



## Full Length Article

## Respiratory negotiations: The elemental biopolitics of medical masks in times of atmospheric crisis

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## ABSTRACT

Existing at the intersection of health, politics and affect, medical masks evoke lines and flights of contentions and resistance in everyday lives. They are instruments of negotiation that mediate across bodies, breaths, airs, faces, and lived experiences. Carrying a history that goes back only a few hundred years, masks gained unprecedented traction during the COVID-19 outbreak. The outbreaks of social anxiety, frustration, and anger following mask mandates live beyond immediate concerns of efficacy. In moment of atmospheric crisis masks articulate and give expression to racial, class, environmental, political, and cultural divisions. In this article, we study the development of medical masks through an exploration of three episodes of atmospheric crisis, starting with their earliest recorded appearance at the time of the first edition of Hobbes' *Leviathan* to the present day. Using an elemental mode of thinking, which foregrounds embodied entanglement with air, we explore the ways in which masks speak to biopolitical concerns. The episodes we draw from constitute and represent different mask regimes, both in their materiality and design, mirroring historical change as well as evolving biopolitical orders. We show that medical masks are not simply filtering devices against exposure from respiratory viruses; instead, they are biopolitical techniques through which regimes of inclusion and exclusion are enacted. By focusing on masks, we make a broader argument that work on biopolitics could gain insight from elemental thinking.

## 1. Introduction

July 2021, the summer in subtropical Taipei is steaming hot as usual. Upon seeing our bus approaching, Ann and I swiftly put on our masks and hop on. Indeed, although there has been no new record of confirmed COVID-19 cases for months now, most people still follow the mandatory mask-wear rule in public transport. We find seats in the front part of the crowded bus. I am not thinking of my mask soaked in sweat, instead my attention is drawn to a senior and well-dressed lady sitting opposite to us. She shouts abruptly at another woman. They don't seem to know each other. Her yelling fills the atmosphere with a high-pitched tone of condemnation that whirls around us: 'How dare you not wear a mask on the bus? Don't you know that your breath and talking risks all our health!' She does not seem able to stop pouring her anger at the other woman, who looks modest, timid, and somewhat awkward. She stands next to her, but she avoids eye contact with the screaming woman. I wonder who the other passengers fear more: the well-dressed woman who ceaselessly sputters from underneath her mask, or the reserved woman who keeps her mouth shut along the way? Ann cannot bear the

tense situation any longer and decides to offer the poor woman a spare mask which she always keeps in her backpack.

Hung-Ying's account of a bus encounter shows how masks signify a shared predicament of respiratory threats. Especially in the early stages of the pandemic, Taiwan commonly was perceived as a model of effective public health governance. Despite its dense population, which ranks among the highest in the world, the country maintained a relatively low record of COVID-19 infections. For the collective upkeep of public health, health measures relied on citizens' voluntary compliance, including mandatory mask-wearing on public transport, which was managed and understood as an act of 'civil obligation' and a 'responsibility for collective care'. Masks help constitute a new moral order that finds its genesis in mutual care and is based on the regulation of fluid and aerosol exchanges between porous bodies and viral exteriorities. Wearing them speaks to what Bratton (2021) describes as the 'ethics of the object'. Mask-wearing means seeing human bodies not as sealed off, but rather as porous vessels situated in biochemical assemblies. 'We' (humans and non-human) never breathe alone. These thin sheets of cloth mediate and negotiate atmospheres, regulate bodies, and

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discipline behaviors. Masks are affectively meaningful. They are markers of political identities, life-protecting objects, as well as tacit protocols for expressing solidarity with, a commitment (or resistance) to a biopolitical health regime. Masks narrate multiple layered histories of interacting bodies in an always shared elemental envelope - air.

In this article, we conceptualise masks as material filters existing at the intersection of personal and international politics. They are symbols of pandemic control and anxiety. Yet, as we will show, they are and do much more still. In fact, these materially basic and modest-looking devices are layered in meaning and serve a diversity of purposes. ‘The mask’ debated in policymaking, official guidelines, and socio-cultural contestations (Elegant, 2020; Huo, 2020; Rogaski, 2021) possesses a plurality of ambiguous qualities that create, shape and travel through different porous and permeable borders. For instance, they act as enabling or restricting instruments to negotiate compromises between human mobility and biopolitical security (e.g. Davis, 2020; Devlin & Campbell, 2020) and, on vastly different occasions, which we will explore later, they are the media through which race, gender, and class politics manifest (Braun, 2014; Howard, 2021). Of course, there is nothing exceptional about a mask as such. A ‘mundane’ example of a mask are the graded Filtering Facepieces (FFP) sold in hardware and DIY stores across the globe. Surgical masks are another example of a mask that we rarely think about in detail. They are so normalised that they are metonymic in how we imagine a modern surgeon to look like. The crisis event of COVID-19, however, challenges the normality and uncomplicated nature of masks and reveals a layered politics underpinning their plain appearance and function. Respiratory crises make explicit the politics of breathing and masks. Respiration becomes a political concern, a matter of governance.

What, then, we ask, is a mask? What does a mask do? Whom does it protect? And from what or whom does it protect? The one defining feature of a mask is that it regulates inside-outside relations. Acting as the interface between air, face and breath, a mask is a constant reminder of ‘the outside’ from which ‘the inside’ needs (or is believed to need) protection. A mask is a biopolitical response to the porous materiality of ‘holey’ human bodies (Nieuwenhuis, 2019). As a boundary between interiority and exteriority, a mask offers an ‘elemental negotiation’ on health, identity, sovereignty, space, and biopolitics. This paper explores how masks modulate these relations by historicizing their usage in different moments and conditions of atmospheric crises.

By venturing into the materially and embodied history of masks, we set out to demonstrate how, in times of crisis, medical masks are shaped by medical as much as political rationalities. The historical episodes that we explore reveal a convoluted, layered, and elemental history of masks. ‘Elemental’, we say, because a mask modulates and negotiates the circulation of air from which all life springs. Masks are technologies that bring bodies together and pull them apart. Our objective is to explore this entangled biopolitical and elemental quality by means of tracing its development through a series of distinct historical episodes that disclose ideas and meanings associated with masks and mask-wearing. Our case studies should not be read as linear, or even as the history of medical masks, but instead we offer an attempt to highlight the biopolitical role that masks play in different moments of atmospheric crisis. We contribute to a wider body of literature that does not start its biopolitical enquiry from the living body but that looks at the evolution of an embodied dependency on the atmospheric elemental conditions required for its animation (Górska, 2016; Nieuwenhuis, 2018, Sloterdijk, 2009; Calvillo, forthcoming). This domain of literature takes seriously the ways in which elemental entanglement is not uniform but unevenly distributed across a biopolitics of class, race, gender, and their intersections. As biopolitics is the study of how politics manages life, on the level of the individual and that of the population, masks invite us to think more elementally about the biopolitical relationship shared with air.

