# Mental health, subjective experiences and environmental change

Juan Manuel Zaragoza Bernal

## ABSTRACT

This article responds to Coope's call for the medical humanities to address the climate crisis as a health issue. Coope proposes three areas for progress towards ecological thinking in healthcare, with a focus on ecological mental health. The article emphasises the need to understand the cultural dimensions of mental health and proposes an interdisciplinary approach that integrates insights from the arts and humanities. It examines the impact of climate change on mental health, drawing on *The Rockefeller Foundation - Lancet Commission on Planetary Health* and recent studies. The discussion focuses on the intersection of mental health, subjective experience and environmental change. Focusing on emotional experiences as constructed from biological and cultural elements, the article proposes a holistic approach to mental health. It proposes two converging lines of research, in constant interaction: first, a historical and cultural research of those concepts, practices and symbols related to the environment, emphasising a cultural history of nature; and second, a synchronous research, drawing on anthropology, sociology and participatory art-based research, to understand how these aforementioned elements influence our current relations with nature. The article concludes by emphasising the urgency of developing narratives and histories that redirect temporal trajectories towards a better future, while respecting and acknowledging diverse narratives of individual experience. It calls for collaborative efforts from the medical humanities to contribute to a more comprehensive understanding of the complex relationship between mental health, nature and ecological crisis.

In a recent publication, Coope (2021) sustained that medical humanities should approach the climate crisis as a health issue and therefore consider lines of action to be undertaken to help solve it. Coope suggested a radical revision was needed of concepts such as health, medical humanities, well-being and even what a 'good society' could be.

Coope's article starts with a reference to the pandemic declared by the WHO when COVID-19 started to expand quickly. In fact, our experience of the pandemic should make us, as some of the witnesses reported to him, thoroughly revise our deepest cultural convictions, particularly our understanding of our relationship with nature (Coope 2021, 123). Yet, beyond the pandemic, other reasons made this 'ecological' turn obviously necessary. Two are specifically mentioned by Coope: the reports published in *The Lancet* (Romanello *et al*. 2021, 2022; Watts *et al*. 2018; Watts *et al*. (2019)) and the support of some doctors to the 'environmental movement Extinction Rebellion' (Coope 2021, 123). I would like to focus on the former.

In January 2015, *The Lancet* published the results of a comprehensive report entitled *The Rockefeller Foundation - Lancet Commission on Planetary Health*. This commission aimed to research human health in the context of its potential impact on the ecological systems we inhabit. Its conclusions could not be starker: the improved life and health conditions 'come at a high price: a dramatic degradation of nature's ecological systems' (Whitmee *et al*. 2015). From this short summary, *The Lancet* report lays down several ways in which human and planet health are connected, including a study on how climate change and humans entering the Anthropocene era impact the health of human populations. It is precisely this approach—as well as the continuation of this work, *The Lancet Countdown on Health and Climate Change* in 2015—what started an analytic effort to understand and measure the effect of climate change on health and to assess the impact of the measures adopted by the world states to slow down global warming in the context of the Paris Agreement reached in 2015.

Returning to Dr Coope's article, he proposed three areas which he defined as 'of progress towards ecological thinking in healthcare'. These are (1) systems understanding, (2) ecological public health and (3) ecological mental health. All three are particularly relevant, but we will attempt in this article to develop a proposal concerned with the third intervention area.

## MENTAL HEALTH AS AN ECOLOGICAL ISSUE

Coope points out that mental health issues are by far the most common globally. Faced with this reality, he continues, some authors are starting to suggest that the relationship that we establish with non-humans, with our natural environment, can have profound consequences for our mental health. As evidence, he quotes a study on empirical approaches to the idea of 'nature connectedness' (Keaulana *et al*. 2021). The report by *The Rockefeller Foundation* and *The Lancet* had already hinted in 2015 to the impact of climate change on our mental health, but it did not relate it so much to *nature connectedness* but to the impact that climate change-associated disasters (floods, fires, etc) had in the affected populations. They pointed directly to the idea of *place attachment* and the links we establish with the land, explicitly using the term *solastalgia* (Albrecht 2011). Current research in mental health and climate change therefore moves between these two extremes, although the latter carries most of the weight.

