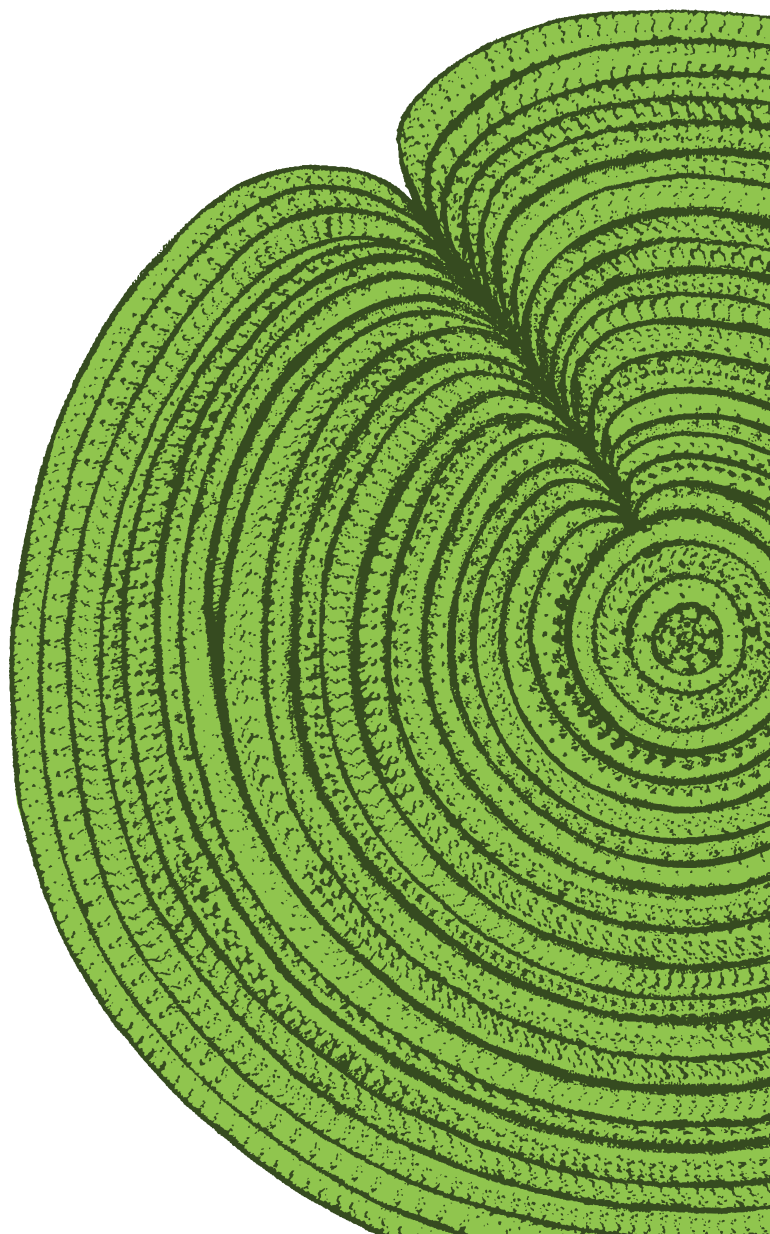




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Healing dolphins? Cognitive and perceptual criticisms in Dolphin-Assisted Therapy

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Since the '70s new therapeutic practices have been developed, involving the interaction between humans and dolphins - *Tursiops truncatus* in particular. Such practices are known as Dolphin-Assisted Therapies (DAT), a specific case of a more heterogeneous set of experiences with cetaceans called Dolphin-Assisted Activities (DAA). These include programs of dolphin watching and swimming in high seas, and shows in dolphinariums and marine parks.

Although the promoters of this type of practices highlight the physiological, psychological and cognitive benefits on human participants, such putative positive effects have not been experimentally validated yet [1]. Studies supporting DAT seriously suffer from theoretical and methodological flaws, such as the small sample size, the lack of control on effects of exercising in aquatic environment and of control groups, the absence of a randomization of participants [2,3].

Human-dolphin interactions are characterized by two sets of perceptual and cognitive misinterpretations. On one side, humans are neglecting the animal's psycho-physiological dimension [4]. DAT causes suffering on several levels: physical (respiratory, peptic and vision diseases, stress-related disorders), behavioral (aberrant, hyper-sexual and stereotyped behaviors, unresponsiveness, self-inflicted trauma, excessive aggressiveness) and social (alteration of hierarchies, limitations of sexual partners) [4-5]. Even in the open water, cetaceans followed by the boats and approached by swimmers are disturbed by noises and human inappropriate behaviors [6].

On the other side, humans have a mislead interpretation of the dolphins' nature [8]. Several behaviours exhibited by dolphins are naively associated with playful and sociable attitudes. However, ethological observations have shown that surfing, breaching, leaping are behaviours linked to specific physiological (sometimes social) functions that have nothing to do with playful patterns. The “smile” on their faces is not a joyful sign, rather an anthropomorphic projection of it [7].

These types of perceptual and cognitive misinterpretations in the human-animal interaction expose non-human species, here represented by vulnerable dolphins, to activities that highly impact on animal welfare [4,9].

1. Fiksdal B.L, Houlihan D., Barnes A.C. (2012). Dolphin-Assisted Therapy: claims versus evidence. *Autism Research and Treatment*: 1-7.

2. Marino L, Lilienfeld SO. (1998). Dolphin-Assisted Therapy: flawed data, flawed conclusions. *Anthrozoös*, 11: 194-200.
3. Marino L, Lilienfeld SO. (2007). Dolphin-Assisted Therapy: more flawed data and more flawed conclusions. *Anthrozoös*, 20(3): 239-249.
4. Marino L. (2013). Human, dolphins and moral inclusivity. Corbey R., Lanjouw A. (2013) *The politics of species. Reshaping our relationships with other animals*, Cambridge: Cambridge University Press: 95-102.
5. Frohoff TG. (2004). Stress in dolphins. Bekoff, M. (Edt.). *Encyclopedia of Animal Behavior*. Westport, Connecticut: Greenwood Press: 1158-1164.
6. Barcelo A, Jarin M, Jaubert R, Martin G, Ody D, Peirache M, Randon N. (2014). La nage avec les cétacés : une activité perturbante pour les mammifères marins et dangereuse pour les pratiquants au sein du Sanctuaire Pelagos (Méditerranée nord-occidentale). *Sci. Rep. Port-Cros natl. Park*, 28: 49-64.
7. Janik VM. (2015). Play in dolphins. *Current Biology*, 25(1): 7-8.
8. Vozza L, Vallortigara G. (2015). *Piccoli equivoci tra noi animali*. Bologna: Zanichelli.
9. Zamir T. (2006). The Moral Basis of Animal-Assisted Therapy. *Society & Animals*, 14(2): 179-199.