'Breathful' design in breathless times

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ABSTRACT

This position paper seeks to address the operational logic that created the conditions for the pandemic to take hold. Grasping the crisis as an opportunity for an anthropological inquiry across disciplines, this exploration firmly anchors design inside the social commitment required by breathing bodies and life-enabling atmospheres. By infusing the self-understanding of design with experiences and conceptions from Eastern and Western 'breathwork' practices the adaptation strategy in uncertainty shifts from perpetuating the status quo towards the creative reinterpretation of internal priorities. It also changes the nature of our projects, from making to enacting, from preprogrammed solutions to earthly engagement, from interfacing with inert matter to caring for living matters. Taking our universally shared breath as the resounding call for action, 'breathful' design is about the never-finished, perpetually opening task of persisting through bodily vigilance, diligence, and self-critical forsight for 'knowing what to do when no one knows what to do'.

Keywords: Breathing, atmospheres, Covid-19, environmental embodiment, enlivening design, design anthropology.

1. INTRODUCTION - COMMONWEALTH OF BREATHERS

This position paper explores atmospheres, a conceptual framework from the work of anthropologist Tim Ingold (2010), through which to consider the Covid-19 pandemic. Air, a vital medium that affords locomotion, respiration, perception and attention. The air-borne, life-threatening contagion has interlinked and (de)mobilised billions of people. Locomotion played its part in the speed at which the virus spread around the globe. How then do we carry this de-mobilising constraint forward for adapting to the abstract threat of climatic and environmental breakdown? This is especially important when air pollutants, such as nitrogen dioxide, are deteriorating human respiratory systems, making us more vulnerable to Covid-19 (Brandon, 2020). Ingold (2010) suggests re-admitting air as an essential and substantial constituent of the inhabited world, to expose our thinking and inspirations to 'fresh air'.

The healing properties of breath have long traditions. For example, Chinese healing exercises of the Daoyin (Kohn, 2008; Chaitow et al, 2013) are centred on breathing, and Eastern traditions of breathwork understand "how it could kill us, or heal us, depending on how we use it" (Gross & Nestor, 2020). Hindus equate breath and spirit for balancing both physical and mental health. Buddhists use breathing to prolong their lives and reach higher consciousness. Western thought approaches breathing more phenomenologically through the inhalation and exhalation of breath (Bachelard, 1988; Merleau-Ponty, 1962) that constitutes our being; altering the frames through which we inhabit the world what Petri

Berndtson (2018; 2011) describes as "the inspiration and expiration of being". For design, consideration of breath offers the potential to transform our intentionality.

In the face of anxiety that can be attributed to the pandemic, it is essential to understand how a person's outlook on reality results in acting one way, and not another. Breathing, as the mechanism underlying thinking, allows the formulation of language as a tool for interconnecting wind, breath and life. Ingold (2010) indicates how the word 'animate', from Latin, animare denotes 'to give life', while anima for 'breath', stems from the Greek word anemos for 'wind'. Thus, life is born and substantiated within the currents of the medium; air. In keeping a close connection with the medium that enlivens, there is potential for building awareness of freedom and choices whereby a wider range of capacities and responses can open up (Sacks & Zumdick, 2013; Bachelard, 1988).

An anthropological design approach has the potential of tapping into collective imaginings of the pandemic by bringing together practical, personal and embodied experiences. Eeva Berglund (2015) explains how anthropology can invoke design as a means of engaging the mind-body split by working simultaneously with conceptual and material frameworks. Much of theory emphasises the solidified forms of our landscapes at the expense of the atmospheric dimension of bodily movement, exchanges and experience (Ingold, 2010).

