home (which is nowadays usually equated with having access to the internet). Moreover, the pattern of being at home while being more or less permanently connected to some institution is typical not only of someone with a commercial home office, but also of a school child and school teacher exposed to online teaching, a pregnant woman interacting with her midwife, a sick person who is called upon to first call the doctor before seeing them, and of course an online shopper who is currently boosting Amazon’s balance.

Luis Lobo-Guerrero (2011) termed the early modern emergence of a social milieu of commercial traders the birth of a ‘form of life’. He argues that early forms of trade capitalism in Europe were articulated through a connection between the commercial insurance of trade investments (for instance, through overseas trade insurances) and the private securing of early bourgeois lifestyles (for instance, through life insurances that translated expected business success into credit availabilities). For Lobo-Guerrero (2011: 1–12), this historical example testifies to the emergence of an ‘entrepreneurial’ type of biopolitical governmentality, according to a transformation from genuine investment uncertainty to a fungible, calculable and thus

⁶ <https://www.bundesregierung.de/breg-en/news/decision-of-federal-and-state-governments-1841104> (last accessed on 17 August, 2021).



insurable uncertainty. Yet, for Lobo-Guerrero, the important point is that this type of governmentality concretised in the form of a social milieu (or a form of life) that—by dint of access to payments from assetised securities, which their insurances counted as—was able to develop certain aesthetic preferences, consolidating them into a lifestyle including refined forms of sociability. Building on these historical insights and conceptual suggestions, we contend that the concept of ‘form of life’, as it connects the analysis of the mechanisms of social control and mobilisation with an analysis of the public generalisation of valued lifestyles, is capable of envisaging the effects of the current pandemic-triggered intensification of the entanglement of the infrastructural logics of circulation, containment and assemblage.

Working from home is thus part of the imagination of a more general, and generally valued, form of life in which crucial societal functionalities can be maintained through digital connectivity which allows, but also demands, individuals to take on their functional social roles (the employee, the school child, the teacher, the pregnant mother, the patient, the shopper, etc.) without having to leave home. It thus depends on role connectivity, that is, the ability to perform in different social roles even when locally confined at home (like, for instance, in the performance of occupational roles along with educational and caring roles, with a very uneven distribution of resources, e.g. apartment size). The innumerable calls to ‘stay at home’, to not socialise physically with ‘others’ and to appear together in public only as a ‘family’ (‘plus X persons from other households’, depending on the political gauging of the infection rates), make clear that this way of life consolidates an ethical ideal around the nuclear family, excluding both friends and kin living in other households. The nuclear family thus emerges as a form of life which minimises ‘outside’ co-present contacts while boosting its digital connectivity. Thus the ‘home’ emerges as the ground for the safe assemblage of the nuclear family, gathering together individuals in their very different roles yet with the normative underpinning that they ought to live in solidarity and care for each other. The exclusiveness of this image of the home as a safe assemblage becomes evident when contemplating its flip sides. First, this refers to increased domestic violence, which is often reported but not reflected in the normative demand to ‘stay at home’. Second, it concerns the detrimental effects that the digitisation of the retail sector, which fills Amazon’s order books but not those of the local store, has on significant parts of the retail economy. Obviously, the non-digital retail economy is not seen as part of the ‘home’s’ safe assemblage.

The public discourse on remote work aptly exemplifies how the covid-19 crisis activates infrastructural dynamics and imaginations that combine circulation, containment and assemblages: one should stay at home, yet stay connected. The infrastructural affordances of digital technology thus nudge users both to avoid physical sociality and to maintain social fungibility. Thus, digital technology serves as the infrastructural base for the emergence of a form of life that promises to uphold, and even to foster, the societal architecture of highly commodified liberal capitalist societies even in a moment in which these societies face a viral threat. Yet, it is essential to point out that this technology unfolds its infrastructural potential not through the circulation of digital symbols alone, but crucially by dint of the social and localised assemblages that it helps to emerge. To be sure, the form of life associated with working from home and its infrastructural imagination is socially highly exclusive



and bound to compound social inequalities—a point that applies to all modernist infrastructures, as postcolonial critique has pointed out (Mitchell 2014; Gupta 2015; Nolte and Yacobi 2015; Nolte 2016; Tonkiss 2015). Yet, precisely through those exclusions which it effaces through its claim for generality, it acquires a strategic importance for the safeguarding of the liberal political economy.

It hardly requires citing evidence that face-to-face sociality is politically framed as a practice in which calculable risk threatens to transmogrify into incalculable, radical uncertainty. Hence, calls abound to conduct face-to-face sociality, whenever it is unavoidable, rationally—that is, *at a distance*. Yet, ‘social distancing’ approximates sociality to connectivity: the point is to perform as a rational role player, not as an elementary particle drawn (or pushed) towards the other person. Thereby, it is not only about late 19th century theories of the irrational mass looming in the imaginary background of the notion of ‘social distancing’ and warnings against ‘corona parties’, but also the call to safeguard basic societal functions through an infrastructure that ensures connectivity.⁷

Conclusion

The covid-19 pandemic has arrested much of what is called ‘public life’ all over the world. Whole populations have been called upon to self-isolate—a demand that was policed in an unprecedented manner in many countries. At the same time, this historically unprecedented suspension of ‘public life’ has triggered severe concerns about the economic consequences of the crisis. Accordingly, mobility has emerged as a precious economic good, whose absence is bound to enact a global economic downturn. Political agency thus seems to be locked into a dilemma between securing the containment of the virus and securing the viability of the political economy.