Our analysis starts by reviewing the ways in which thinking about the elemental connects with a biopolitics of breathing and breathing

technologies. To bridge elemental thinking with biopolitics, we explore the politics associated with one of the first-recorded medical masks. Famous for their iconic beak-shape, which still can be seen in carnivalesque *commedia dell’arte* today, these masks were introduced during the time of Europe’s second plague pandemic. The inception of the mask coincides with the first publication of Hobbes’ *Leviathan*, which, not coincidentally, depicts mask-wearing doctors on its original front cover. We analyse how their eccentric shape and design equipped wearers with sovereign powers to divide inside from outside. The third section explores the onset of mass medical mask-wearing at the time of the Great Manchurian Plague (1910–1911). Heralding the first diagnosis of the pneumonic plague, we argue that the discovery of human-to-human transmission made respiration a personal and, at the same time, a public concern. The state, acting under a newly founded regime of public health and modern epidemiology, committed itself to the implementation of a broad spectrum of intrusive elemental measures meant to treat rather than exclude contaminated populations. Discourses around the ‘infectivity of the breath’ (Strong & Teague, 1912) enabled the mask to turn into an instrument of embodied containment. Making bodies responsible for their own respiration meant that the logic of quarantining shifted to a biopolitical disciplining of human bodies. In the fourth section, we turn our attention to the social tensions that arose during the COVID-19 pandemic – by all accounts a global affair with uneven local implications – when surgical masks and respirators disengaged from their immediate medical settings and diffused into everyday cultural and political discourse. Decisions to wear or not wear a mask speak to their elemental ability to regulate a shared air. The case study we present focuses on the anti-mask movement in the United States which exemplifies a move from a biopolitical management of ‘aerial life’ (Adey, 2010) to a necropolitics of aerial death. Shaped by the specificity of their location and time, each case study in this paper highlights a different dimension to what medical masks do and what they are understood to represent. Our exploration does by no means attempt to be exhaustive in its analysis of the layered history of medical masks. We admit that this history is much broader in scope. Instead, and more modestly, our case studies demonstrate ways in which and the extent to which masks negotiate the relationship between self and other in an entangled elemental atmospheric environment. We argue that biopolitical work should take serious insights from elemental thinking.

## 2. Thinking elementally about biopolitics

Over the past few decades, phenomenologists have (re)turned their attention to thinking with and about the elements (Abram, 2010; Irigaray, 1992; Lingis, 1994). This expanding body of work has inspired geographers and others to study: air (Adey, 2015a; Jackson & Fannin, 2011), fire (Clark, 2019; Marder, 2020), dust (Nieuwenhuis & Nassar, 2018), and water (Irigaray, 1991). Of course, thinking elementally is neither new nor necessarily a preoccupation reserved to western philosophy (see, for instance, Kanu, 2013, Chapple, 2020). Perhaps the most popular example of elemental thinking is Feng Shui, an ancient Chinese cosmological tradition, which, in the west is understudied, but, globally, is the most widely applied science for modulating air and atmospheres (Bruun, 2008). If anything, the recent ‘elemental (re)turn’, which Kevin McHugh (2022: 376) aptly describes as the ‘return of the repressed’, seems to be more of an overdue correction within western knowledge production than a shift towards something radically novel.

The move to elemental thought in western academia can be situated within broader concerns over the (uneven) implications of climate break-down, air pollution, wildfires, dust storms, and other climatological events or respiratory crises, such as COVID-19, that collapse the unstable and porous borders of inside and outside. The environmental philosopher Macauley (2010) argues for a moment of ‘elemental anamnesis’ (meaning ‘recollection’, or ‘loss of forgetfulness’). Elemental thinking in his interpretation replaces the problematic and dated category of ‘nature’ and embraces a form of thinking with elemental forces.

The intervention is marked by a conscious effort, an act of remembering and reflecting upon our (human)animal bodies' immersion in the elementals world that travels through, with and within 'us'. Peter Adey (2015b: 100), whose own elemental thinking is primarily focused on air, explains that thinking with the elements helps 'recognise that there is an outside or excess of the various ways we think about, feel, and measure the air as well as how we go about breaking the air down into components.' In the introduction to a recent special issue on the 'elemental Anthropocene', Neale et al. (2019: 111) argue that thinking elementally helps decentre 'human life in terms of fundamental chemical or physical components that are, in themselves, neither wholly defined by or dependent upon human life.'

All this, however, still leaves us with the question what we mean by 'elemental'. The adjective referring to its equally non-exhaustive and ambiguous attribute 'element', is difficult to pin down. McHugh (2022: 376) recently describes it as a 'promiscuous term with a serpentine history in philosophy and science relating with forces of nature as medium and substrate of all matter.' Elements can neither be reduced nor made synonymous to materiality, even though elemental relations are material and constituted by interactions of different materialities, for instance, in the form of atoms, molecules and ions. Adey (2015b: 99) explains that what we think of the elemental is more 'than material, or more than geophysical, but not necessarily separate from these approaches.' Engelmann and McCormack's (2021) writing provides us with perhaps one of most explicit engagements with the term. Their writing invites us to think about elements in four different 'orientations.' First, ontologically, elements are the 'matter' that circulate between bodies and worlds. Second, starting from but not ending with the periodic table, elements can be thought of as the malleable and manipulatable arrangements of and interactions between unstable 'molecules.' Third, and more classically geographical, elements can be conceptualised as situated spatialities that shape 'milieux'. A fourth, and (post)phenomenologically, orientation invites to see elements as sense-making, sensory, legible, experienced in the form of 'media'. These four orientations are not delineated or distinct from each but cohere, interact, entangle, fuse, and may further breakup, disintegrate, and regenerate elemental worlds.