By way of an example, Hwong *et al*. (2022) made a difference between acute and subacute climate events. Some of the former can be earthquakes, floods or devastating fires, but it is harder to name examples of the latter: one could be drought and its consequences, as well as other aspects such as long-term changes in humidity conditions, rain, hours of sun, etc (Hwong *et al*. 2022, e285). It is obvious, they conclude, that the majority of research focuses on the former, on the one hand because they are discrete events which can be clearly defined, and on the other hand because they are the direct cause of very obvious effects on mental health, commonly associated with stress-related and trauma-related sequelae. In terms of subacute climate events, we are dealing with indirect, much more diffused, effects including 'helplessness, worry, and fear of rapid climate change' and which would be closely related to, among other factors, 'the local cultural, social, economic, and developmental context' (Hwong *et al*. 2022, e281).[1] The importance of the local and culture is also highlighted in *The Lancet* report:

> However, because the definition, acknowledgment, stigmatisation, and treatment of mental health varies across different regions

Philosophy, Universidad de Murcia, Murcia, Spain

**Correspondence to** Dr Juan Manuel Zaragoza Bernal, Philosophy, Universidad de Murcia, Murcia, Murcia, Spain; jm.zaragozabernal@um.es

Med Humanities: first published as 10.1136/medhum-2023-012879 on 22 April 2024. Downloaded from http://mh.bmj.com/ on April 27, 2024 by guest. Protected by copyright.

and cultures, assessing the mental health effects of climate change is a challenge that the Lancet Countdown will work to address in upcoming years (Romanello *et al*. 2021, 1627).

The close relationship between cultural differences and understanding mental health is also highlighted in many other studies undertaken from a health anthropology perspective (Gopalkrishnan 2018). This could explain another key point in the studies analysed: they cannot offer a clear idea of what this impact would consist of and to what extent it would affect the well-being of populations, which would make it difficult to follow up, assess and intervene, and ultimately develop mental health indicators (Romanello *et al*. 2022, 1628). It is here, in this task analysing the cultural differences to define adequate indicators allowing us to perform an intercultural comparison, where humanities can add up with its knowledge and research methods.

What I suggest in this article is a way to approach this issue from a cross-discipline perspective, taking into consideration what arts and humanities can bring, and which allows us to develop mental health indicators without erasing the experiences lived by those not sharing the same cultural markers.

## AS REGARDS EMOTIONS, EXPERIENCE AND MENTAL HEALTH

The work I have developed over the last few years, within the research group led by Javier Moscoso, has focused on the study of the existing relationship between the subjective perception and objective consideration of health and well-being, aiming to untangle the variations in the subjective perception of one's experience and the conditions that make it possible to qualify it as positive or negative ().[2] This proposal elaborates on these elements, but introduces a new approach to facilitate cross-discipline collaboration. Our initial hypothesis is as follows: emotions are constructed from combining those aspects we have traditionally called 'biological' and those we have called 'cultural' (Boddice 2018). We are following Lisa Feldman Barrett when she points out, as one of the basic hypotheses of the conceptual act model, that 'understanding the meaning emotion words and emotion concepts [*sic*] is a piece of the puzzle to understanding what emotions are and how they work' (Barrett 2011, 363).

I do not deem it necessary to dwell upon the close relationship between emotions and mental health, which we know to be profound, complex and bidirectional (; Sloan *et al*. 2017). It is more relevant to ask ourselves about the relationship between our experiences of well-being and emotions. Barrett *et al*. (2007) defend that the emotional experience is not only a passive response to stimuli but an active construction based on the interpretation and cognitive assessment of the situation. Furthermore, they analyse the subjective, physiological and behavioural components of the emotional experience. Within physiological components, the concept 'core affect' stands out, considered to be a fundamental neurophysiological response underpinning the most complex emotional experiences. This basic 'core affect' experience is combined with other cognitive, cultural and contextual processes in order to generate more complex and differentiated emotions.

Barrett *et al*. (2007) also maintain two ideas which are relevant to my proposal. First, and following John Searle's biological naturalism (Searle 1992), they put forward a view of the relationship between emotions and experience, implying on the one hand that we should pay attention not only to the causes of the diverse emotional experiences but to their content, which we can only access through the agent's narrative (Barrett *et al*. 2007, 376). Second, a distinction between 'foreground' and 'background core affect' is made, which they use to distinguish between 'experience' and 'experience of an emotion'. In the latter, the core affect would be in the foreground, allowing thus the transformation of a *diffuse* affect into an intentional state attributed to a given cause (Barrett *et al*. 2007, 386). However, I am more interested in those circumstances where the core affect remains in the background, affecting behaviour indirectly, in particular because it 'is experienced as a property of the external world rather than as the person's reaction to it' (Barrett *et al*. 2007, 388).[3] This is something especially relevant to those experiences connected to specific environments (Zaragoza Bernal 2021), in particular those experiences connected to 'nature'. Thus, the whole idea of a potential 'nature therapy' is underpinned by the idea that *something* in nature can affect our experience of well-being and ill-being (Frumkin *et al*. 2017).

