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ORIGINAL ARTICLE

Health beyond medicine. A planetary theory extension

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Abstract

In Niklas Luhmann's vision of the modern functionally differentiated society, health presents one of the essential function systems, along with politics, law, economy and science. While he devoted much effort to elaborating the theoretical foundations of the latter function systems, his work on the health system was relatively sparse. This research gap has been rendered particularly acute by the recent COVID-19 crisis. In reconstructing and updating the Luhmannian analysis of this system, this article presents a three-dimensional concept of organic, psychic and social health and highlights the risks raised by a potential overexpansion of the health concept to the planetary level. The most important of these risks is shown to be the potential rise of totalitarian social control that exceeds classical forms of medical social control. The proposed argument not only contributes to the public criticism of the political responses to the COVID-19 crisis but also fills in some missing pieces of Luhmann's seminal elaboration of the health system.

KEYWORDS
health, Niklas Luhmann, planetary health, social systems

INTRODUCTION

The COVID-19 crisis has prompted an unprecedented shift of attention to health issues (Armstrong, 2021; Millner et al., 2021; Taylor, 2021), and the corresponding proliferation of health-related communication may appear the more epochal as—compared to other social

domains such as politics, economy, education, or law—health might have been a rather disregarded social system before (Roth et al., 2019).

From the onset, the crisis has been taken as the token of a historical turning point from weak to strong government as much as from economy-driven policies to a situation where politics sets the direction for all social domains, including an economic realm in perceived transition to a 'mission economy' (Mazzucato, 2021), now expected to deliver not only ever-increasing profits, but also an ever-increasing number of 'positive outcomes' for people and the planet. As early as April 2020, the coronavirus crisis had joined ranks with the protracted financial crisis of 2008 and the climate crisis to form a 'triple crisis of capitalism' (Mazzucato, 2020) that calls for extensive interventions by an 'entrepreneurial state'.

Whereas from this perspective, health issues appear as only one pretext for political interventions among others, there has been great momentum for the idea that both the coronavirus and climate crisis represent two dimensions of a global or planetary health crisis. For example, in May 2020, *A message from HRH the Prince of Wales on Earth Day 2020* underscored that the 'parallels between the human and the planetary condition in the coronavirus are quite clear. If we look at the planet as if it were a patient, we can see that our activities have been damaging her immune system and she has been struggling to breathe and thrive due to the strain we have put on her vital organs'. During the kick-off event of the World Economic Forum's (WEF) 'Great Reset' initiative launched in response to the coronavirus crisis in June 2020, HRM the Prince of Wales was in accordance with WEF Founder Klaus Schwab that 'climate change could be the next global disaster with even more dramatic consequences' (Klaus Schwab), insisting that if 'there is one critical lesson to learn from this crisis, it is that we need to put nature at the heart of how we operate. We simply can't waste more time' (HRM the Prince of Wales). During a WEF dialog on 'Building Future Resilience to Global Risks' in November 2020, European Commission president Ursula von der Leyen, too, made an explicit link 'between the rise of infectious diseases on the one hand and the rising temperatures and, mainly, the loss of nature, the loss of biodiversity'. On an even larger scale, as quoted in The Guarding from 15 June 2020, to United Nations Global Compact executive director Lise Kingo, the COVID-19 crisis can therefore hardly be taken for more than 'just a fire drill' for the climate crisis, a statement that pings back to Bruno Latour's blogpost from 26 March 2020 (later published as Latour, 2021), where he is 'advancing the hypothesis, as have many others, that the health crisis prepares, induces, and incites us to prepare for climate change', thus referring to 'the intervention of the virus (...) as a dress rehearsal for the next crisis'. In one of his last public talks, the self-identified philosopher on the warpath Latour (2022) extended this logic from the *war against the virus* (Donald Trump, Emmanuel Macron) over the *war against climate change* to 'une guerre généralisée', that is, *a generalised war* combining both military and ecological dimensions of warfare into a militant 'écologie de guerre' *(war ecology)* that pursues the former wars as global geopolitical missions.

