



BEHAVIOURAL SEQUENCES DISPLAYED BY A BOTTLENOSE DOLPHIN (*Tursiops truncatus*) COMMUNITY DURING SWIM PROGRAMMES DEDICATED TO AUTISTIC CHILDREN



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INTRODUCTION

Dolphins show a huge behavioural capacity, as in potentially performable elements quality and amount as well as in events temporal concatenation. However, as for this last aspect, the transition probability to shift from an activity to another one, seems to be to a certain extent predictable in orderly sequences.

Aim of this study was to analyse the linkage between behavioural units in a *Tursiops truncatus* community during dolphins/autistic children encounters.

RESULTS

Since the instant the child came into the water, spontaneous animal reactions revealed to progress in distinctive sequences, reasonably relied on individual and group characteristics (see diagrams for details).

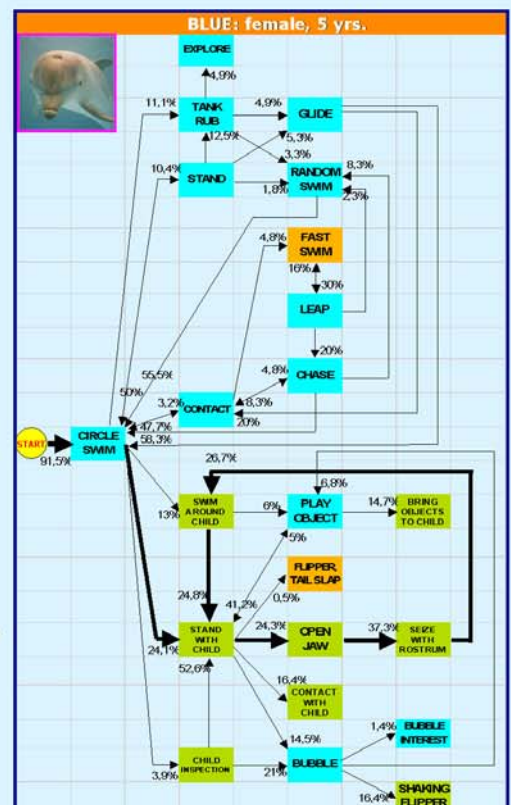
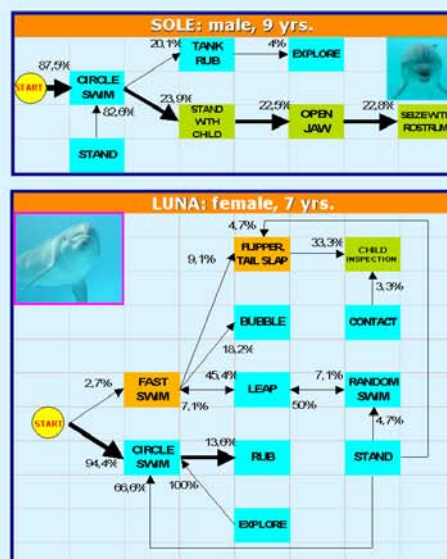
In fact, while adults (SPEEDY & ALFA) and still parent-dependent offspring (LUNA), showed a quite simple way of acting, almost exclusively related to a series of neutral-locomotory behaviours, other juveniles (SOLE & BLUE) started more complex successions preferentially including interactions with children even via tactile displays such as "contact" or slightly "seize with the rostrum".

METHODS

The bottlenose dolphin group was composed by two wild adults (a male and a female) and three captive born juveniles (a male and two females) housed in the Rimini Delfinario (Italy).

A specific ethogram, including 39 activities organized into 3 main categories ("Neutral", "Approach" and "Avoid"), was used during continuous focal observations lasting 20 minutes each. Frequencies were scored by means of a video camera for a total of 120h of sampling.

Observer Lag Sequential Analysis was applied to obtain transition matrices and to construct significant flux diagrams ($p < 0.05$) (Fagen & Mankovich, 1980).



CONCLUSIONS

Even if the limited subjects number prevent a wider generalization of results, the positive approach to humans, together with the weakness of negative responses, seemed to confirm the promising value of bottlenose dolphin implication in encounters with children affected by communicative disorders. At the same time, since psychological stress measurements are quite difficult to obtain, behavioural quantification could represent a good indicator of cetacean status in these contexts.