Exposure to elemental worlds is marked by an affective mode of experiencing of that which in one way or another is foundational, anterior to and independent from human or other animal existence. An example of our (human)animal embeddedness in the elemental world is the feeling of wetness of water before it cognitively is known, classified, and objectified as 'water'. Another example, important for our argument, is the breathing of air which precedes any thinking of it (see also Irigaray, 1999). The elemental enjoys (post)phenomenological qualities that originate from outside the body but are experienced, willingly and/or unwillingly, through and come along with the body. This does not mean, however, that elemental milieux are beyond biopolitical control, although they pose a serious challenge to sovereign power in, for example, situations of atmospheric crisis. Neither does it mean that elemental forces are universal or that they exist outside of difference. The bodies located in and exposed to elemental worlds are neither anonymous nor homogenous. Intersections of gender, class, ability, and race determine the kind of and extent to which bodies are entangled and exposed to the elements. Some bodies breath 'cleaner' air than others. An example of atmospheric inequality are the hundreds of thousands of mostly male, working class and often racialized bodies suffering from pneumoconiosis, the world's most common occupational disease, which is inflicted by their long-term inhabitation and inhalation of harmful elemental dust worlds (Nieuwenhuis, 2022). Elemental forces continuously and in various ways negotiate with the biopolitical. The specific negotiation we focus on in this article is the filtering device through which molecules are rearranged to create breathable and 'cleaner' elemental milieux.

Each human breath has a volume of approximately 500 ml of air. The molecular composition and exact mass of each breath, however, will

differ on where, when and whose body breaths. Kathleen Stewart (2011: 452) uses the term 'atmospheric attunement', which she describes as 'a force field in which people find themselves', to turn attention and give expression to the diversity of everyday encounters between sensory bodies and their surroundings (or 'spheres'). Spackman's (2020: 420) use of the term in expounding the politics of smell explains that attunement 'operates at the edge of perception'. A focus on attunement reveals 'an aesthetic registration of the way that individual lives are entangled in systems of molecular attention' (Spackman, 2020). Writing on the everyday inhalation of domestic formaldehyde, found commonly in disadvantaged homes, Shapiro (2015: 374) describes how attunement often takes place without bodies having 'necessary knowledge of exactly what chemicals they are attuning to.' Yet, he explains, '[i]t is through the articulation of these small corrosive happenings [resulting from sustained inhalation of domestic formaldehyde] that residents reckon with how their homes are decomposing into them as they decompose in their homes.' Inhabitations of such 'unbreathable worlds' shape the minutiae of everyday life, affecting which bodies can do what, with whom and when (see also Carel, 2018; Kenner, 2021). They also reflect broader social social-elemental 'attitudes' that disclose breathing as a specific and unequal political relationship to the air. Atmospheric conditions, as Simmons (2017, np) writes, 'are collective and unequally distributed, with particular qualities and intensities that are felt differently through and across time.' 'Atmospheric violence' takes on different temporalities, some fast and explicit (Feigenbaum & Kanguieser, 2015; Nieuwenhuis, 2018; Sloterdijk, 2009) others slow and mundane (Davies, 2022; Kenner, 2021), which discloses and makes explicit a respiratory dependency that unevenly ties bodies to an elemental world that is not independent from but always already fused with questions of the (bio)political.

In that context, masks, or 'breathing apparatuses' (Sloterdijk, 2009), constitute technological devices that serve to retune (or 'recondition') molecular milieux more favourable to respiratory bodies. We study these prosthetic extensions as techno- and biopolitical object-interventions as evolving with atmospheric episodes of pathogenic crisis. In the historical management of epidemics, Michel Foucault (1977, 2003; 2006; 2009 [1978]) observed transformations in the modes of governance from expelling infected bodies during Europe's leprosy epidemic, to quarantining at the time of the plague and culminating in mass vaccinations and statistical diagnoses on a population level during the smallpox epidemic. Each of these epidemics, as Thacker (2009: 141) explains, speaks to the 'minimal recognition of an epidemic as something-that-passes, and passes between and through the multiplicity of bodies that constitute the body politic.' Each political response to the 'problem of multiplicities' constitutes an intervention to establish a biopolitical order which, through different spatial techniques, targets the sovereign governance of populations' life and health, forming a 'living biomass displaying particular biomedical traits' (Thacker, 2009: 142). Sarasin (2008: 279) goes as far as to argue that the 'aspiration of power to bring about order' amidst the threat of infection is central to the 'structure of Foucault's thinking' on power. A mask, we argue in this paper, is a specific 'biopolitical technology' (Hay, 2021) that aims to retune atmospheric relations in a moment of crisis.

Elemental thinking provides a framework to explore how a mask's materiality and chemical capacity engages with biopolitical questions. It offers a pathway to examine the biopolitics of mask-wearing/anti-masking by focusing on the role of such interventions in body-air relations. While recognizing masks as technologies that are integrating into daily routines and reshaping social structures (Lupton et al., 2021), this paper highlights their role as everyday breath-filtering devices, enabling elemental segregation by blocking and negotiating specific viral aerosol and toxicant flows, reshaping bodily attunement and inhabitation. Unlike air purification devices, which conditions air voluminously and in larger enclosures (Böer, 2016), masks filter the immediate materialities that enter the individual body's interiority and exercise a regime of bodily sovereignty that separates bodily inside from



outside, self from other, and life from death.

A mask is simultaneously about the inside of the self and the outside of the other. It negotiates and 'conditions' these divisions (Ore & Houdek, 2020), blurring medical and political distinctions. It does not conceal the underneath, but rather shapes, affects, and gives meaning and expression to the outside that collapses into the inside, and the inside that collapses into the outside. The function of a mask, therefore, cannot be limited to the purpose of technically protecting the inside from a threat that exists on an outside, as it also acts as a marker of the location of outside and inside, and, therefore, as a denominator of the identity of self and other. In an autobiographic section on being 'suited up in both racial skin and chemical mask', Mel Y. Chen (2012: 201), whose work addresses how toxic atmospheres are endowed with both chemical and social qualities, explains how 'the skin of the mask ambivalently locates the threat on either side of it'. They write that 'the same ambivalence may be attributed to the 'skins' of some toxic bodies, whereas the synecdochal attribution of toxicity applies either to the (rest of the) toxic body itself (the mask standing for the human SARS vector) or to an exterior, vulnerable body that renders it so [a blackness that is toxic to a white collective]'. Like skin, which equally is porous and relational, masks negotiate and regulate various embodied borders that not only separate inside from outside, self from other (see also Hay, 2021), but, following Chen's thesis, also police divisions between the animate and inanimate.

A mask regulates breathing as an elemental process of animation (from *animāre*, 'to fill with breath'). If breathing is porous and permeable, a reminder of embodied vulnerability towards others, '[muddying] the distinction between subjects and environments, and between subjects' (Choy, 2011, p. 157), a mask serves as an attempt to regulate these distinctions. Masks operate in an elemental atmospheric (pre)condition and, as such, can (be used to) negotiate always already shared embodied entanglement. In moments of atmospheric crisis, such as during COVID-19, masks both represent and act as markers of the shared threat of contagion of air and of social difference. It is especially, but not exclusively, in conditions of atmospheric uncertainty that masks carry with them an impossible promise of immunity against the outside. The promise to keep 'death' away by filtering undesirable life (in the form of 'toxins' or 'viruses') means that masks, as techniques of the management of the individual body, actively participate in biopower for the governance of the health of the population.