In his pandemic response, Bruno Latour (2020) asks "what protective measures can you think of so we don't go back to the pre-crisis production model?" In his view, the prime learning from the crisis is not to perpetuate the predominant paradigm behind human organisation that created the conditions for Covid-19 to take hold. Boaventura de Sousa-Santos (de Sousa Santos, 2018) advocates for the participation in social movements, in this instance a commonwealth of breathers (Abram, 2018), that allows us, as fellow Earthlings, to become solution-holders and co-producers of the world. In this paper, we explore the potential for turning crises into opportunity from a process of perpetual openings through our breathing bodies; a strategy for new insights, words and storytelling towards 'breathful' design.

Many responses to Covid-19 tend to overly rely on 'swift solutions' by "designing new things into existence [...] rather than designing people-based systems of provision" as Cameron Tonkinwise (2014) points out. This focus on *resourcing through making things* is perpetuating the logic that caused the crisis in the first place, thus preventing necessary paradigmatic change as Audre Lorde (1984:110-114) poignantly denotes: "the master's tools will never dismantle the master's house". If designers want to permit more than the narrowest perimeter of change, then their ontological tools, their very way of being in the world requires paradigmatic shifting since "we are both the generators and recipients of crisis" as Tony Fry (2020) asserts. Exploring atmospheres ontologically for orienting design theory and practice can guide such profound retooling.

2. BREATHFUL DESIGN

The question that guides this exploration is, what are the implications for design when we evaluate our pandemic responses through the vantage of breathing and breathlessness? In doing so, "wicked problems" (Buchanan, 1992) are held close to our bodily needs for scrutinising social and technical decisions. This inner situatedness from attention to breath stipulates a strategy for orienting design research and practice. 'Breathful' design alludes to a practice of calm, composed and inter-connectedness within the breathing world.

The paper draws from a multitude of ways of being, knowing, and making, as shown in Table 1 below. It explores the relationship between the breathing body and action as they relate to embodied, embedded, enacted, and extended minds (Newen et al. 2018). The Greek word for mind is psyche which denotes 'breath' and 'blood' reminding us how the human self, arrives and departs through breathing (Kleinberg-Levin, 2018). Here the physiological foundation of embodied and social experience is related to their cultural implications.

Table 1. Conceptualization of 'breathful' design across discourses

	Elements	Conception	Epistemology	Ontology	Social Arena	Metaphor
1	Breathing	Mechanism (rhythm. movement)	Phenomenology (embodied)	Interiority	Concern	Breath Turn
2	Air (atmospheres)	Medium	Sciences (embedded)	Reality formation	Capabilities	Breath Room
3	Bodies	Substance	Design (enacted)	Poetic objectivity	Commitment	Breath Depth
4	Inspiration	Co-Thriving	Philosophy (extended)	Environmental embodiment	Cosmology	Breath of Life
Source:	Škof & Berndtson, 2018	Ingold, 2010	Newen et al, 2018	Weber, 2019; Sacks, 2018		Blackstock, 2019

Note: the design anthropological approach engages with uncertainty through the inquiry across discourses to understand, research and intervene in the world.

Both authors use design anthropology as an approach in their research, evidencing 'breathful' examples of working with the atmospheres of air that adds grounding to the conceptualisations of this paper—introduced in Figures 1 and 2 below. Figure 1 is part of a work-in-progress ethnographic fieldwork that looks at traditionally trained designers who, as a result of their life trajectory, opt to live otherwise. The study, depicted below, followed Tanja, formally trained as a knitwear designer, who re-trained over five years, cultivating practices of self-reflection through breathwork. Tanja had found the way to change the nature of her own design projects working as a breathwork practitioner and helping others by exploring different ideas of "tension and relaxation" [interview with Tanja, Bali, Indonesia, January 2020].

Figure 1. Tanja's breathwork class: This illustration was created between author/participant and artist, Anuroe, under an International Creative Commons License (CCO) for the purpose of sharing research into the public domain.

By infusing understanding of design with body consciousness and attention practices, the design transforms from making to enacting, from predestined solutions to earth-bound engagement, from interfacing with inert matter, to caring for living matters (Puig de la Bellacasa, 2017).

