



Happy Dolphins? We Can't Ever Know

Statement on study of captive dolphin welfare

The scientific paper *“Looking forward to interacting with their caretakers: dolphins’ anticipatory behaviour indicates motivation to participate in specific events”* was recently published in the journal *Applied Animal Behaviour Science*. The media coverage of this paper was intense and generated such headlines as: “We finally figured out whether or not [captive] dolphins are happy,” “Scientists attempt to measure dolphin ‘happiness’ for the first time,” “Dolphin ‘happiness’ is measured for the first time,” and “Happiness is human for dolphins.” Dolphinaria-Free Europe considers this interpretation of the study’s results to be misguided and a misrepresentation of the findings of the study.

The study took place over three months at a French dolphinarium and measured the degree to which the bottlenose dolphins energetically looked toward an area where an event would occur (termed “anticipatory” behaviour) just before being presented with two non-food-related events – interacting with toys and familiar trainers. The researchers also measured anticipatory behaviours before training sessions, where food was provided. Finally, the study assessed whether the intensity of anticipatory behaviours predicted the degree to which the dolphins participated in the events, as the researchers considered this link to be a measure of how much the dolphins “looked forward” to these events.

The study’s results: these dolphins displayed significantly more anticipatory behaviours before interacting with trainers than with toys, and heightened anticipation led to heightened participation.

The authors considered the most likely explanation for these results to be that dolphins view interacting with their trainers and toys as important, positive events in their lives, in that order of preference, and food was not a factor in these preferences or motivations. (Interestingly, the authors did not address the obvious question of whether dolphins showed more anticipation of trainer interactions where food was provided versus where it was not. The only analysis they performed on their data regarding anticipatory behaviours before training sessions, where the animals were fed, was whether the intensity of anticipation predicted the intensity of participation, which unsurprisingly it did.)

Dolphinaria-Free Europe believes these results suggest that captive dolphins look forward to anything that occurs during the day that interrupts the tedium of their lives and that they most look forward to events where they might be fed. We disagree that food was not a factor in the dolphins’ preference for interacting with trainers over toys, even when food was not provided. We believe it is reasonable to conclude that dolphins, given their intelligence, know that familiar trainers (who provide their food outside of the experimental sessions) *might* feed them at any time, whereas toys never will.

Regardless of one’s interpretation of the results, the most that can be concluded from this study is that dolphins prefer participating in certain events. Yet the media message clearly linked these results to the concept of “happiness.” Determining that dolphins show preference towards one event over another does nothing to measure their “happiness” or even contentment. At best, these results can provide guidance, in a captive dolphin management context, on how often to provide captive dolphins the opportunity to experience certain events they may prefer or even find enriching. However, these results

can also indicate how boring the rest of a captive dolphin's life is and/or how strongly motivating food is to them.

When popular media over-interprets or misinterprets scientific results, it is the responsibility and even obligation of the scientists who conducted the study to publicly correct them. Unfortunately, it appears that the authors of this study have done little beyond brief article quotes to more accurately frame the results of their work.

DFE strongly recommends, when in future journalists report on captive cetacean welfare studies, they read the original study before publishing their own story, as relying solely on press releases from dolphinariums or researchers can lead to bias. Bias can arise two ways: through a study's design, which can lead to biased results, and through interpretation of results, even when the results are unbiased. In the case of this study on anticipatory behaviours, it was impossible for the study design to entirely eliminate factors that could confound the results (such as using familiar trainers, whom the dolphins would recognize as food providers, even in contexts where no food was provided). Certainly dolphinariums have a vested interest in spinning welfare study results in a way that benefits their businesses, as appears to have been the case here.

Dolphinaria-Free Europe
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