The risks associated with the recent politically endorsed and almost unchallenged proliferation of health communication and its extension to the level of *planetary health* (Horton et al., 2014; Horton & Lo, 2015)—defined as 'the health of human civilisation and the state of the natural systems on which it depends' (Whitmee et al., 2015) and the corresponding attempts to 'protect and restore planetary health' (Guzmam et al., 2021), that is, to mitigate or neutralise both the 'impact of human activities on our planet's natural systems' (Myers, 2017) and the human health impact of altered ecosystem (Myers et al., 2013)—are, therefore, considerable. This is true not only because 'the speed with which liberal and social democratic societies have abandoned long-established public freedoms and have embraced controls, often more extensive than in wartime, may be reflective of the rising powers exercised by "bio-political" discourses

that *predate* the pandemic' (Pennington, 2021), but also because this discursive drift may drive dynamics in which increasingly militant attempts to heal the world result in a world at war with itself.

Social systems theory in the tradition of Niklas Luhmann has long problematised the possibility of the indefinite and potentially dysfunctional expansion of the operations of individual function systems or social systems generally. Luhmann (1981, p. 108) himself observed that function systems have no 'internal stop rules' that could regulate this expansion according to any definite criteria. This lack of stop rules presents a generic systems-theoretic reconstruction not only of the ecological crisis of modern society (cf. Luhmann, 1989), but also serves as an observational framework for cases when individual functional logics seem to 'escalate' or function systems to dominate the rest of the functionally differentiated society (Teubner, 2012; Verschraegen, 2011; Weaver, 2021, 2022). It is noteworthy that Luhmann systematically explored this scenario in the case of the political system. In his seminal book 'Grundrechte als Institution' *(Basic Rights as an Institution)*, he showed that the overexpansion of the political system would logically result in the conversion of the modern society into a totalitarian regime, and that basic human rights and liberties operate as a check on this process (Luhmann, 1965).

Since then, Luhmann's systems-theoretical insights into the nature of human rights have provided impetus for a burgeoning research program on the so-called societal constitutionalism, which underscores the significance of these rights for ensuring that the regime of functional differentiation remains in a viable state (e.g., Teubner, 2012; Verschraegen, 2011). This research program explores how legal 'expansionism' in terms of constitutionally secured human rights protects humans from scenarios of overexpansion of function systems, with the paradigmatic case being the overexpansion of politics and the concomitant rise of totalitarianism (Luhmann, 1965; Teubner, 2012, 2021; Verschraegen, 2011). Yet such expansionist drift is not exclusive to the political system. Teubner (2021), for example, has recently discussed similar tendencies for other function systems such as the legal system, for which he outlined potentially dysfunctional side effects of one-sided functional expansionism similar to those of the political system.

Although therefore basically well-equipped to deal with the potentially destructive dynamics of an unchallenged expansion of the logic of individual function systems, social systems theory in the tradition of Niklas Luhmann has so far mirrored rather than challenged the traditional disregard for health issues. Drawing on his systems-theoretic groundwork, Luhmann dedicated a special monograph to most of the function systems of modern society (such as politics, economy, religion, education, and art), with the health system being a major exception. Though most relevant in the context of ongoing *global health and climate crises*, ideas of excessive medicalisation (Ballard & Elston, 2005; Broom & Woodward, 1996; Bushfield, 2017; Conrad, 1992; Coveney et al., 2011; Fawcett et al., 2020; Illich, 1975; Williams et al., 2011), healthicisation (Seale et al., 2007), 'healthification of everything' (King, 2013), healthism (Crawford, 1980) or medical social control (Conrad, 1979, 1992; Rojas-Navarro, 2022; Roth, 2021a) are therefore not easily conceptualised in terms of social systems theory.