As said, it is not by coincidence that the history of medical masks develops with toxic atmospheres and the political transformations they generated. We argue that the concurrent development of masks and political responses to atmospheric crisis reflects an evolving biopolitical attunement to atmospheric entanglements. Masks bring with them an order of inside and outside in a situation of elemental fluidity that constitutes 'our' shared embodied entanglement. Moments of atmospheric crisis unsettle and disrupt the delicate equilibrium that makes possible the life of the individual self and the health of population. In the next section, we explore the first known use and design of a medical mask at the time of Europe's second plague pandemic.

### 3. Beaked masks

The early modern physician Charles de Lorme (1584–1678), who served as the first doctor at the Courts of Louis XIII, Louis XIV and Henri IV, is believed to have written one of the earliest treaties (1619) on medical gowns at the time of the great plague (from Latin: 'to strike' or 'to blow') outbreaks of the 17th century. The Venetian-trained doctor designed the garment based on military outfits worn at the time by

French soldiers.<sup>1</sup> Considered today to be a precursor of the modern hazmat suit, the costumes were made air-tight to prevent physicians' contamination by 'pestilent air'. Their most dramatic feature, however, is their characteristic nose-mask (Fig. 1), which, as de Lorme (in Luce-net, 2007, np) described, was 'half a foot long (16 cm) in the shape of a beak, filled with perfumes ... [It] has only two holes, one on each side at the place of the openings of the natural nose: but it may be enough for breathing and to carry with it the air that we breathe the impression of the drugs [odorous substances] contained further along the beak.'<sup>2</sup> The mask mediates and negotiates medical as well as metaphysical relationships to the air.

Muckart (2009) explains that the eccentric design was not



Fig. 1. 'Doctor Beak of Rome/Clothing against Death in Rome' [*Doctor Schnabel von Rom/Kleidung wider den Tod zu Rom*] (Fürst, 1656)<sup>3</sup>.

<sup>1</sup> Falk (2011: 251, fn. 5) entertains the possibility of a "relationship between the beak man of the plague doctor and the [antisemitic] stereotype of the Jewish nose [*Judennase*] that makes its appearance as early as the thirteenth century."

<sup>2</sup> Although such masks were made and meant to protect the wearer from "bad air" (*miasma*), there has been some debate more recently about whether or not the mask might unintentionally have helped prevent the plague's transmission via fleas (Basham, 2015).

<sup>3</sup> Written in a mix of Latin and German, the text under the image is a social critique of the high price that plague doctors charged.

exclusively a means to disarm and prevent bad airs from entering the body, but also an affective instrument to inflict ‘fear’ and compel sinful victims of the plague to ‘repent’. Falk (2011) remarks that the masks might have had the apotropaic function of frightening the plague itself. With his staff ‘brandished like a bishop’s crozier, its point surmounted by an hourglass sprouting demonic bat-like wings ... Dr Beak projects an almost religious terror’ (Bovenmyer, 2016, np). The mask and the political-theological symbolism of death approaching can hardly be confused with the image of a doctor that heals. More probable is that the doctor evoked fears for a foreboding death (a *memento mori*) that was imagined to be in, with and travelling through the air. The anonymous figure is at one and the same time hyper visual and secreted. The doctors underneath the mask, whose human identities remained unknown to those he treated, is positioned in a liminal place in-between the realm of the living and that of the dead. It is tempting to see the wearer of the mask as *homo sacer*, which, as Agamben (1998) in another context describes, is neither fully human nor reduced to the status of animal.<sup>4</sup> Although closer to the ‘toxic Other’ than to the self, beak doctors, who often are said to have been Jewish (Sennett, 1994), are at the border between inside and outside, having access to both realms, but belonging to neither.<sup>5</sup>

The dramaturgical mask, now best known for its gothic associations with the Plague Doctor character in Venetian *commedia dell’arte*,<sup>6</sup> constituted ‘an extension of the development of barrier technologies that helped to create distances and boundaries between those who may have touched the plague and those who feared contamination’ (Carmichael, 2006, p. 57). In a dissertation on its English reception during the Great Plague of London (1665–1666), Muckart (2009: 66) writes that the costume, ‘which was meant to contain not just the body of the plague doctor, but through fear, the denizens of London, was the corporeal expression of policies of containment.’ The mask not only dehumanises the wearer, positing him in an altogether different realm, but the very appearance of the mask affectively repels anyone that takes notice. Fig. 1 depicts how the very sight of the beak mask propels children, displayed in the background of the drawing, to flee for sanctity and safety in the nearby city. The mask acts as an embodied technology that polices dichotomous borders between inside/outside, self/other health/disease and life/death. Its wearer, in short, appears only as a ‘doctor’ in name, as their power stemmed neither from the act of healing nor from treatment of the population, but instead from the affective materiality of the divisive and dividing beak mask they wore. Alongside other technologies, the mask served as an elemental bordering device with the purpose of repelling and excluding both contaminated bodies and the contaminating pandemic. The former and the latter are treated synonymously as a miasmatic ill that threaten to contaminate the atmosphere and bodies of the healthy population.

It is probably important not to overemphasise the eccentricity of the masks too much, as this could risk placing them outside of their historical context. Instead, we situate the mask within a broader set of

contemporaneous technologies and techniques in the making of a topology of sovereignty. The device and the individuals that worn them divided the population in a similar way that quarantining strategies did at the time. The term ‘quarantine’ (from the Italian word for ‘forty’), understood as a spatial, temporal and embodied strategy of societal distancing and engineered insulation, was first introduced in 1377 in Dubrovnik (then Ragusa, an important trading port), making it the first ‘government in the world to formulate, develop and apply the concept’ (Tomić & Blažina, 2015, p. 229).<sup>7</sup> Initially, quarantine referred to a period, measured in days, in which the movement of incoming travelling traders was restricted. After careful medical and bureaucratic inspection, involving enquiries of past travels, outsiders were separated from the healthy population and housed in a separate and isolated location. In the form of the first permanent Health Office [*Chazamorbi*], quarantine legislations granted medical authorities with relative autonomy from the Church and state to control a large part of everyday life. Health officials were given such powers that they were able to prosecute anyone who refused to comply with the laws, allowing them to burn property and even force healthy citizens to remain inside their homes (Tomić & Blažina, 2015). In short, these newly established medical authorities were made responsible for the health of the urban population, but also enjoyed powers over decisions on whose bodies could stay inside the city and those who could not. Gradually, then, we witness the emergence of an atmospheric governmental regime that approaches and manages life as an elemental condition exposed and vulnerable to epidemics that contaminate and permeate through bodies. It is within this context that the beak mask stands out as the sometimes forgotten, but perhaps most explicitly elemental medium for negotiating the air to secure the population.