In this paper, we tried to show, through discussing the concept of infrastructure, that this perception of a dilemma as constituting the present crisis is misguided on several counts. In conceptual terms, infrastructures, which are often held to secure mobility, circulation and connectivity, quite often perform the opposite, namely immobilisation, containment and interruption. Based on Michel Foucault’s different conceptualisations of how to govern, this contribution expanded the dominant conceptualisation of infrastructures. While infrastructures have often been described in terms of their ability to enable and maintain flows, the pandemic has brought to the fore their capacity to contain. However, the consideration of the infrastructural formation of assemblages from the dynamics of guaranteeing and interrupting circulation is clearly the most important contribution that we wish to make. In the present constellation, this means that the current interruption and deceleration of all sorts of

⁷ As the numerous citations of East Asian positive experiences with virus containment and the upholding of ‘public life’ imply, at the basis of this ‘public life’ is actually a nearly total digital connectivity of these state’s citizens, because it is only under this condition that sociality can return to the status of being a calculable risk, not a fatal uncertainty. Only if everybody’s contacts and movements can be traced and reconstructed it is possible to carve out a ‘safe space’ for a public sphere resembling a liberal one; the implication being even stricter calls on people identified as (potentially) infected to ‘stay at home’.



circulation do not of themselves announce a crisis, but need to be reflected in terms of the specific configuration of mobilisation and immobilisation, as they inform the formation of what are perceived as 'safe' assemblages. Current infrastructural governance does not only aim at interrupting circulation, but also evoking a new form of life through hoarding and forestalling, which takes the form of what we term safe assemblages.

With respect to the pandemic, we have firstly seen how the stalling of economic mobilities due to lockdowns—like the interruption of production chains, the suspension of international travel, and the suspension of consumption practices—is compensated for by a massive provision of financial liquidity. However, that provision can only be analysed superficially as the compensation of one type of flow for one type of immobility; rather, it follows the metaphor of the 'hoard' in enabling general economic connectivity as the ability of companies to receive payments if necessary. The effects of immunological containment are thus complemented not symmetrically by financial flows, but by the infrastructural logic of the safe assemblage in terms of financial guarantees. National government and EU funds not only compensate for lost business, but also invoke a gesture of stability directed to an economic and financial audience far greater than the actual businesses in disarray. We also argued that the economic support by governments and the EU is enabled by the logic of the hoard that will allow future circulation. The funds that are available are meant to effect relief to an economic crisis due to stalled economic circulation.

Secondly, we argued that technological infrastructures that ensure digital connectivity are not only publicly framed as a means to overcome the socially isolating effects of the lockdown, but are celebrated as a way to safeguard a liberal form of life. 'Working from home' becomes the generalised, stereotypical and socially exclusive metaphor for this form of life, crucially including the latter's political-economic functionality. This liberal form of life, in its quality as a normative generalisation of a way to secure liberal governmentality through a combination of self-discipline and connectivity, is the safe assemblage that is the precondition for having digital infrastructures compensate for physical immobilisation. Thereby, the valuation of the 'home' is part and parcel of the liberal imagination. This pertains to the gendered separation between home and work that informed early understandings of private and public spheres; it also pertains to the neoliberal idea that individuals and their households form the substrate of a society that can develop no better overarching institutions than the competitive market (as Hayek preached and Thatcher and Reagan put into practice). The invocation of the home as a site for a 'safe' pursuing of affairs, related both to homely domesticity and to the effectiveness in social roles like in gainful employment or schooling, weds the early liberal with the neoliberal imagination. The call for more 'home schooling' might actually inconspicuously invoke the notion that schooling is a home affair—an argument which has been consistently used in neoliberal argumentation against the public school sector in the US. The 'home' thus emerges as that form of life which is currently valorised most against any other conceivable forms of life, which is evidenced by the fact that the notion of the 'home' is not really publicly challenged by all the information regarding the detrimental, depressing, violent and sometimes lethal things going on in homes (see for example 'the shadow pandemic' campaign on violence



against women).⁸ At best, these reservations resemble a haunting; an uncanny consciousness that something might not be right with ‘home’, which has not yet been upgraded to an effective critique, but might be a part of the motivation of a significant social constituency to engage in anti-lockdown protests.

Future work will surely pay increasing attention to a central feature of economic and epidemiological operativities within the governance of the global pandemic: the notion of connectivity, enabled by digital infrastructures, emerges as that strategic and ethical quality around which a virus-adapted form of life crystallises. Connectivity might also inform current rationales of ‘saving’ the economy from the effects of lockdown, stalled production and decreased trade. In a continuation of the logic of ‘safe assemblages’, one could argue that digital connectivity proved itself as an asset, as a provision—as a security—that could then be built upon to govern the crisis. Thus, whereas the present article could only hint at the complementarity of political-economic and epidemiological crisis responses, while questioning the current ‘dilemma’ narrative, further work will need to show how exactly those responses intersect in digital infrastructures.

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⁸ <https://www.unwomen.org/en/news/in-focus/in-focus-gender-equality-in-covid-19-response/violence-against-women-during-covid-19> (last accessed on 17 August, 2021).



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