Against this backdrop, the contribution of the present paper is twofold. First, in briefly describing and then further developing Niklas Luhmann's concept of health as a social system, we show that a comprehensive concept of health would need to include not only the diagnosis and treatment of ill organisms (medicine) and insane minds (psychotherapy), but also of 'damaged' social addresses (social work) and, most recently, of literally ill-defined ecosystems up to the planetary level. Second, we suggest extending established concepts of *medicalisation* or *medical social control* along these lines so as to facilitate a broader perspective on a potential overexpansion of health as either a function system or pretext for political decision-making. In addition

to assessing the impacts of such perceived overexpansions, we emphasise their effects on the corrosion of the polycontextural nature of a functionally differentiated society. In the tradition of Luhmannian sociological systems theory (Knudsen & Vogd, 2014; Meyer et al., 2015), polycontexturality denotes the constitution of the functionally differentiated society through 'alternative and contingent observational perspectives that may be mutually conflicting and discrepant' (Roth et al., 2020, p. 417). Against this backdrop, we want to argue that the overexpansion of the health system results in its observational perspective being privileged over other perspectives through its association with absolutised moral claims that discourage the consideration of its own inevitable blind spots.

The proposed argument will consist of the following steps. The next section will prepare the ground by summarising the Luhmannian vision of how function systems and, more generally, social systems exist and operate within the regime of functional differentiation. On this basis, the following sections will explain how the overexpansion of the health system might result in the rise of totalitarian social control and the suppression of alternative observational perspectives. The article concludes by discussing implications for further research on bringing the Luhmannian understanding of the health system into line with current developments, such as the expansion of health concepts to the planetary level.

SOCIAL SYSTEMS AND FUNCTIONAL DIFFERENTIATION: KEY LUHMANNIAN INSIGHTS

True to Luhmann (2006, p. 44), 'a system is the difference between system and environment'. Though inspired by advances in biology, Luhmann's concept of environment must not be confused with nature or ecological niches. Rather, his definition refers to the concept of autopoiesis, which Maturana and Varela (1980) introduced to define as living those systems which maintain themselves by maintaining the boundary between themselves and their environment. In this context, the environment is everything that is not the autopoietic system. While Maturana (2015) insisted that autopoiesis refers to living systems only, Luhmann (1995a) traced the logical foundations of the concept back to George Spencer Brown's cult classic 'Laws of Form' (1979) and extended it to other 'observing systems', such as psychic or social systems. Thus, in Luhmann's social systems theory, society, the 'comprehensive social system' (Luhmann, 2012, p. 40) of all communication, is an autopoietic system, too, as are all subsystems of society: All distinctions within society 'have to made by the system within the system' and are, therefore, made of and by communication, as this system 'makes the difference between system an environment and copies that difference in the system to be able to use it as a distinction. This operation of re-inventing the difference as a distinction can be conceived as a re-entry of a form into the form, or the distinction into the distinguished' (Luhmann, 1995c, p. 172f).

Against this backdrop, different forms of society correspond with different forms of social differentiation. Luhmann (1977, p. 32ff; 2013, p. 12f) himself identified three and later four basic forms of social differentiation: segmentation, centre-periphery differentiation, stratification and functional differentiation. He also suggested a connection between these forms of social differentiation and different epochs of social evolution. In fact, archaic societies are thought to have been segmented into relatively isolated tribal archipelago societies, whereas the ancient world has often been associated with emerging and shifting centres of civilisation and the influence they exerted on their peripheries. Particularly, the mediaeval era is then characterised as a stratified order in which families or professions were ranked into rigid hierarchies of estates,

classes or castes. All these forms may well co-exist, yet Luhmann's intuition is that newer forms of social differentiation superpose older ones. 'Modern society is characterised by differentiating its primary subsystems according to specific functions and by attributing primacy to these functions (e.g., to politics or to science, to law or to health care, to the economy or to art) vis-a-vis all other functions, even if society is not able to bring these functions or the functional systems into a universal, transitive order of rank'. (Luhmann, 1990a, p. 432).