The second work sample from the authors is research into 'collective urine upcycling' for exploring the agri/cultural potential between peoples' bodies and their living environment. Here participants attempted to close their nutrients cycle through collection, monitoring, fermentation and aeration of their urine that required regular breathing into test tubes as shown in Figure 2. When carefully considering the respiratory interactions between humans, things, and the environment (Shove et al. 2014) it begs the question of what it means to design in such a mutually open, porous, and animating world. In response, a 'breathful' strategy such as the one employed in this collective urine upcycling, establishes self-implicating spaces for what it means to be alive by "always interweaving dimensions of matter with perception and expression" (Weber, 2013). The research-minded participants fermented their own urine for a substrate in which to grow an edible plant, thereby creating a simple metabolic relationship between their organism and the plants. Such revelatory processes can increase our choices and adeptness of our actions (Sacks & Zumdick, 2013), as one of the participants claimed through the common effort they were "actively contributing to life-cycles" [interview with Eliza, Hong Kong, June 2017].
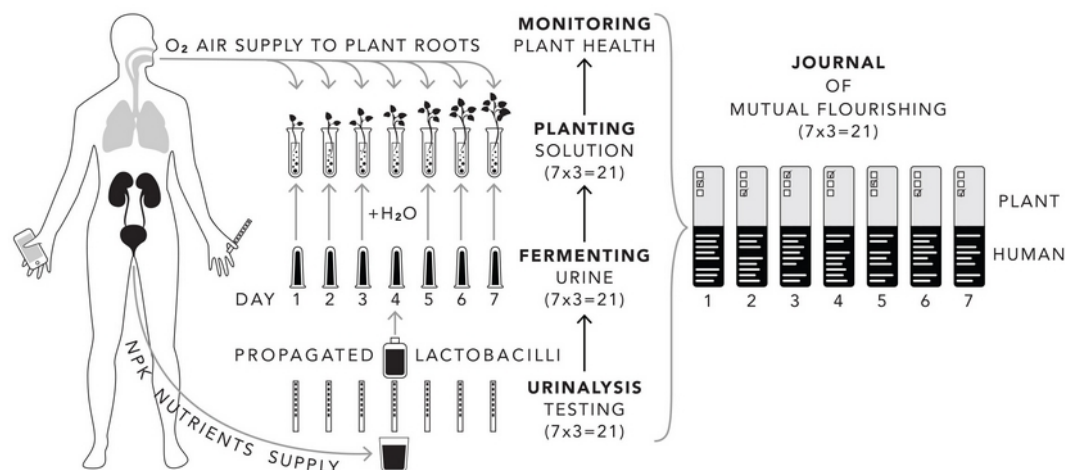

Figure 2. Collective urine upcycling: From April to June 2017, 22 participants in Hong Kong eagerly fermented, annotated, and aerated samples of their urine for investigating how their diet and lifestyles influence the plants growing out of it. Photographs by Sarah Daher.

3. FROM BREATHING TO CONCERN

Breathing is the most intimate, rhythmic connection to our vitality. Pausing routine functioning and switching to conscious breathing is palpably bringing us into the present. Slowing down for lowering breathing interval is calming, increases blood flow into the brain, and brings the body into a state that harmonises the coordination of its organs. This triggers a rest-and-relax response in our parasympathetic nervous system fundamental to anxiety moderation, social functioning and acting responsibly (Dana, 2018; Nestor, 2020).

Distress from lack of air is forcing many to reconsider basic, life-supporting functions usually taken for granted. Luce Irigaray (1999:171) indicates how breathing is neglected in most peoples' self-understanding: "No doubt, we breathe on pain of death, but we breathe poorly, and we worry little about our first food of life: air." Megan Wainwright (2017) and Havi Carel (2016:106-129) indicates how a body transformed by breathlessness becomes sensitised to atmospheric changes. Acknowledging how people grasp their environment through breathing lungs is fundamental since air is a multi-sensory medium for temperature, wind, smell, sound, pollution, and contagion.

