

Animal welfare science and “a life worth living” for wild and captive elephants

Commentary on [Baker & Winkler](#) on *Elephant Rewilding*

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Abstract: Baker & Winkler (2020) propose restoring elephants to a state of “wildness” and a “life worth living” by reintroducing captive elephants to the hands of indigenous mahout cultures and practices. To evaluate this proposal, we must define operationally a number of critical concepts in a species-centric, individualistic way, avoiding human-centric opinions and romanticized notions of the wild. Animal welfare science can help create greater synergy between *ex-situ* zoological institutions and *in-situ* elephant conservation, and welfare efforts that respect and value the cultures of both species.

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Baker & Winkler (2020) (B&W) propose a new approach to elephant protection and conservation, with rescue, rehabilitation, and rewilding facilitated by experienced mahout-guardians who understand the needs of individual elephants, their personalities and their life histories. The rationale is that this would be a compassionate model for conservation in the era dominated by humans when being “wild” no longer pertains to status at birth but to providing elephants with the chance of “a life worth living.”

It is important to agree first on what is meant by various critical concepts such as “wildness,” “captivity,” “work,” and “a life worth living.” We should not assume that the wild is inherently superior nor should we romanticize the harsh realities of life in the wild. There are many examples of poor welfare for elephants who are “living free, in their natural environments,” including vehicular accidents, shootings, poisoning, infectious diseases, plastic ingestion and intestinal impaction, among others. The introduction of additional elephants will also require considering all potential ecological effects. Although there have been some successes, it is

speculative to assume rewilding will lead to an increase in breeding and wild populations. As carrying capacities are approached (and inevitably exceeded) by “rewilding” captive elephants, how many premature deaths would be acceptable due to resource competition and social aggression? For rewilding of any scale, a qualified ethical review would need to evaluate the steps, target area, individual animals (health, history, personality) involved (both the rewilding candidate-captives and their free-roaming conspecifics) as well as group dynamics, etc. Measures and standards of animal welfare should be applied to *in-situ* populations as well.

A number of species have adapted and are thriving on the edge of (or in the midst of) human civilizations. Should we try to preserve a historic ecology (resisting human behavior, greed, and ambition) or should we try to make the pieces fit better as the world continues to change? B&W’s reference to “wild populations living in highly-managed national parks” is almost an oxymoron; as they acknowledge, *in-situ* populations experience “varying degrees of captivity.” That makes defining “captivity” even more important and seems to imply that human management is necessary.

When it comes to defining quality of life, we feel that there is a role for animal welfare professionals (and those who have extensive experience working directly with elephants in accredited zoos) and scientists to collaborate with indigenous communities. Some of the traditional practices of mahout cultures — which have historically used aversive control — were not fully considered or disclosed in B&W’s target article. Important advances in applied behavior analysis have been made in accredited zoological institutions that we should not overlook or ignore (e.g., Forthman & Ogden, 1992; Tarou & Bashaw, 2007). Managers of *ex-situ* programs have devoted considerable resources to the cause of captive elephant welfare and may continue to contribute valuable knowledge and resources to range-country efforts, even if some may disagree philosophically with such facilities. Such a collaboration would surely be beneficial for the zoo professionals and indigenous caretakers as well as for elephants in varied situations. It would also help make the conservation role of many *ex-situ* facilities more direct, collaborative, and synergistic.

Some projects involving Western elephant behaviorists who directly work with indigenous caretakers have already been successfully undertaken in Asian range countries (personal communication: Erin Ivory, IUCN Asian Elephant Specialist Group). Behavioral, cognitive, and welfare research help us understand how elephants perceive and respond to their environment, although we still have much to learn. We do agree with B&W’s stance in favor of “reward-based conditioning” rather than the “punishment-driven technique” or other methods that rely on force, fear, or pain to produce behavior. Animals who have been subjected to aversive conditioning — which by its nature *suppresses* behavior (especially innovation, creativity, and expressiveness) — may no longer have the behavioral adaptability and plasticity characteristic of elephants. Even a few years of exposure to archaic methods may have lasting effects on an elephant’s problem-solving capacity.

Emphasizing a purely ethological perspective may be less productive than adopting a behavioral perspective, given that elephants are highly adaptable and exhibit huge variation in “natural behavior” according to their personalities, learning histories, and environment. Although there can be ethical concerns when “work” serves a primary function in a relationship (Lorimer & Rahmat, 2020), compassionate conservation can still be achieved. In our own observations and research, we have seen that voluntarily participating in experiments requiring problem-solving

may function as cognitive enrichment for elephants and appears psychologically and physically stimulating as well as enjoyable. This supports the sizeable literature showing that working for rewards can be beneficial in supportive learning environments. These examples remind us to avoid purely anthropocentric notions of “a life worth living” for another species. Individual welfare should be taken into consideration in trying to arrange the best environment for elephants.

In summary, we caution against advocating traditional mahoutship without analyzing their practices and tempering them according to scientific advances in the behavioral sciences. It remains to be determined whether the traditional knowledge of elephant care in such cultures is viable and sustainable in the context of Western notions of “welfare” and “wellness” (Laine, 2020). Zoo animal welfare scientists can contribute their expertise in behavioral welfare more directly to conservation efforts. We all agree that more knowledge and information is needed about what makes an elephant’s “life worth living.” This goal will be best achieved with interdisciplinary and cross-cultural collaboration.

References

- Baker, L., & Winkler, R. (2020). [Asian elephant rescue, rehabilitation, and rewilding](#). *Animal Sentience* 28(1).
- Fernando, P., Leimgruber, P., Prasad, T., & Pastorini, J. (2012). *Problem-elephant translocation: Translocating the problem and the elephant?*. *PLoS One*, 7(12).
- Forthman, D. L., & Ogden, J. J. (1992). The role of applied behavior analysis in zoo management: Today and tomorrow. *Journal of Applied Behavior Analysis*, 25(3), 647.
- Highfill, L., Fad, O., & Spencer, J. (2019). Cognitive research and elephant wellness. In *Wellness for elephants: Proceedings of the 2016 Jacksonville workshop (Wellness for Wildlife)*, (Morris, M. C., Segura, V. D., Forthman, D. L., & Maple, T. L., eds.). Red Leaf Press, 125-141.
- Highfill, L., Fad, O., Makecha, R., & Kuczaj, S. (2013). Brief report: Asian Elephants (*Elephas maximus*) may demonstrate stable personalities. *International Journal of Comparative Psychology*, 26, 233-240.
- Laine, N. (2020). [Anthropology and conservation](#). *Animal Sentience* 28(5).
- Lorimer, J., & Rahmat, K. (2020). [Elephants at work](#). *Animal Sentience* 28(7).
- Osborne, S. R. (1977). *The free food (contrafreeloading) phenomenon: A review and analysis*. *Animal Learning & Behavior*, 5(3), 221-235.
- Spencer, J., Highfill, L., Fad, O., & Arnold, A. M. (2012). Untapped potential: Enriching our animals through behavioral research. *Proceedings of the annual conference of The Animal Behavior Management Alliance*.
- Tarou, L. R., & Bashaw, M. J. (2007). Maximizing the effectiveness of environmental enrichment: Suggestions from the experimental analysis of behavior. *Applied Animal Behaviour Science*, 102(3-4), 189-204.
- Williams, C. (2006). Elephants on the edge fight back. *New Scientist*, 18, 39.

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