Thus, archaic logics according to which older persons discipline younger persons may still prevail within the families of a stratified society, but things have changed in so far as an old farmer cannot punish or reprimand a young nobleman anymore. In a similar way, hierarchies do remain important features of modern societies, but have themselves been superposed by a more recent form of social differentiation. Whereas members of early modern learned societies would still have agreed that only Gentlemen can be good scientists (Shapin, 1988, p. 390), the idea that a young aristocrat of humble intelligence might turn into a better scientist than an intelligent girl of humble beginnings will hardly find consent in late modernity, as we find pleasure in the thought that science itself and all its sub-disciplines are defining the skillsets required to properly function as a scientist.

For Luhmann, the emergence of autological function systems like science is almost tantamount to the process of modernisation, and he devoted a considerable amount of time and energy to the study of the individual function systems, writing a monograph each on politics, economy, science, law, art, religion, education and the mass media system. Whereas reservations apply as to whether love, to which he also devoted a dedicated monograph, qualifies as a function system, there is little doubt that Luhmann thought of health or medicine as a function system. It is therefore surprising that Luhmann has never published a monograph on 'Health as a social system' and only written a few articles on health or medicine.

THE FUNCTION SYSTEM OF HEALTH AND ITS EXPANSION

Among the few works in which Luhmann dealt with health in more detail, the most pertinent are the three German-language articles or chapters 'Medizin und Gesellschaftstheorie' *(Medicine and Theory of Society)* (1983b), 'Anspruchsinflation im Krankheitssystem. Eine Stellungnahme aus gesellschaftstheoretischer Sicht' *(Claim inflation in the illness system. A statement from a social-theoretical perspective)* (1983a) and 'Der medizinische Code' *(The medical code)* (1990a). In these articles, Luhmann experimented with key terms such as medicine, health, health care, health system or, occasionally, illness system to zero in on the function system at stake. The thin red line between these excursions in what has remained an uncharted territory on the map of social systems theory, however, is Luhmann's insistence that the exclusive function of this function system is to identify and cure or at least treat illnesses. This claim clearly sets a broad range of public health interventions, such as many of those promoted or implemented during the COVID-19 crisis, outside of the domain of health as a social system. Yet, we must give Luhmann credit for the fact that public health interventions are not operations within the health system but rather functionalisations of health in line with political or broader 'social' missions. Vaccination campaigns, for example, are clearly not just about health, as they typically rely on the mass media system for the dissemination of pertinent information or 'education' (which refers to the corresponding function system) and are often flanked by varying degrees of allusions to political power, whether it be indirect via economic incentives (consider, for example, the Australian 'No Jab, No Pay' programme) or direct measures such as mandatory vaccination

schemes, the non-compliance with which may have, occasionally, severe, legal, educational or yet other consequences. In this sense, the term public health refers to an ecosystem of function systems rather than solely to the function system, that is, health.

The function to identify and cure or treat illnesses is the health system's only function, and the system is the only one that can perform it (Michailakis & Schirmer, 2010), as neither money, law nor power can directly heal a sick person. As every system, health has its own specific environment, which it scans for relevant events. 'The health service legitimates itself not as the application of a science but rather in its capacity to make a further medical service possible'. (Luhmann, 1987, p. 108). As with every function system, the system applies its specific binary code to that end, which, in the case of health, is healthy/ill or ill/healthy (Boiko et al., 2011), respectively. True to Luhmann, the just performed reversion of polarity is an idiosyncrasy of 'the medical code'. Typically, function systems orient their operations to the positive side of their code: in the economy, the standard case is that payments connect to payments, whereas the observation of the negative side, non-payment, triggers reflections about where not to send payments in the future. In science, researchers seek to draw true conclusions from true conclusions. While the same is true for other function systems, in the case of health, it appeared to Luhmann that the entire system is geared towards the negative side of its code. In fact, unlike the economy, which is scanning its environment for payment opportunities, the health system is scanning its environment for cases of illness rather than health. That illness nonetheless is the negative side of the code is true if we concur with the common reading and understand *positive* and *negative* in terms of good and bad rather than as tokens for presence or absence. Sickness, hence, the absence of health, is thus well-defined as 'being' or 'feeling' unwell, and it is these communicative detections of states that turn one person into a patient and another into a therapist. The health system is thus characterised and maintained by operations pertaining to the treatment of ill and not healthy persons, which is why Luhmann occasionally, and probably more adequately, called it the illness system too.