Experiencing breath is linking the automatic functioning of the body with our consciousness. The sense of self awakens from connecting emotional state and foresight, on the one hand, to unconscious survival mechanisms, on the other. Antonio Damasio (1999) demonstrated that body-derived consciousness and emotions are not the opposite of reason but the very essence of it. Emotions tell us what to pay attention to, care about, and remember. Irigaray (1999:52) advocates anchoring 'mindful making' practices of breathing in our daily routine since "[w]e have forgotten that to be cultivated amounts to being able to breathe, not only to survive but to constitute a reserve of breath as a soul that helps us to transform our natural life." Gaston Bachelard (1988:242; cf. Berndtson, 2018) emphasises the humbleness we can derive in our reserve of breath stems from listening: "Let us [listen] to nothing but our own breathing". Grappling for meaning when the coronavirus 'drowns away' our breathing implicates in paradoxical, all-inclusive processes of life (Weber, 2020) and instils an urgency.

Humility when breathing delineates living concerns: When we experience ourselves as full members in a 'world of breathers' inside an atmosphere shared by many other breathers, then we start to realise how air is the ebb and flow of life forces that inwardly engulf all of us. For the emancipated breather, notions of defence and control are limiting, while staying connected, vigilant and anticipatory, prove helpful. Humility from this breathing vantage is an underestimated ingredient in design.

4. FROM (SHORTAGE OF) AIR TO CAPABILITIES

Ancient breathing practices have become essential in easing coronavirus-induced breathlessness. Patients were initially laid on their backs for intubation with respirators. However, physicians soon realised that by laying patients on their sides or stomachs, they could breathe much easier (Pflanzer, 2020). Breathing on our sides, know as prone breathing, enables the lungs to be more efficiently accessed and can stimulate self-healing properties in the body. Cameron Tonkinwise (2018) indicates how bringing back ancient practices, for breathing and beyond, is key to avert our unsustainable predicament. Naturally, due to the reliability of such ancient practices as being restorative for lungs, bodies, and communities, they persist today.

Aside from reviving ancient healing practices, the pandemic has imposed lockdown and suspension of work routines. This has opened an unexpected breathing room for non-activity, spontaneity, contemplation, personal development, alongside a rediscovery of leisure. Leisure is often mistaken as distractive amusement or laziness, however, Josef Pieper (1952) illustrated the importance of recreational leisure in the formation of person, outlook, and society: "leisure is an attitude of the mind and a condition of the soul that fosters a capacity to perceive the reality of the world." Pieper (1952) points out that the place we designate to learning – school – is derived from leisure with the Greek word for 'leisure' being skole. However, both have come to mean something far different and unrecognisable than leisure and school today.

For decades, designers have envisaged how peoples' desire for an abundance of time, leisure, and less isolation into more communal forms of living could be drivers for addressing social and environmental issues (Ehn et al., 2014; Fuad-Luke, 2002; Manzini, 2015). 'Taking a breather' during the pandemic, leisure-led learning helped many to rehabilitate neglected practical and interpersonal skills. Communities of 'aerial practices' sprung up, like online yoga groups, Qigong cohorts in the park, or vocalist ensembles on balconies. For advancing skills and staying motivated when resistance mounts, it is the group that makes its members put in the extra effort, go the extra mile, or attuning their breaths.

Synchronised efforts like yoga breathwork or choir singing depend on building mutually inspiring partnerships. Harold Nelson and Erik Stolterman (2012) talk about "design conspiracy" where key players are breathing together. It describes the ability of synergistic trust through mutual intention and empathy. Opening rather than suffocating the imagination of its conspirators, this breathing together can initiate the second stage of a conversation; a turning together. It means that design conspiracies require informal or formal agreements to become more enduring.