The empty, quarantined city of exceptional biopolitical rule forms the backdrop of Abraham Bosse’s 1651 front piece of Hobbes’ *Leviathan* (Fig. 2). Falk (2011, 2012) prompts us to think about the depiction of the two largely forgotten beak doctors that appear roaming around the city



Fig. 2. Front piece of Hobbes’ *Leviathan* (1651).

<sup>4</sup> Agamben (1998) famously uses the example of the werewolf [*loup garou*].

<sup>5</sup> The mask’s history is shrouded in mystery and controversy. Writing in the context of Renaissance Venice, Sennett (1994: 225) explains: ‘If the touch of Jews seemed like a physical, sexual infection, as Jews became associated in the public mind with the spread of syphilis, Jewish doctors were also called on to treat the disease. The race of the doctor became in the public mind inseparable from the taint of the disease itself.’ Sennett (2012: 242, 243) continues that ‘most Christians shrank from physical contact with Jews and most doctors in Venice were Jewish ... [The mask] made to look half-human, half-bird ... was meant to bridge that fear. When a doctor donned the bird-mask, his patients relaxed about being touched, pushed and prodded physically by a Jew; some strange creature instead seemed to make physical contact.’

<sup>6</sup> Known as *Medico della Peste*, actors wearing the mask project a *persona*, which, in Latin, refers to the individual wearing a mask who becomes other, a character (see also Johnson, 2011). For an in-depth analysis on masks and identities, see Belting (2017).

<sup>7</sup> The original strategy refers to a 30 days (*trentina*) period (Tomić & Blažina, 2015).



church (Fig. 3).<sup>8</sup> Besides the two disproportionately large-loomed figures located at the very edge of the image and the few soldiers policing the street, the rest of the desolate city seems to be in an exceptional condition of lockdown. Soldiers and beak doctors both worked under the auspices of the sovereign to protect the body politics. They do so, however, in distinctly different capacities: the former polices the interior, while the latter prevents ‘corruption’ from the outside from leaking into the inside. ‘The plague doctor finds his counterpart in the soldier: both risk their lives in their commitment, but at the same time both refer to the fragility of the state, they mark the limits of the Leviathan [state]’ (Falk, 2011, p. 263) Falk (Falk, 2011) links the masked men to a biopolitics of inclusion and exclusion. She writes that the beak masks [*Schnabelmasken*] help us imagine an early relationship between the plague, health, and sovereignty. The sovereign possesses the jurisdiction to ban entry of ‘toxic bodies’, which at the time referred to Jewish bodies, into the city proper to safeguard the health of the population.<sup>9</sup> We add to this relationship the elemental nature of the atmosphere, as it is through the mask’s filtering of air that the other three elements come together.

Plague doctors themselves had the capacity to move in-between the realm of the living and the dead, and the healthy and the sick, but they also played a role in the ‘filtering’ process that shaped the inside by means of separating and excluding it from an outside. They were able to do so through their masks, which, on the one hand, repelled ‘toxic’ air from entering the body (politic), and, on the other hand, enabled their wearers to dwell in a liminal zone, or ‘threshold of indistinction’ (Agamben, 1998, p. 105), between inside and outside. The beak mask, in other words, exercises sovereignty not by means of directly sanctioning rules onto bodies but by dwelling inside the atmospheric conditions that enable embodied life and death. It would take a different kind of plague and biopolitical order for masks to be worn as a biopolitical technology of the self.

#### 4. Infectivity of the breath

A person with a mask may almost feel insured against a suspicious coughing neighbour. It will be very difficult, however, to enforce the wearing of masks and still more to have them properly worn.

(Wu, 1926, p. 399)

Limited to pest-treating physicians and later 19th century surgeons, medical masks remained only sparsely used by those outside medical professions. This changed with the outbreak of the Great Manchurian Plague (1910–1911) in the Chinese-Russian border region. The disease,



Fig. 3. Close-up of front piece of Hobbes’ *Leviathan* (1651).

which is said to have killed at least 60,000 people, provided the impetus for the mass introduction of medical masks. Lynteris (2018) explains that this change has to do with the diagnosis of its underlying cause, which no longer was sought in the idea of bacterial contagion via fleas, but in airborne transmission between humans<sup>10</sup>. To be sure, the Manchurian Plague, which had a near total death rate, was the first recorded manifestation of the pneumonic plague (Gamsa, 2005). The biopolitical response to the crisis enjoys parallels with the management of 18th century smallpox, analyzed by Foucault (1977, p. 2009 [1978]), in that health governance centered on the level of the population rather than on individuals, who, importantly, were made responsible for their own body’s breathing.

The Malayan-born physician Wu Liande (in Lei, 2010, p. 80), who led the Chinese Government’s anti-plague campaign, warned that the disease ‘spread almost entirely from man to man ... so that all efforts at suppression of the present epidemic may be concentrated upon the movements and habits of man.’ The shift from bacterial contamination via fleas to direct transmission between humans propelled embodied relations with the air to become a central object of health governance. Epidemiologists and physicians argued that the ‘infectivity of the breath’ (Strong & Teague, 1912) meant that ‘the wearing of masks and the proper covering of any surface of the skin where fresh abrasions are present are important, personal, prophylactic measures in pneumonic plague’ (RPC, 1912, p. 446). Wu (in Sin, 2016, p. 90) remarked that soon after the discovery of airborne transmission ‘inhabitants showed undue precaution, in that almost everyone in the street was seen to wear one form of mask or another.’