Once past observations of illness inform further observations of illness, however, we may observe the take-off of an autological health system in which health remains but an ever-moving infinite horizon for an ever-growing number of diagnoses and treatments. Surprising events lead to the discovery of new diseases, while the recognition of old ones increases the system's capacity for diagnosing and curing them. Thereby, health is being defined as an ever-longer list of illnesses and treatments. The canonical example for the outcome of this process is the *Diagnostic and Statistical Manual of Mental Disorders*, whose fourth edition comprises 886 pages and 410 disorders as compared to the 130 pages and 106 disorders reported in the manual's first edition. The considerably revised fifth edition comprises 947 pages. In this process of identifying new and occasionally cancelling definitions of old illnesses, the health system is flanked and challenged not only by economic incentives and constraints, but also by scientific efforts to distinguish true from false illnesses.

In all that, there is no natural internal limit to this process, as there are few to no purely health-related reasons for doing less than what is in human power for every patient. Thus, the negative polarity of the health system combined with certain experiences during the COVID-19 crisis suggests that one should not underestimate both the inherent momentum and the potential dark sides of health expansionism. An unchallenged *medical gaze* (Foucault, 1973) abets a culture of suspicion in which everyone is potentially ill unless proven otherwise.

A sceptical attitude to health expansionism is more justified as this development is a trend not only in scale but also in scope. Figure 1 is instrumental in illustrating this point.

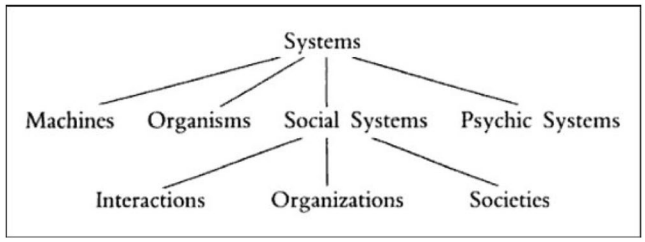

FIGURE 1 Typology of systems (Luhmann, 1995b, p. 2)

Figure 1 shows Luhmann's (1995b) famous typology of systems from his hallmark work 'Social Systems', in which he performs and justifies his 'autopoietic turn'. In looking at Figure 1, we find that machines differ substantially from organisms in that the former—to date—lack the capacity of self-maintenance and self-reproduction. In Luhmann's diction, machines are therefore counted among the allopoietic systems, whereas organisms are autopoietic systems as they maintain and reproduce themselves by means of their own operations. Luhmann's claim to fame was then to extend the concept of autopoiesis to psychic and social systems. Organisms are systems that maintain themselves by, and thus essentially are, the very sequences of biochemical operations by which they maintain their border to their environment, and the same is true for psychic and social systems, with the only difference being that the former operate thoughts and the latter communications rather than biochemical operations. Thus, in the Luhmannian universe, organisms, psychic systems and social systems are all autopoietic systems, each being irreducible to one another and reproducing themselves according to a logic of their own. It is this difference of logics that is ignored by the ongoing expansion of the medical gaze.

At closer scrutiny, Luhmann's typology implies far-reaching consequences for the relationship between human individuals and human society. As the encompassing system of all human communication, society clearly is the most compassing social system. As social animals, we are, however, neither fully confined to nor exhaustively covered by this category, as the human condition clearly implies an organic and psychic dimension too. As a result, Luhmann would always insist that society is *not* made of human individuals (but rather of communications and nothing but communications), and that our persistent interest in human individuality implies a focus on the interplay of three independent types of systems.

As idiosyncratic as Luhmann's approach to human society and the human condition may seem, it does resonate well with everyday experiences of willing spirits and weak fleshes or the general difficulty with putting thoughts into words, not only in love letters, eulogies or academic articles.