Inner breathing space for self-in-other capabilities: Conscious breathing directs attention to the 'inner workspace' of the person through which imaginal thought and primary relations with reality are formulated. Skilful breathing analogous to skilful designing demands a mastery of self in a sensitised, metacognitive state. Doing and making with our lungs is embedded in respiratory knowledge generated through bodily practice that necessitates a physical approach. This systemic integration of purpose, artistry, intelligence is developing our "innermost technologies" (Sacks, 2018) where in-person capability building is prioritised over dominating otherness in the Aristotelian way. For a trained 'breath worker' like a yogi, it is not enough to know a lot (episteme) about how to do breathwork properly. The yogi also must have certainty in the meaningfulness of the method (phronesis) for then get into action and becoming skilful through regular practice (techne). In this perspective, breathwork qualifies as designing since it "involves the tacit discernment of aesthetics, a prejudicial yet flexible analogue of ethical hermeneutics [where] there are an art and craft to the science of practising design" (Tonkinwise, 2003). Since breathwork gravitates on the sensorial realm, it confronts us with our corporeal harm-awareness, bringing existential issues to the fore, thus directing our design agenda. Unless we make room for resourcing the self that is involved with bodily functions, capacities, and restrictions, we are not sufficiently able to establish relationally relevant ways of designing.

5. FROM BREATHING BODIES TO COMMITMENT

Lungs are receptive to harmful, air-borne substances since they "have the largest surface area in the body in direct contact with the environment" (Ramsay & Dartnell, 2005:83). Without a barrier between ourselves and the air we breathe, our bodies are completely open to the environment. In pandemic times, our immersion in the air calls for the mediation of risks between the self and the environment as well as the self and others. Surgical masks are acting both as material and cultural mediators between self, others, and the environment (Moshenska, 2010), however, we have to wonder how this response appears to mimic the modality of the virus—once again reducing breath.

In this tension between vital breathing and viral threat, the air constitutes what Albert Borgmann (1995:39) calls "commanding presence" that "has a telling and strong continuity with its world and is an embodiment and disclosure of the world it has emerged from". Thus, the breathlessness has brought about an environmental embodiment where our bodily experience is transformed by sensitivity and awareness to the availability of air.

The crisis brought about – next to inconvenience and hardship – also improvisation, restructuring of habits, instructive insights, and, potentially the reorientation of our priorities. Many had to let go of habitual shields, instead, relate in novel ways to self and others for opening up creative responses. Andreas Weber (2019) refers to this reconnective shifting of paradigms as "poetic objectivity". In times of revelatory breathlessness, poetic objectivity can be the realisation that breathing bodies of people, animals, and trees are equally participating in the larger whole of sun-infused air while each body's awareness is richly differentiated.

John Dewey (1938) already articulated how stretching our imagination is essential in building our personal resilience since the suspension of the status quo forces us into critical self-reflection and revisiting our core beliefs. Dewey also noted how the reflection upon disruption is required for attaining our change potential beyond crisis point and prevalent regimes of expectation: "The idea of consequences must blend with desire and impulse to acquire moving force; it then gives direction to what otherwise is blind, while desire gives ideas impetus and momentum" (37). It remains to be seen what learning will manifest long-term once our pandemic breathlessness subsides. Also, it begs the question if only a crisis can propel us to act like we are part and parcel of an interpenetrating, breathing world.

Hannah Arendt (1958) and Tony Fry (2005) point to indigenous people whose lives were enactments of social relations and "earthly immortality". It meant that breathing skies, lands, and creatures were not merely considered as 'nature' or 'environment' but constituted a "geography of culturally relevant signs, memories, and narratives that was lived in familiarity" (194). Arendt indicates how both individual and society "transcending", by belonging to such immanent meaning, is the basis for breathing life into our public realm, common world, and political engagement.