## CONVERGING RESEARCH

This would open the possibility of initiating cross-disciplinary research programmes contributing to improve the knowledge of the subjective factors of experience, which are key to determine how we assess it. Thus, we should be able to contribute to the achievement of those indicators, so difficult to attain in the case of mental health. To this end, we will have to work both diachronically and synchronically in two converging research lines, in permanent interaction.

In the sense that, as we have seen, cultural concepts (linguistic, conceptual, ideological) are key elements in the configuration of our experiences, it seems almost unnecessary to highlight how important it is to understand them as fully as possible. Therefore, we understand that researching how some concepts linked to our relationship with nature were created is key to understand its impact on our mental health. The historical study of how these concepts were generated and how they have helped to construct our experience of nature and its relationship with our ideas of health and illness seems to be paramount. We need a cultural history of nature that covers practices, representations, material culture, etc, in an effort which must always be situated and intersectional, but also comparative and postcolonial. A good example would be the different ways of understanding surfing, as described by Ingersoll (2016), and how the appropriation of this practice by Western young people in the 50s and 60s, after the acculturation process carried out by the colonising protestant missionaries after the annexation of Hawai'i to the USA (1889), meant the sea was beginning to be thought as 'a place of conquest and domination' and surfing was separated from local tradition, which was one of its rites and narratives, but above all was understood as part of a symbiotic relationship with the ocean (Ingersoll 2016). The emotional impact that a potential ecological crisis might have on these two communities, connected to the sea by such a similar practice but from such disparate perspectives of the type of relationship they have with the ocean, can be so different that they are also constitutive elements of their experience.

Second, we must be able to determine to which extent those factors are still alive today, how they configure the subjective experience of nature and their impact on individuals' mental health. To that end, mixed-methods research programmes should be developed, harnessing the potential of qualitative research tools provided by anthropology, sociology and art-based participative research (Evert and Peters 2014), but also the narrative strategies developed in medical humanities (Charon 2006; Moscoso 2012). These methods must help us, on one hand,



Med Humanities: first published as 10.1136/medhum-2023-012879 on 22 April 2024. Downloaded from http://mh.bmj.com/ on April 27, 2024 by guest. Protected by copyright.

access those first-person narratives which, according to Searle, are the only way of accessing subjective experience. Furthermore, they facilitate the constitution of *communities of experience* (Kivimäki, Malinen, and Vuolanto 2023) which allow us to research how individual experiences impact the construction of shared identities, communal imagination and collective actions. A good example of these methods can be found in *Mientras Tanto* (Escudero and Zaragoza 2023), where, by using collective creation methods taken from theatre, a community of experience was constituted where the experiences of living through the COVID-19 lockdown were shared, and how these changed when they became activities of helping one another. The result was a shared history, written in a fragmented way, which showcased not only the different experiences but the impact of the research process on the constitution of their experience.

It is important to point out that the results obtained from this research might be lost when translating into the 'languages' of psychology or psychiatry. A *diplomatic* attitude (Morizot 2017;) is essential to allow a translation that does not betray the experiences lived by the participants. This also includes the respect for ways of conceptualising illness, be it their ontology, aetiology or treatment, which differ from the Western conception.

## CONCLUDING REMARKS

Research on the impact of environmental change and the climate emergency on mental health is one of the factors highlighted by Coope (2021) as key for medical humanities seeking to be qualified as ecological. As we have seen, our capacity to measure, prevent and put forward public policies to tackle this unease is clearly limited by the inability to develop accurate indicators due to the great number of cultural factors involved in 'mental health'.

Nevertheless, this allows humanities and arts to contribute to the solution of a problem that goes beyond the limitations of the tools traditionally used by medicine and health sciences. This translates into the historical, comparative and transnational research of how our attitudes towards nature have changed, but also into the need to pay close attention to the experiences lived by those individuals who want to share with us this legitimate, valuable and absolutely indispensable form of knowledge to advance in our understanding of the relationship between mental health, nature and ecological crisis.

In his article, Coope alerted us of the urgency to 'develop narratives which can help people 'imagine a better future'' (Coope 2021, 125), while Julia Zielke, elaborating on Coope's proposal, encouraged us to 'build time-sensitive histories that have the power to reorient temporal trajectories towards other human and non-human and their various environments' (Zielke 2022, 266). Notwithstanding that we share this urgency with them, we must not ignore the existing countless narratives which inform us of individual experiences of damage and unease, but also of joy and plenitude. Constructing upon the singularity of the lived experience, respecting other ways of thinking, and conceptualising and acknowledging mental health open up a collaborative space to which medical humanities can and must contribute.