More specifically, Luhmann's typology of systems also resonates well with Foucault's (1965, 1973) demonstrations of the early modern expansion of the medical gaze, which for the latter, too, was an expansion in both scale and scope. In combining the observations of both scholars, we may hence observe not only a proliferation but also functional differentiation of that gaze up to the point where the initially indiscriminate 'clinic' was differentiated into institutions specifically dedicated to the concentration and later also treatment of organically (hospitals), psychically (mental asylums), and socially ill (prisons, workhouses) individuals.

Cognate considerations have resulted in Pelikan's (2007, p. 97) idea that late modernity may be characterised by the co-existence of three different function systems, each devoted to physical, mental and social health, which he refers to as 'care of ill physical health', psychotherapy and social work, respectively. Reservations apply, however, as Roth and Schutz (2015, p. 21) have

argued that a similar strategy 'of distinguishing physical, psychic, and social forms of scarcity' would then also require our 'differentiating the economy into three new function systems', and the same may be said if education is geared specifically to physical, mental and social advances.

Against this backdrop, in the present article, we assume that the above trends point at an internal rather than external differentiation of the basic concept of illness, with the concepts of medicine, psychotherapy and social work referring to increasingly specific sets of strategies for or attempts at repairing perceived defects in one or several of the three basic dimensions of the human condition.

It is hence obvious that the idea of health expansionism refers not only to a merely quantitative proliferation of an illness/health gaze but also to an expansion of the scope of situations to which that gaze may safely be applied.

Reflection theories of health are therefore well-advised to also reflect the dual nature of this expansion, not only because health politics and policies have long been mirroring it but also because we are currently witnessing an increasing momentum for further expansions of the concept of health to the natural environment.

This issue is critical, particularly if it is paired with attempts at reversing the polarity of health from the 'negative' illness to the 'positive' side. Consider the WHO definition of health as 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity' for a prominent example. Planetary. As positive as these and similar attempts at producing 'positive health' (Pelikan, 2007) may seem, however, they hold the potential of creating not only structural drifts to rat races for individual self-enhancement but also of laying the ground for attempts at ever more comprehensive control of the organic, psychic and social aspects of the human condition as well as of 'the' environment in which this condition unfolds.

TOTALITARIAN IMPLICATIONS OF POSITIVE AND PLANETARY HEALTH EXPANSIONISM

Though prevalent in health and social policy agendas and instructive for corresponding interventions from the local to the global level, there is little doubt that positive concepts of health may not only be misused but rather create inevitable momentum for a never-ending expansion of social control. The issue at stake is hence not only that 'positive health' or active 'salutogenesis' (Mittelmark et al., 2022) has a great potential to lead humanity into some of the worst nightmares such as the US Eugenics movement, the placement of the mentally ill in total institutions, the Nazi approach to medicine and 'race hygiene' or the Soviet punitive psychology, in the context of which deviance from official party doctrines could be defined as illness and result in 'hospitalizations'. Rather, what also is at stake is that if we define health as a positive 'state of complete (...) wellbeing' along all dimensions of the human condition, then the term *complete* adequately reflects the totalitarian feature of this definition, as now any failure to achieve or maintain this precarious equilibrium may be problematised and thus serve as a reason for further diagnosis and intervention in pursuit of an inherently unattainable goal. Even in liberal societies, the resulting self-reinforcing processes create ever-longer lists of features that individuals must display to prove to themselves and others that they maintain the precarious state of complete wellbeing in a bid to avoid their being labelled as ill and thus their identification as objects of treatments and interventions. Thus, positive health comes at the price of a culture of increasingly regular and detailed forms of self-monitoring and deviance control, one reification of which is

the current trend towards smart wearables that constantly monitor the body functions of increasingly younger parts of the population.

Moreover, the more states subscribe to 'positive health' policies, the more individual citizens become subject to ever more extensive state control and intervention, and the dark sides of these tendencies have inspired numerous works by and in the tradition of scholars such as Foucault (1965, 1973), Goffman (1959) or Illich (1975).