Wu’s own design of the original gauze mask (Fig. 4), chosen from several other models, received praise from physicians for its ‘cheapness’, ‘simplicity’, ‘comfort’ and ‘protection’ (Fang, 1912, p. 288). In his *Treatise on Pneumonic Plague*, written for the League of Nations, Wu (1926) links his invention to the earlier beak masks, for which he

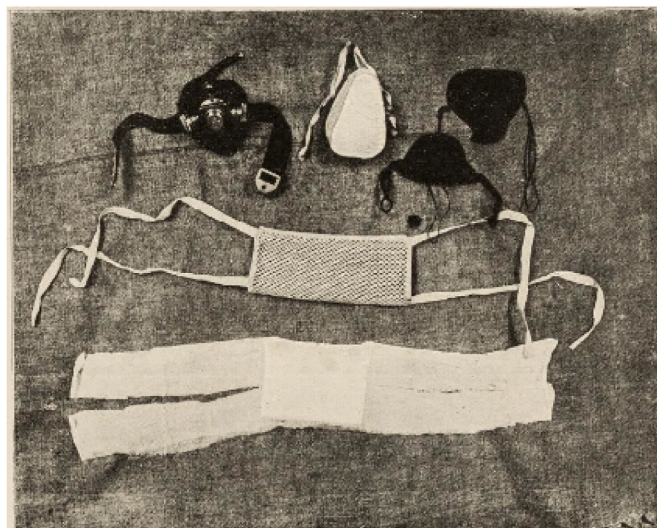


Fig. 4. ‘Types of anti-plague Masks. Lowermost was introduced by Dr. Wu Liande and recommended by Mukden Conference in 1911’ (Wu, 1926).

<sup>10</sup> *Yersinia pestis* was discovered by and named after the Swiss bacteriologist Alexandre Yersin in 1894. The discovery was an important step in the evolution of germ theory and modern bacteriology, led by Louis Pasteur, Robert Koch and others, which replaced earlier Miasmatic theories. For an in-depth discussion of the introduction of Western medicine and its effect on Chinese medical theories, see Lei’s brilliant *Neither Donkey nor Horse: Medicine in the Struggle Over China’s Modernity* (2014).

<sup>8</sup> Later editions of the book’s front piece do not feature the beak doctors.

<sup>9</sup> The ‘Jewish ghetto’ saw its first iteration in 1516 Venice (Sennett, 1994).

expressed his admiration. Masks, for Wu, were among the most important anti-epidemic measures because they directly targeted the embodied link between air and body. Seemingly developed independently from Jan Mikulicz-Radecki's surgical masks, which we will discuss later in more detail, Wu's cotton-gauze masks proved highly effective in preventing infection of the respiratory passage and must have had a considerable effect in preventing the spreading of the epidemic inside and outside of China. The initial reception had not been all positive, however. Resistance against its use came from both domestic and foreign physicians. The former argued that its principles contradicted practises used in traditional Chinese medicine, while Western physicians, who, aware of Alexandre Yersin's earlier discovery of the plague bacillus, expressed scepticism about Wu's claim on the pneumonic quality of the plague.

With support from the national government, who found itself in a context of colonial pressure to modernise, anti-plague masks were promoted, distributed, and shared among doctors, patients and affected populations, making it 'the first time that such an epidemic containment measure was attempted' (Lynteris, 2018, p. 444).<sup>11</sup> The comprehensive effort consisted of older biopolitical quarantine and exclusion strategies, including house-to-house inspections, segregation camps and mass cremations (Strong & Teague, 1912), but also contained elements of a newer biopolitical approach in that it constituted 'medical campaigns that [tried] to halt [the] epidemic or endemic phenomena' (Foucault, 2009 [1978]: 10). Chinese politicians at the time described the programme as having 'the most brutal policies seen in four thousand years ...' (Viceroy Xi Ling in Lei, 2010, p. 82). In their analysis of the public's reception of the interventions, Lei (2014: 29) states that people 'feared [the anti-plague measures] more than the plague itself.' Blame, shame, and punishment fell especially hard on the bodies from migrants from Shandong province (derogatory: 'coolies'), whose hunting of the plague transmitter, Siberian marmots, was said to be responsible for spreading the disease (Lynteris, 2013). Their behaviour was considered 'backwards', 'unsanitary', and their 'floating' bodies were made synonymous to the disease itself.

Although being highly controversial, and dismissive of traditional Chinese medicine, which was framed as symbolic of China's 'backwardness', the new 'scientific' measures constituted a radical state-led programme to modernise public health on the level of a national population. Despite the many casualties, many of whom fell victim to the 'medicine' rather than the disease, authorities hailed the campaign as a success and claimed having prevented a global catastrophe (Rogaski, 2021). The event helped strengthen the national government which endorsed western and 'scientific' attitudes and approaches to public health in China (Knab, 2011; Liu, 2016; Summers, 2012).

Lynteris (2020, np) writes that the masks were not only effective but also an 'excellent PR tool for proclaiming China's position as a modern, scientific nation.' Masks became a mainstay in China, but photos and stories of their 'successes' were shared internationally. Only a few years after the epidemic, impelled by the mass deployment of gas masks in WWI (see also Carmichael, 2006), mask-wearing 'by lay people [in the U.S.] was among the most novel public health practices introduced in the 1918 ['Spanish Flu'] pandemic ... When [American] cities lifted public-gathering bans, they often did so with the proviso that people wear masks when attending theatres. Mask wearing gained considerable popularity as an emblem of public spiritedness and discipline' (Tomes, 2010, p. 56). For those Americans who could not afford a mask, but still wanted to participate in public life, the cloth 'handkerchief' offered an outcome. Handkerchiefs (literally 'hand cover for the head') were so

pervasive in everyday life that they became a cultural symbol of health and good manners long after the 1918 pandemic (Ewing et al., 2014).

The move to individualised mass mouth-covering was part of a broader campaign to control the spreading of diseases by policing bodily orifices. Policing, however, was not coerced by means of discipline, as had been the case in previous moments of crisis, but, closer to Foucault's (2009 [1978]) reading of smallpox, through an everyday normalisation of biopolitical techniques. The discovery of atmospheric transmission meant that coughing, sneezing, breathing and all other elemental relations that bodies share with the air were framed as potentially hazardous. Breath was made the responsibility of the individual, who had a duty to secure the collective health of the population. Bodies found to be at risk of contaminating the public air, either by refusing or forgetting to use a mask, were considered a health risk, morally reprehensible, and even held accountable by law (Fearnley & Wu, 2022; Tomes, 2010).

The mass-masking of populations, in which the Manchurian Plague played an important role, marks a change in the governance of epidemics in China. Masks and attires worn by medics of the newly established Manchurian Plague Prevention Service, of which the Cambridge University-educated Wu was the Director, heralded a comprehensive and 'scientific' approach to the public health management of the epidemic. Medical masks were not only a medical measure, but, as Lynteris (2018: 447) argues, rendered into an 'organizing principle of ... a vision of state-organized medical reason and hygienic modernity.' The newly ushered in biopolitical order, which shares parallels with that of the one described by Foucault in his study of Europe's smallpox epidemic, rests on a 'scientific' approach to governing the health of the population, while establishing self-governance on the level of the individual. Masks, as 'liberal objects' of as '(self-)control and (self-)security' (Hay, 2021, p. 365), formed an important part of this new biopolitical health protocol. In the next section, in which we explore the most recent pandemic, we study the continued central role that masks play in mediating, modulating, and negotiating an ever greater and layered array of insides and outsides.