**Twitter** Juan Manuel Zaragoza Bernal @jm_zaragoza

**Funding** This paper has benefited from the support of the following institutions: Ministry of Science and Innovation, through the research project 'Crisis climática, salud mental y bienestar en el Antropoceno. Una aproximación desde la ontología histórica' (PID2021-124477OA-I00 funded by MCIN/AEI/10.13039/501100011033, by 'ERDF A way of making Europe'), and the University of Murcia, with the project 'La naturaleza como horizonte ético. Modernidad, crisis ecológica y experiencia del orden' (RG2020-004UM).

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; externally peer reviewed.

OPEN ACCESS

**Open access** This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

© Author(s) (or their employer(s)) 2024. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

**To cite** Zaragoza Bernal JM. *Med Humanit* Epub ahead of print: [*please include* Day Month Year]. doi:10.1136/medhum-2023-012879

Accepted 11 March 2024

*Med Humanit* 2024;**0**:1–4. doi:10.1136/medhum-2023-012879

## NOTES

1. It seems that ecoanxiety, at least in its most popular use, includes many of these impacts. However, the imprecise use of the term has been criticised because it needs to be better defined (Pihkala 2020) and it is too Western-focused (Uchendu 2022).
2. This proposal is based on reading history and anthropology classics such as Reinhart Koselleck and Victor Turner. In this sense, the recent article by Moscoso (2024), published in *Historia y Grafía*, makes for compulsory reading.
3. In this distinction between 'foreground' and 'background,' there is an echo of Goffman who analysed the scenic elements of the presentation of the self in daily life (Goffman 1956).

## BIBLIOGRAPHY

Albrecht, G. 2011. "Chronic Environmental Change: Emerging 'Psychoterratic' Syndromes. En Climate Change and Human Well-Being: Global Challenges and Opportunities, Editado Por Inka Weissbecker, 43–56." In *International and Cultural Psychology*. New York, NY: Springer New York.

Barrett, L. F. 2011. "Constructing Emotion." *Psihologijske Teme* 20 (3): 359–80.

Barrett, L. F., B. Mesquita, K. N. Ochsner, and J. J. Gross. 2007. "The Experience of Emotion." *Annual Review of Psychology* 58 (1): 373–403.

Berking, M., and P. Wupperman. 2012. "Emotion Regulation and Mental Health: Recent Findings, Current Challenges, and Future Directions." *Current Opinion in Psychiatry* 25 (2): 128–34.

Boddice, R. 2018. *The History of Emotions*. Manchester: Manchester University Press.

Charon, R. 2006. *Narrative Medicine: Honoring the Stories of Illness*. Oxford: Oxford University Press.

Coope, J. 2021. "On the Need for an Ecologically Dimensioned Medical Humanities." *Medical Humanities* 47 (1): 123–27.

Escudero, R., and Y. Zaragoza. 2023. "Juan Manuel Prod. 2023. Mientras Tanto." Available from: https://www.youtube.com/watch?v=jBw8Av0Nlcc

Evert, K., and S. Peters. 2014. "Artistic Research: Between Experiment and Presentation." *Transcript Verlag*: 35–44.

Frumkin, H., G. N. Bratman, S. J. Breslow, B. Cochran, P. H. Kahn, J. J. Lawler, P. S. Levin, *et al*. 2017. "Nature Contact and Human Health: A Research Agenda." *Environmental Health Perspectives* 125 (7): 075001.

Goffman, E.. *The Presentation of Self in Everyday Life*. Edinburgh: University of Edinburgh, 1956.

Gopalkrishnan, N. 2018. "Cultural Diversity and Mental Health: Considerations for Policy and Practice." *Frontiers in Public Health* 6: 179.

Hwong, A. R., M. Wang, H. Khan, D. N. Chagwedera, A. Grzenda, B. Doty, T. Benton, J. Alpert, D. Clarke, and W. M. Compton. 2022. "Climate Change and Mental Health Research Methods, Gaps, and Priorities: A Scoping Review." *The Lancet. Planetary Health* 6 (3): S2542-5196(22)00012-2.: e281–91.

Ingersoll, K. A. 2016. *Waves of Knowing: A Seascape Epistemology*. Duke University Press.

Keaulana, S., M. Kahili-Heede, L. Riley, M. L. N. Park, K. L. Makua, J. K. Vegas, and M. C. K. Antonio. 2021. "A Scoping Review of Nature, Land, and Environmental Connectedness and Relatedness." *International Journal of Environmental Research and Public Health* 18 (11): 5897.