Yet, the negative side effects of positive health clearly do not stop at the individual level: As is well known in terms of the Tocqueville paradox, frustration about social disequilibria may grow more quickly than social conditions can improve, and the gap between frustration and attempted improvements may even be widening as the reduction of social disequilibria tends to increase a population's sensitivity towards the remaining disequilibria. Here again, there is a drift towards ever-increasing deviance and self-control that meets growing, but necessarily unfulfilled expectations (Gibson et al., 2004), yet this time, vis-à-vis the state that serves as the address for claims to the presumably interdependent concepts of wellbeing and welfare. This is how Luhmann's concept of health claim inflation (Luhmann, 1983a) may be applied to the challenges of welfare states (Luhmann, 1990b). The inflation really does seem hard to stop, as states confronted with claim inflations tend to respond by welfare expansions and thus require access to growing financial resources. Welfare expansion thus seems to depend on economic growth, a circumstance that may in turn be translated into a health issue in terms of dependency, and there is much and growing scholarship (e.g., Daly, 1974; Jackson, 2009; Mishan, 1967; Rees, 1999; Slaughter, 2012; van Griethuysen, 2010) concurring in the diagnosis that capitalist welfare 'societies are addicted to growth' (Haapanen & Tapio, 2016, p. 3495). Where this dependency is not diagnosed in individual consumers in terms of a behavioural addiction (Higham et al., 2016; Ryan, 2013), the issue emerges that therapeutic interventions that might work at an individual level must be scaled up to different levels of society (Costanza et al., 2017a, 2017b) in a bid to solve the most urgent ecological problems and, perspectively, achieve all sustainable development goals.

The underlying condition diagnosed in all these cases, however, seems to be that our societies and the entire planet are ill, and perhaps chronically so. And this diagnosis clearly is a necessary condition without which claims for 'planetary health' (Horton et al., 2014; Whitmee et al., 2015) would not make any sense. It therefore seems as if 'the idea that health in its broadest sense to include planetary health must take precedence over economic and other considerations ha(d) been trending for quite some time' (Roth, 2021b) and has gained extra momentum during the COVID-19 crisis.

Yet, if we reconsider the drastic and, at times, draconic nature of the measures taken in the global health war 'against the virus', and if we then consider the current discursive drift to associations between these global health strategies and those supposedly required in the pursuit of a planetary health war against climate change, then we are confronted with the serious question of what might ensure that *planetary health* does not turn into *total health* on a planetary scale, thus turning the entire 'spaceship Earth' into a total institution.

CONCLUDING REMARKS

In the earlier sections of this article, we have proposed a theoretical reconstruction of the health system that points at an internal differentiation of that system into subsystems, each devoted to one of the three basic dimensions of the human condition: medicine to the organism, psychotherapy to the psyche and social work to the person in terms of a human being's social address.

In each case, we found that these subsystems can get active only if an organism, psyche or social address can be defined as ill, insane or damaged. As the corresponding diagnoses are made by the three subsystems themselves, these systems differentiate and expand, not least by performing increasingly extensive and detailed diagnostic scans of their environment. This three-dimensional concept of health as a social system, as well as of the corresponding expansionist drifts, is one major contribution of our article to current discourses on the sociology of health and illness.

If we furthermore find that this three-dimensional 'healthicisation' is currently being expanded beyond the human organism, psyche and person and applied to 'the' environment of individual humans or humanity (Bergman et al., 2020; Herrick, 2020) up to the point where we find sufficient momentum for the launch of a journal such as 'The Lancet Planetary Health', then we are clearly confronted not only with potential excesses of bio-political interventions or claims (Hamilton, 2018) but also with several serious challenges for the social-theoretical conceptualisation of health and illness.

For a start, it remains unclear what the term environment refers to in a case where one human's organism, psyche and person constitute environments, first to one another and, second, to other human's organisms, psyches and persons. Given this multitude of perspectives, who would have the authority to diagnose illnesses, insanities or damages in which of these many environments at all?