## 5. Toxic breath

Thus far, our writing has been concentrated on thinking through the elemental relationship between masks and the governance of life in the context of state sovereignty and biopolitics. In this section, we advance our analysis by exploring masks' multiple and overlapping roles in COVID-19's anti-mask politics. Nearly a century after the introduction of mass masking in China, facemasks resurged globally for pandemic containment. 'Mask mandates' introduced masks to protect the lives of self and others, mediating chemical materialities, elemental entanglements, and 'communicating solidarity with the immunological common' (Bratton, 2021, p. 93). Masks unite and divide bodies, embody borders, shared vulnerability, and collective breathing amid differentiated and uneven air.

As depicted in the introductory vignette of this paper, a bus scene in Taiwan during COVID-19 exemplifies how atmospheric change can elevate mundane scenarios into emotionally charged encounters. The environments we navigate daily - buses, trains, supermarkets, parks and other shared places - suddenly feel awry and suspect. Elemental unknowns dictate emotions, evoke affect, rupture routines, and reshape landscapes, social conduct, identities, contracts, behaviors, and relations. The seemingly trivial decision over wearing a mask on a visit to the local corner shop becomes intricately interwoven with a complicated, layered and differentiated politics. Aptly described by Tuzcu and Britton (2022: 185) as 'permeable materials between discourses', masks unveil more than they obscure. Masks disclose and articulate existing social tensions, which are brought to the fore when differentiated bodies meet in a shared atmosphere. Especially in neoliberal societies, wherein masculine individualism is celebrated, mask-wearing is often perceived as feminine, feeble, and fundamentally 'unfree' (Kahn, 2022; Sharp, 2022, pp. 1-18). In this section, we focus our attention on the use and

<sup>11</sup> It is important to mention that the necessity of masks was not immediately accepted by virologists and epidemiologists at the time. The leading Japanese plague authority in East Asia at the time, the bacteriologist and protégé of Robert Koch, Kitasato Shibasaburō (in Lei, 2014, p. 27), felt the need for masks 'unnecessary and exaggerated.'



symbolism of masks in anti-masks protests in the specific context of the United States where, according to Sharp (2022:11), ‘the refusal to wear masks has apparently been most closely entangled with performances of toxic masculinity’.

In a widely circulated image (Fig. 5), a demonstrator in a Pennsylvania-based rally holds a placard on which a typical surgical mask is depicted with a slogan in bold, red capital letters: ‘THE NEW SYMBOL OF TYRANNY MUZZLE’ (Collinson & Hu, 2020). In popular anti-mask protests across North America and Western Europe, conspiracy theorists, libertarians and right-wing antagonists compared medical masks to ‘muzzles’, or ‘speech mufflers’, conflating instruments of respiratory protection with dehumanizing instruments originating from a concealed, yet not so distant colonial past. Gordon and Wetherbee (2022) describe how the U.S right-wing have used such ‘viral’ imagery to portray masks as metonymic approximations of authoritarianism and government overreach. The act of glorifying non-compliance with mask mandates enables ‘anti-maskers’ to sidestep the principles of a liberal governance that emphasizes personal accountability for safeguarding one’s own respiratory health. Spurred on by U.S. president Trump, who ridiculed mask wearers, ant-maskers also challenge the legitimacy and authority of the scientific consensus that since the 18th-century small-pox epidemic marks the modern health management of populations (Foucault, 2009 [1978]). Instead of recognizing masks as symbols and manifestations of shared universal vulnerability within an entangled elemental milieu, a catalyst for an atmosphere of ‘altruism and solidarity’ (Cheng et al., 2022), they are misconstrued as unpatriotic abstractions - emblems of authoritarianism, censorship, surveillance, and control.

The most frequently chosen target in their protests is the surgical mask, which, given their availability and affordability, perhaps is unsurprising. The history of the surgical mask is wrapped in an attuned elemental awareness of the porosity of human body and the biopolitical desire to secure and border its fluidity, relationality and permeability. In the same year that German bacteriologists conclusively evidenced that diseases can be transmitted through air-borne droplets, the impressive ‘father of endoscopy’ Jan Mikulicz-Radecki (1897) invented the surgical mask [Mundbinde, or ‘mouth bandage’]. Its design served to prevent atmospheric germ contamination and sepsis during surgical operations. Spurred by Pasteurian germ theories, the invention of surgical mask displays a medical obsession with separating inside from outside. The medical rationale, based on the idea ‘that a single microorganism emitted by the surgeon’s breath could kill a patient’ (Schlich & Strasser, 2022, p. 116), meant that coughing, sneezing and even speaking were

treated as dangerous conduits of contamination. Physicians even were prohibited to communicate orally in operating theatres. In other words, it was the ‘danger of human exhalation’, the very act of breathing, that lies at the roots of the invention of the now (in)famous three-ply non-woven fabrics masks (Spooner, 1967, p. 76). In an effort to enforce ‘perfect sterility’, safeguarding an absolutist separation, involving the spatial bordering of molecules and milieux, these bio-technical masks helped regulate and circumvent the risk of disease transmission by respiration.

Competing with this biopolitical history centered on managing the fluidity of elemental life, in service of protecting the bodies of others, we find a necropolitical discourse of a ‘muzzle’ that entraps dehumanized bodies. In today’s vocabularies, a ‘muzzle’ commonly is associated with the risk of biting dogs, but under colonial conditions the device acted as instruments to enslave othered bodies. One commentary explains that black enslaved bodies were ‘clipped between the tongue and chin, and fixed behind the head by two strings, one surrounding the chin and the other surrounding the nose and forehead’ (Kilomba, 2010, p. 16). Although the dehumanizing masks did not impede the capacity to breathe, they restricted the ability to eat, speak and shout. The human muzzle, Kilomba explains, ‘represents colonialism as a whole’ (Kilomba, 2010), dehumanizing, incapacitating, and silencing the colonized body by means of cutting off the voice, a respiratory relation, from the (human) world.

So-called ‘anti-maskers’ appropriate the dehumanizing historical legacy of the muzzle as a political metonymy to protest the ‘freedom’ not to wear a mask or be vaccinated. Instead, either directly or by implication, they assert a right to die, even if that means being complicit in the killing/dying of, disproportionately non-white, others. This call for libertarian freedom (to be *with* virus rather than protecting against it) is made by co-opting the feminist dictum ‘my body, my choice’ and ‘through laying claim on humanness vis-à-vis the un-humanity of racialized Black others (for whom mask/muzzle/captivity is deemed natural)’ (Shakhsari, 2022, p. 239). Underpinned by a misplaced fear of becoming nonhuman or a subject of othering – built upon the historical trauma of the Black subject – ‘the anti-masker cries of ‘individual freedom’ are in fact passionate protections of the homogenous - of a whiteness that articulates itself through a disregard for the lives of Others’ (Bratich, 2021, pp. 258–259).