Kivimäki, V., A. Malinen, and V. Vuolanto. 2023. "Communities of Experience." In *En Digital Handbook of the History of Experience*. Tampere: HEX. https://sites.tuni.fi/hexhandbook/theory/communities-of-experience.

Latour, B. 2017. *Facing Gaia: Eight Lectures on the New Climatic Regime. Traducido Por Catherine Porter*. Cambridge, UK; Medford, MA: Polity PR.

Med Humanities: first published as 10.1136/medhum-2023-012879 on 22 April 2024. Downloaded from http://mh.bmj.com/ on April 27, 2024 by guest. Protected by copyright.

Morizot, B. 2017. “Nouvelles Alliances Avec La Terre. Une Cohabitation Diplomatique Avec Le Vivant.” *Tracés*, no. 33: 73–96.

Moscoso, J. 2012. *Pain: A Cultural History*. Basingstoke ; New York: Palgrave Macmillan.

Moscoso, J. 2024. “Historias de La Experiencia.” *Historia y Grafía*, no. 62: 205–32.

Moscoso, J., and Y. M. Zaragoza. 2014. “Historias Del Bienestar. Desde La Historia de Las Emociones a Las Políticas de La Experiencia.” *Cuadernos de Historia Contemporánea* 36: 73–89.

Pihkala, P. 2020. “Anxiety and the Ecological Crisis: An Analysis of Eco-Anxiety and Climate Anxiety.” *Sustainability* 12 (19): 7836.

Romanello, M., C. Di Napoli, P. Drummond, C. Green, H. Kennard, P. Lampard, D. Scamman, *et al*. 2022. “The 2022 Report of the Lancet Countdown on Health and Climate Change: Health at the Mercy of Fossil Fuels.” *Lancet (London, England*) 400 (10363): S0140-6736(22)01540-9.: 1619–54.

Romanello, M., A. McGushin, C. Di Napoli, P. Drummond, N. Hughes, L. Jamart, H. Kennard, *et al*. 2021. “The 2021 Report of the Lancet Countdown on Health and Climate Change: Code Red for a Healthy Future.” *Lancet (London, England*) 398 (10311): S0140-6736(21)01787-6.: 1619–62.

Searle, J. R. R. 1992. *The Rediscovery of the Mind*. Reissue. Cambridge, Mass: MIT Press.

Sloan, E., K. Hall, R. Moulding, S. Bryce, H. Mildred, and P. K. Staiger. 2017. “Emotion Regulation as A Transdiagnostic Treatment Construct across Anxiety, Depression, Substance, Eating and Borderline Personality Disorders: A Systematic Review.” *Clinical Psychology Review* 57: 141–63.

Uchendu, J. O.. 2022. “Eco-Anxiety and Its Divergent Power Holds: A Youth Climate Activist’s Perspective.” *South African Journal of Psychology* 52, no. 4: 545–7.

Watts, N., M. Amann, N. Arnell, S. Ayeb-Karlsson, K. Belesova, H. Berry, T. Bouley, *et al*. 2018. “The 2018 Report of the Lancet Countdown on Health and Climate Change: Shaping the Health of Nations for Centuries to Come.” *The Lancet* 392 (10163): 2479–2514.

Watts, N., M. Amann, N. Arnell, S. Ayeb-Karlsson, K. Belesova, M. Boykoff, P. Byass, *et al*. 2019. “The 2019 Report of The Lancet Countdown on Health and Climate Change: Ensuring That the Health of a Child Born Today Is Not Defined by a Changing Climate.” *Lancet*394 (10211): S0140-6736(19)32596-6.: 1836–78.

Whitmee, S., A. Haines, C. Beyrer, F. Boltz, A. G. Capon, A. Ezeh, *et al*. 2015. “Safeguarding Human Health in the Anthropocene Epoch.” In *Report of The Rockefeller Foundation-Lancet Commission on Planetary Health. Lancet*, Vol. 386, 1973–2028. London, England: .

Zaragoza Bernal, J. M. 2021. “Espacios Emocionales Y Medicina En El Siglo Xix. Una Ontología Histórica de Las Pasiones.” *Asclepio* 73 (1): 341.

Zielke, J. 2022. “It’s about Time: On the Need of a Temporal Language for Ecologically Dimensioned Medical Humanities and Public Health Scholarship.” *Medical Humanities* 48 (3): 265–68.



Med Humanities: first published as 10.1136/medhum-2023-012879 on 22 April 2024. Downloaded from http://mh.bmj.com/ on April 27, 2024 by guest. Protected by copyright.