

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/351372202>

The One Health Triangle

Method · May 2021

DOI: 10.13140/RG.2.2.15974.14401

CITATIONS

0

1 author:



Paolo Zucca

Friuli Venezia Giulia Region, Italy

38 PUBLICATIONS 902 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:

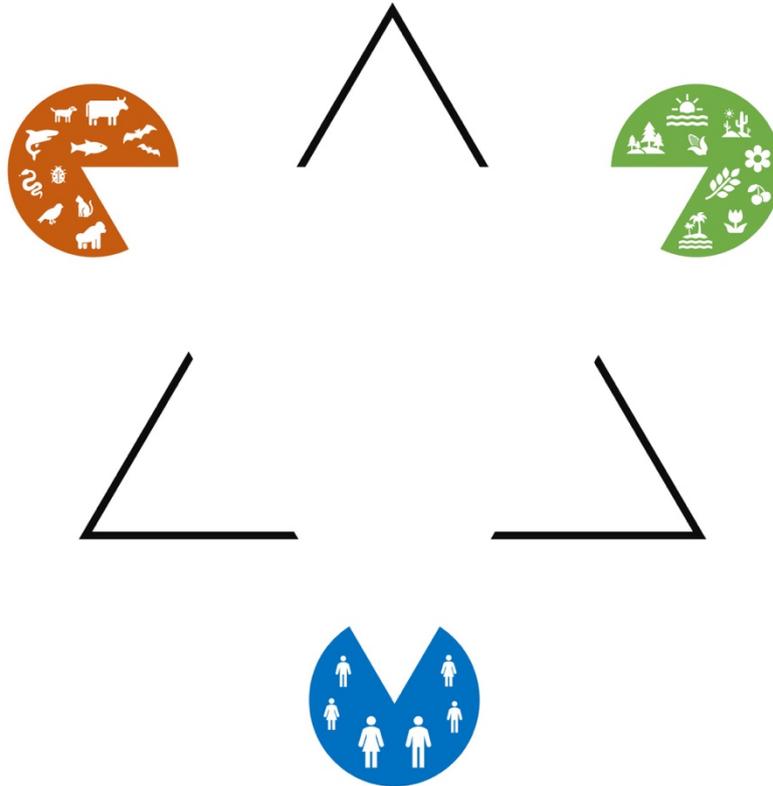


Bio-crime - zoonoses and illegal animal trade [View project](#)

The One Health Triangle

Paolo Zucca, D.V.M. Ph.D. B.Sc. Psychology

*Biocrime Center - Health Prevention, Food Safety and Veterinary Public Health Service,
Central Directorate for Health, Social Policies and Disability, Friuli Venezia Giulia Region, Trieste Italy*



The illusory white triangle developed by the Italian perception psychologist Gaetano Kanisza (1955), has been merged with the three components of the theoretical framework of One Health represented by Humans, Animals and the Environment. If you focus your attention on every single component of the triad one at a time, you don't see any triangle because in the picture there is no triangle. But if you look at the three components at the same time "as a whole", you see clearly the white triangle. One Health is represented by the white triangle that doesn't exist but we see. Seeing a white triangle in this illusion demonstrate the Gestalt idea that the sum of visual perception is more than its parts because the observer view all objects together as a single image. The One Health framework origin has been generated by a Holistic approach to One Medicine that is well explained by the Gestalt school of psychology. According to this approach One Health is more than the sum of its three components, One Health is also everything that is in the area of the white triangle and that connects Humans, Animals and the Environment. Only by understanding the theoretical model that forms the foundation of One Health it is possible to apply this process in the real world, also extending its scope to an even broader operational levels represented by Global and Planetary Health (*original image source Kanisza 1955 available also as open source on Wikimedia, modified and merged with the One Health triad framework*).

Rationale

One Health is defined as a cooperative, multisectoral and interdisciplinary approach that operates at a global, national, regional and local level, the aim is to improve human health by monitoring the human-animal- environment interface (CDC, 2021; Khan et al., 2021). This approach sees the health of humans, animals and ecosystems as an interconnected network, rather than problems to be tackled individually. Key concepts of One Health include viewing the health of all species as needing to be balanced, focusing on health assessment and disease prevention rather than exclusively on treatment and promoting a strong collaborative endeavor between human and veterinary medicine (McMahon et al., 2018; CDC 2021; Khan et al., 2021; Zucca et al., 2021). Why did several scientific disciplines, such as for instance human and animal medicine, ethology, comparative psychology in the middle of the last century, began to investigate the processes not individually but contextualized in their respective ecosystems? Probably, because the founding fathers of One Medicine that evolved into the holistic concept of One Health later on, they were influenced by the Gestalt theory. Gestalt is a school of psychology that emerged in the early twentieth century in Germany and Austria as a theory of perception that was a rejection of the atomist and structuralist psychology. According to the Nobel prize for Medicine and father of ethology, Konrad Lorenz (1951), *"It is the merit of Gestalt psychologists to have introduced the method of correlative analysis to the study of organic systems, at a time when the atomistic way of thinking was holding sway. They showed that the characteristic quality of the whole can be dependent on the universal interaction of literally all its parts, thus proving the naivety of the current atomistic assumption that a part, though isolated experimentally, would behave exactly as it did in the context of the whole"*. To a considerable extent the rules laid down by Gestalt psychologists can be applied to the study of a complex system represented by humans-animals-environment, where epidemiologists perceive entire patterns or configurations not merely individual component like single events, outbreaks, symptoms or diseases, because *"The whole is more than the sum of its parts"*. According to this approach the One Health framework is more than the sum of Humans, Animals and Environment: One Health is also everything that is in the area of the white triangle and that connects Humans, Animals and the Environment. Only by understanding the theoretical model that forms the foundation of One Health it is possible to apply this process in the real world, also extending its scope to an even broader operational levels represented by Global and Planetary Health.

REFERENCES

- CDC. One Health (2021). CDC website. Available online at: <https://www.cdc.gov/onehealth/>
 - Kanizsa, G., 1955. 'Margini quasi-percettivi in campi con stimolazione omogenea', Rivista di Psicologia, 49 (1) pp.7–30. English translation, 'Quasi-perceptual margins in homogeneously stimulated fields', in S. Petry and G. E. Meyer (Eds) 1987, The Perception of Illusory Contours pp. 40-49, Springer: NY.
 - Khan LH, Kaplan B, Monath TP, Woodall J, Conti LA. One Health initiative. (2018). Available online at: <http://www.onehealthinitiative.com/>
 - Lorenz K.(1951) The Role of Gestalt Perception in Animal and Human Behaviour
In: L.Whyte (ed.) Aspects of Form. London: Lund Humphries. pp. 157-178.
 - McMahon BJ, Morand S, Gray JS. Ecosystem change and zoonoses in the Anthropocene. Zoonoses Public Health. (2018) 65:755–65. doi: 10.1111/zph.12489
 - Zucca P. (2020) The Zoonosecene: the new geological epoch of intensive breeding, of wildlife trade, of antibiotic resistance and of pandemic diseases, following the Anthropocene. Platinum, Sole 24 Ore English edition, 11, 114.
- Zucca, P.; et. al (2021), 'What do adolescents know about One-Health and Zoonotic risks? A school-based survey in Italy, Austria, Germany, Slovenia, Mauritius and Japan', Frontiers in Planetary Health, doi: 10.3389/fpubh.2021.658876.

www.biocrime.org