Even if we abstract from this requisite complexity and mistake a human being, or even mankind, for *one* system, then the environment of that system cannot be confused with nature, whether ill or not. First, as every organism, the human organism is clearly *not* nature and would thus be a subsystem of both the 'human system' and this system's environment. The issues emerging from this logical short circuit are obvious. Second, if humans are properly defined as *social* animals, and thus distinguished from the rest of nature, then it is just worthwhile to remind that the human concept of nature is a *social* construct shaped by a specific subsystem of modern society, namely science in general and natural science in particular. Yet other subfields of sciences—not to speak of other subsystems of society such as religion, economy or art—entertain fundamentally different concepts of environment (Roth & Valentinov, 2020).

Popular claims to expand the health gaze to 'the' environment in a bid to cure a literally ill-defined nature and thus 'heal the world' therefore fail systematically to deliver their promise of healing as they systematically ignore or conceal the idiosyncrasy of their diagnostic perspective and the natural-scientific reductionism inherent to their attempts at fixing their environment.

The destructive potential of this reductionist health gaze is further increased whenever its polarity is reversed from the treatment of illness to the achievement and maintenance of 'positive health' balances or equilibria, and this ambition is scaled to the planetary level. Now the planetary 'ecosystem' as a whole would need to meet a certainly ever-growing list of 'positive' expectations to qualify as a healthy environment for some of its subsystems. The question remains why these (and not other subsystems) are the measure of things.

Yet, even if the polarity is not reversed, from a planetary perspective that mistreats Earth, nature or 'the' environment as one system, we would find that all attempts at healing this world ultimately constitute therapies of systems to which the therapists belong. The list of reasons why such forms of therapies systematically fail is as well known as it is long and should command modesty rather than overambition vis-à-vis our current planetary 'environmental' challenges. Again, the issue at stake is how and why some subsystems of the 'ecosystem' should, and possibly could be, in a position to define what is healthy for the system as a whole.

One promising way to overcome the partialities and other dysfunctionalities of environmental autotherapies, however, is to abandon the dear idea that the environment is a system and

rather subscribe to the view that environments are created by systems capable of maintaining their border between themselves and their environment. From the latter perspective, the environment is neither primordial to systems nor are the systems' subsystems of a larger system called the environment. Rather, there is a world of systems in which environment can be nothing but a plural, as each system is creating its own environment. To heal the environment would be a thing of impossibility in such a context. What would be possible, however, is to observe systems equipped with the capacity of detecting and then improving the conditions for specific other systems in their environment. None of these healing systems would be expected to feature the capacity to heal *all* other systems, let alone the compassing system to which the healing system itself belongs. Moreover, there is no need for any such universal healing system, not least because it is hard to imagine a situation where the entire ecosystem simultaneously expresses a need for cure, help or healing. Yet, such expressions of strain or need for help are critical if it comes to the distinction between, on the one hand, invited therapies that aim at improving the situation of the patient and, on the other hand, forensic and other mandated interventions that are supposed to change the condition of the patient in a bid to improve the situation of a third party.

If we abstract for a second from therapies whose main function is to improve the situation of the therapist, then the key question is indeed whether the current health expansionism both along the three dimensions of the human condition and across the border towards the 'human environment' is characterised mainly by attempts at invited or forensic health interventions. Thus, the question re-emerges by what means we as mankind are currently making sure that messages received from an environment that we far too often reduce to its natural-scientific fraction, nature, truly are requests for help, cure or similar interventions and not just extensions of our own—perhaps even somewhat pathological—health gaze. Failure to adequately address this question might well be punished by success, which would be that we, almost accidently, complete the planetary health mission to build this well-tempered, healthy and totally institutionalised 'spaceship Earth', a vessel without any mission other than orbiting another celestial body.

AUTHOR CONTRIBUTIONS

Steffen Roth: Conceptualization (lead); writing – original draft; writing (lead); review and editing (equal). **Vladislav Valentinov**: Conceptualization (supporting); writing (supporting); review and editing (equal).

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DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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