Courage is required for staying committed: In a world focused on perfection and invincibility our reconciliation with the unpredictability of our breath-reliant life is essential to our wellbeing and response-ability to otherness (Wernli, 2019). Our exposure to environments is always associated with vulnerability. Yet, being genuine about our frailties as human and designer is also utterly liberating and the foundation of creative potential and inter-being solidarity. David Whyte (2015) advocates inhabiting our vulnerability whereby "we become more courageous and compassionate through our intimacy with disappearance

[since] our only choice is to inhabit vulnerability as generous citizens of loss, robustly and fully". Courage, from Latin cor, for 'heart', originally meant to tell the story of who we are with our whole hearts. Having the courage to be imperfect is about becoming sympathetic with oneself first and then to others (Brown, 2012).

6. FROM INSPIRATION TO COSMOLOGIES

Meant as a framework to understand and direct design thinking with the immediacy of breathing, it entails the four dimensions of embodied concern (Breath Turn), embedded capabilities (Breath Room), enacted commitment (Breath Depth), and the extended cosmology (Breath of Life) shown in Figure 4 below.
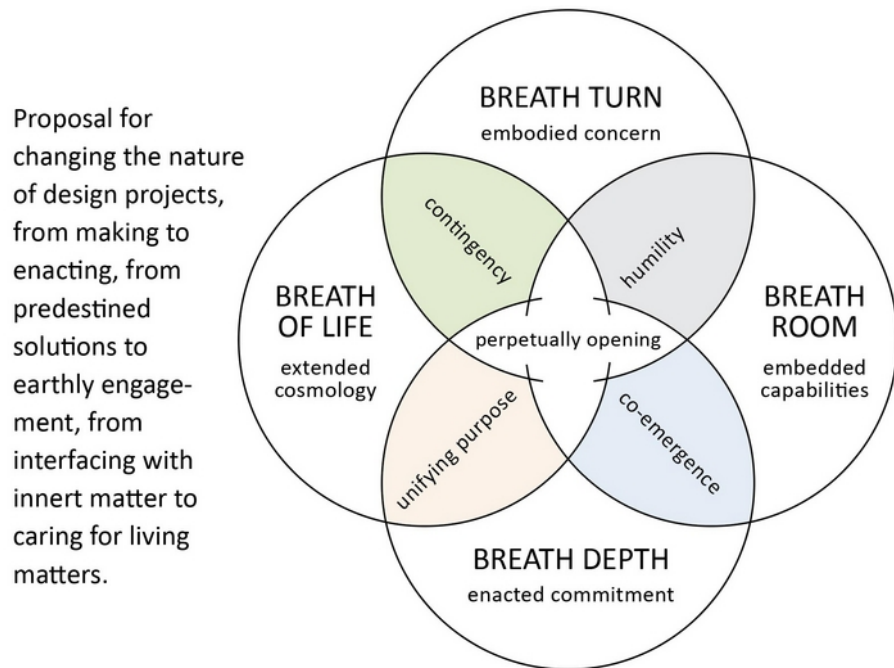
Proposal for changing the nature of design projects, from making to enacting, from predestined solutions to earthly engagement, from interfacing with innert matter to caring for living matters.

BREATH TURN
embodied concern

contingency

humility

BREATH OF LIFE
extended cosmology

perpetually opening

BREATH ROOM
embedded capabilities

unifying purpose

co-emergence

BREATH DEPTH
enacted commitment

Figure 4. The 'breathful' design framework: It integrates the four dimensions of metacognitive engagement, including urgency, trust, attention, and narrative to comprehensively account for long-term quality in reality formation.

Breathing potential is not restricted to our lungs, metabolism, and respirators. Air understood as one continuous atmospheric body presents the wellspring of all existence. Indigenous First Nations' worldview of "Breath of Life" (Blackstock, 2019; Abram, 2018) refers to our indivisible, immanent Earth, where everything across all time contributes to understanding the human condition. Since one lifetime is inadequate to comprehend the intergenerational experience, Breath of Life accounts for seven generations prior and after the present. Humanity here is defined by its relation to the natural world, ancestral knowledge, and provision for unborn generations. Hazrat Inayat Khan (2012; cf. Škof & Berndtson, 2018:x) describes the Breath of Life as a "vast current" that permeates through everything; a chain of breath that stems from our consciousness extends into our physical world and stirs awe for the borrowed gift of our existence.

