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LETTER TO THE EDITOR

One health: A brief appraisal of the Tripartite – UNEP definition

One Health is, arguably, the result of multiple historic conceptualizations, explorations and implementations of integrated approaches to health (Woods & Bresalier, 2014). One Health remains variably interpreted and implemented as it undergoes a dynamic process of awareness, acceptance and adoption (Evans & Leighton, 2014). In 2021, The joint Tripartite World Health Organization-Food and Agriculture Organization of the United Nations-World Health Organization for Animal Health (WHO-OIE-FAO) plus United Nations Environment Programme (UNEP) (Quadripartite) agreed to promote a unifying operational definition of One Health (World Health Organization – WHO, 2021c) distinctive in its systems approach. Prepared by the One Health High-Level Expert Panel (OHHLEP) – a group of 26 multidisciplinary, international experts appointed to provide scientific and policy advice on challenges relevant to One Health (World Health Organization – WHO, 2021b) – the Quadripartite's definition proclaims that:

> 'One Health is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems. It recognizes the health of humans, domestic and wild animals, plants and the wider environment (including ecosystems) are closely linked and interdependent. The approach mobilizes multiple sectors, disciplines and communities at varying levels of society to work together to foster wellbeing and tackle threats to health and ecosystems, while addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change and contributing to sustainable development' (World Health Organization – WHO, 2021c).

OHHLEP built upon core aspects of previous Tripartite members' definitions (Food and Agriculture Organization of the United Nations – FAO, 2021; World Health Organization – WHO, 2021a; World Organisation for Animal Health – OIE, 2021): the recognition of 'interconnected health' (FAO) and 'intertwined and interdependent' health of animals, humans and environment (OIE); the integrative nature of the approach that relies on 'collaboration' (OIE), 'communication' (WHO) and 'working together' (WHO and FAO) to 'tackle health threats' (FAO), 'achieve better public health outcomes' (WHO) and 'managing risks for planetary health and encouraging a more sustainable ecosystem balance' (OIE). OHHLEP also acknowledged the importance of multisectoral work 'at local, regional, national and global levels', as well as 'development' and 'collective needs', absent in former Tripartite members' definitions, but highlighted elsewhere (Centers for Disease Control and Prevention – CDC, 2022; World Bank Group, 2018).

The Quadripartite's definition is conceptually rich. Philosophers distinguish definitions according to their purpose – those that describe the essence of a thing (*Intensional* definition) and those that list the members and practices that belong to a class (*Extensional* definition) (Cook, 2009). Although presented as operational, the Quadripartite's definition has a robust *intensional* component; it broadly describes the essence of the One Health approach, but less so the practices that qualify as an operationalization of it. For example, the Quadripartite's definition does not list the practices or activities that qualify as sectors, disciplines and communities doing One Health work together. Thus, the richness of the definition must necessarily be interpreted to operationalize it. Three such interpretations are discussed.

First, OHHLEP defined One Health as an integrated, unifying approach. *Integration* and *unification* are frequently used interchangeably in scientific literature. However, *integration* best describes an activity while *unification* its product (Törnblom et al., 2007). Previous One Health definitions have promoted *integration* but no *unification*. Therefore, the inclusion of both terms suggests that One Health is, in essence, transdisciplinary. In operative terms, a transdisciplinary One Health approach should promote collaborative work of sectors, disciplines and communities at different levels (integration) to develop novel working frameworks, hypotheses and methods that transcend disciplinary and sectorial boundaries (unification). The unifying nature of the Quadripartite's definition seems to challenge alternative health narratives of One Health stakeholders (Scoones, 2010) and competing health priorities (Kingsley & Taylor, 2017; Munyua et al., 2019) that pose significant barriers for effective, sustainable and equitable solutions.

Second, the Quadripartite's definition transcends traditional One Health domains (animal, human and environment) to emphasize the sustainable, balanced and optimal health of ecosystems. Ecosystem health incorporates environmental integrity and anthropogenic activity to inform natural resources' sustainable use and management (Kruse, 2019). A focus on ecosystem health will likely help transcend pathogen-centric One Health approaches that miss the systems effects of health afflictions (Villanueva-Cabezas et al., 2020), but its operationalization remains challenging as no consensus on a single definition and framework exist (Kruse, 2019). Embracing ecosystem health is necessarily intertwined with holistic health conceptions beyond humans. For example, it has been proposed that an intergovernmental

wildlife health authority be formed to oversee wildlife health. Such authority would help overcome fragmented task responsibility at the country level; it would strengthen ecosystem health by improving wildlife health surveillance in natural and human landscapes and it would prevent biodiversity and ecosystem service loss that follows targeted destruction of wildlife during disease emergencies (Karesh et al., 2020). Holistic conceptions of health can be best operationalized using multidimensional rich outcomes like the Sustainable Development Goals (United Nations, 2015). These outcomes capture the systems effects of a health affliction – health, social, economic and environmental; however, their implementation relies on appropriate governing mechanisms that maximize benefits and reduce adverse outcomes (Waage et al., 2015).

Third, the Quadripartite's definition explicitly promotes collaboration that fosters wellbeing – a welcome balance to the deficit-based understanding of health (i.e. absence of disease) predominant in One Health and western medicine. Traditional forms of knowledge practised by Indigenous communities conceptualise wellbeing as balanced states of physical, emotional and mental health intertwined with the health and preservation of the land in which they live (Hillier et al., 2021). 'Caring for Country' is an example of such knowledge which has environmental, sociopolitical, cultural, physical and emotional benefits that contribute to Australian First Nations' identity, autonomy and health (Weir et al., 2011). Fostering wellbeing implies that health promotion is as essential as preventive medicine and outbreak response to attain optimal One Health. This should stimulate the exploration and incorporation of other forms of knowledge.

The Quadripartite's definition seemingly embraces the complex systems in which animals, humans and the environment interact, in contrast to reductionist zoonotic-centric One Health approaches that miss the significance of broader disease links (Woods & Bresalier, 2014). The emphasis on climate change and sustainable development underline that health is shaped by local physical and social contexts, as well as global politics and economics. Thus, foundational structural understanding of the physical, historical, cultural, political and economic features of a health issue is critical to set working boundaries conducive to operative transdisciplinary One Health (see Wallace et al., 2015). Finally, curricula development is vital to make the Quadripartite's definition operative. One Health programs frequently target veterinary and medical students who learn aspects of infectious diseases, antimicrobial resistance and zoonosis (Amuguni et al., 2019; Mor et al., 2018; Sikkema & Koopmans, 2016; Wilkes et al., 2019). Other examples involve interfaculty curricula development inclusive of non-veterinary and non-medical students (Chakraborty et al., 2021; Villanueva-Cabezas et al., 2022). These efforts are global contributions to promote One Health awareness, acceptance, adoption and operationalization.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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