Bratich (2021) and others (Grunawalt, 2021) have analyzed the west’s anti-mask movement/ant-lockdown movements as expressions of necropolitics. Whereas sovereignty in biopolitics engages with practices of and techniques for managing life, sovereignty in a condition of



Fig. 5. Mask-mandate dissenters held a placard in a rally outside of the Pennsylvania Capital Building in Harrisburg, Pennsylvania on May 15th, 2020 (Credit: Mark Makela/Getty Images).



necropolitics resides 'in the power and the capacity to dictate who may live and who must die ... In this case, sovereignty means the capacity to define who matters and who does not, who is disposable and who is not' (Mbembe, 2003, pp. 11, 27). In other words, whose breath counts, and whose does not? Grunawalt (2021, np) identifies an 'eugenic-adjacent ideology beneath [the anti-mask] movement' which legitimizes and justifies the act of sacrificing the lives of the poor, elderly, and disabled to enable a white and 'healthy' national body politic to survive, prosper in their 'normality'. A popular language of 'weak' and 'strong' bodies reveals a necropolitical regime that accepts the dying of certain bodies not only as unavoidable, but as necessary for the health of a national self that is white and masculine. Black, poor, aged or disabled bodies who 'can't breathe', as a consequence of pandemic and/or endemic toxicity, 'are simply too weak and may die anyway' (Hristova & Howard, 2021, p. 476).

The tension in the move from a politics of life to a politics of death operates through the mask, which, as we discussed earlier, polices and negotiates the conditions of animation. Respiratory devices, such as surgical masks, which medically and materially are designed with in mind elemental relationality and entanglement, are denied and actively resisted by 'anti-maskers' who embrace 'a whiteness that articulates itself through a *disregard* for the lives of Others, an *indifference* to those who are different' (bid.: 259, original emphases). It is no coincidence that those who wear a mask are perceived as weak, expandable, and/or enemies of the nation. Roberts-Miller (2023) recounts events of masked airline attendants, healthcare workers and masked others who were physically assaulted and verbally accused of satanism or, worse, communism. Anti-maskers replace the objective of mask-wearing from a technique focused on managing the conditions for embodied life against death with a carnivalesque 'necropopulism' (Bratich, 2021) that '[subjugates] life to the power of death' (Mbembe, 2003, p. 39). This, Bratich (2021:262) explains, is 'a populism that, under the banner of specific types of people (white, masculinized, Christian), seeks to extinguish the life that allows any people to persist'. What remains when biological lives are sacrificed are vacuous political abstractions entitled 'nation' and 'country'. Indeed, as Texas Governor Dan Patrick (in Stieb, 2020) stated in early 2020: 'There are more important things than living, and that's saving this country for my children and my grandchildren and saving this country for all of us'. Restrictions in the state were soon lifted with disproportionately fatal consequences for Black and Hispanic bodies (Platoff & Astudillo, 2020).

## 6. Conclusion

In this article, we embark on an exploration of the historical and contemporary significance of facemasks as a respiratory technique, situated in-between elemental entanglement and biopolitical governance, epitomizing the diverse manifestations of what Nguyen (2020) aptly calls 'respiratory publics.' Our inquiry spans a spectrum of atmospheric crises that shape the meaning, logic, and functioning of masks, ranging from the enigmatic beak masks of early modern Europe to the widespread adoption of gauze masks in the Russian-China border region of the early twentieth century and the contemporary abuse of muzzle masks popular amongst the American right. Our analysis unravels the intricate and variegated political geographies that underlie the elemental politics of respiratory negotiations. These negotiations transcend the biopolitical management of life to the domain of breath and breathing as its elemental precondition, and extend to encompass a popular necropolitics that wilfully adopts a respiratory disease that inflicts death on the other.

While our primary focus remains on medical masks as tools of filtration and mediation, our paper illuminates a selection of episodic atmospheric events wherein masks appear and function as biopolitical interventions. Collectively, these respiratory situations showcase mask-wearing as being interwoven in the shaping, articulating, and conditioning of environmental, political, and cultural divisions of inside and

outside. The analysis goes beyond the mere bridging of the medical and the political. Instead, as we show, masks transcend such a static binary. Introducing complexities that extend the category of life beyond the traditional boundaries of biopolitics as embodied life, life of the self and population, we show how masks negotiate life as breath by traversing the forces of the elemental.

Today, as various parts of the world have begun to transition into a 'post'-COVID era, some surrendering to the temptation to forget, we contend that the relevance of masks endures. UK physicians already ask to return to facemask-wearing in hospitals, while others use masks to protect their respiratory dependency from fire, dust, and particulate pollution. In conditions of anthropogenic climate change, which increasingly and differentially will impact embodied life, it is not unlikely to think that masks will continue to serve as one of the primary techniques through which human (and non-human) elemental entanglement is negotiated. In one way or another, we are sure, masks are here to stay.

Our research augments the landscape of political geography by introducing elemental thinking as a lens through which facemasks can be reimagined both as respiratory techniques within the biopolitical management of life (human and non-human alike) and as necropolitical tools to inflict embodied death. Beyond their intended function in disease containment, which serves the purpose of separation on an elemental level, masks mirror and reflect the intricate and dynamic interplay of an intersectional and contextual politics of class, race, and gender in response to and in the context of a respiratory threat to collective public health. The materiality of mask, which is conditioned by the porosity of the breathing body, enables a negotiated fluidity that manages not only daily practices and hygiene regimes, but also mediates the lines of divisions that exist between individuality and collectivity. Within a mask there exist possibilities for separation as well as well co-inhabitation.

To conclude, our study weaves an intricate tapestry of elemental contestations and negotiation strategies in conditions in which breathing and masking are explicated and rendered a biopolitical concern. By tapping into historical episodes of facemask usage, we unveil masks not merely as conduits for shared air, but as embodiments that mediate 'our' (human and non-human) interdependence and shared vulnerability. 'Breathing together', transcending the interior-exterior dichotomy, underscores the significance of elemental considerations within the study and practice of biopolitics. We extend an invitation to geographers and biopolitical thinkers alike to consider the potential of elemental thought and its implications for studying the current and future respiratory politics that undoubtedly lies ahead.

## Declaration of competing interest

We, the authors, declare that we have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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