Thinking of breathing across spacetime is not just about personal reverberance with the larger world through air. Gaston Bachelard (1988) and Petri Berndtson (Škof & Berndtson, 2018) suggest that air has its own imagination: "The air itself dreams, it remembers, and it anticipates". Through inhaling and exhaling air, it dreams within us, it imagines within us, it remembers within us. Then the task of thinkers (including reflective designers) is to listen to the inspiration of the air and its elemental forces. Inspiration, from Old French enspirer, for

'breathing upon grace and excitement', means to seek new languages for unfolding new stories, and new ways of remembering with air.

Elias Canetti (1987:194) warns from creators of stories who do not know how to breathe: "It is not enough to think; one has also to breathe. Dangerous are the thinkers who have not breathed enough". Designers conscious of and inspired by the phenomenon of breathing, no longer want interfaces that merely perform. They want atmospheres that make it easier to breathe. Édouard Glissant (1989:124) reminds us that it is not the structure of things that brings them to life but the very breathing of the agent that dictates their rhythm. Here we look at ourselves from the openness of our breathing existence as well as the most fundamental openness to the atmospheres that interpenetrate and resonate with us.

'Breathful' storytelling as diapason in design: Beyond supplying our lungs with oxygen, the air is the medium of electromagnetic waves and biochemical molecules that transport sound, light, smell, and electric charge. The storytelling of breathing all at once correlates the atmospheres of microbial oxidation, maritime carbon absorption, terrestrial photosynthesis, and stratospheric aurora with our breathing body-minds. As proposed in this article, breathing is the diapason in design—a tuning fork, where the stories we tell us, become resonators for staying attuned to our breathing self and the breathing world. 'Breathful' storytelling attempts to complement the geographically diversifying standpoints in relational design practice (Salazar, Zuljevic, & Huybrechts, 2018). In this decidedly body-relatable narrative that draws across many discourses [shown in table 1 above] can draw seemingly remote issues into a unifying proposition (Morales & De La Peña, 2018). If 'breathful' storytelling is persuasive, it resonates with people for opting to live otherwise in futures that make it easier to breathe, where we continually defend these respiratory advances made.

7. CONCLUSION

The pandemic emergency illuminates the need to integrate the porosity of the body for opening our social consciousness and for addressing our unsustainable predicament from the vantage of our ways of respiratory being. This means to reaffirm the essence of design as the task of persisting with humility, diligence and curiosity from inside the body; a conscious breath for 'knowing what to do when no one knows what to do'.

By adopting an anthropological design approach across disciplines, we considered the implications of the pandemic, which entails three intentions. Firstly, we explored the perspective of interiority as a medium to formulate vigilance and foresight in design when it is firmly anchored incorporeal alongside metacognitive experiences. Like inhaling and exhaling air, the rhythmic correlation of action with reflection is a key dynamic for suspending predispositions, building internal resilience and enhancing thriving together. Secondly, we propose to approach our existential interdependencies as an environmental embodiment for countering the insulating notions of 'embodied life'. Designers who care for proliferating the role of breath in atmospheres, nervous systems and worldviews will be better resourced to pursue a flux-and-flow engagement with the unknowable, anxiety, and pushbacks. Thirdly, we find intergenerational inspiration from the breath of life narrative that implicates us as persons and designers into a way of 'breathful' being in the world where our inhales and exhales of air resonate beyond the single lifespan, across time and space. Taking our universally shared breath as diapason, design is called on to stay attuned, accountable and self-critical. As understanding of the intricate sensations and interrelations

of breath is deepening, future research is tasked to further rediscover, define and articulate the stance of 'breathfulness' in design. As the consequences of design decisions and actions becoming more acute and complex, we will increasingly require 'breathful' approaches in practice, education, and research.

ACKNOWLEDGMENTS

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