

Acoustic and Gestural Language Comprehension

Work at our laboratory in language comprehension was resumed with two young female bottlenosed dolphins, Phoenix and Akeakamai, acquired from the wild a little more than a year after the loss of Kea and Puka. The training, carried out together with Douglas Richards and Jim Wolz at the University of Hawaii laboratory, followed the general procedures developed with Kea. An initial three-month period was devoted to acclimating the new animals to their tank, reinforcing socialization with trainers, and acquainting the pair with various sounds and objects prior to attaching meaning to the sounds. During this period, several behaviors, such as "fetching" and "mouthing" were put under control of gestures—specific movements of the hand or the hand and arm of the trainer. Most of these behaviors were later transferred to acoustic control.

The two dolphins were trained in one tank using separate locations in the tank as testing stations for each animal. Two whistle-like sounds were assigned as names for the animals and each dolphin quickly learned to approach a speaker and, later, her testing station, only if her name were heard. In further training, the name of the animal always preceded any instruction to her, and only the animal named completed the instruction, though both could hear all sounds.

Table 8.1. Current Receptive Vocabulary of the Dolphins Phoenix and Akeakamai

Objects (Nouns)	Actions (Verbs)	Agents (Subjects)	Feedback
<i>Transferable (Mobile)</i>	<i>Take Direct Object</i>	Phoenix	Yes
Ball	Mouth	Akeakamai	No
Pipe	Tail-Touch ^a		Ready
Hoop	Pec-Touch ^b		
Person	(Go) Over		
Fish	(Go) Under		
Frisbee	(Go) Through		
<i>Nontransferable</i>	<i>Takes Direct or Indirect Object</i>		
Gate (P)	Fetch		
Window (P)			
Water			
Panel (P)	<i>Intransitive</i>		
Speaker	(Go) Left (A)		
	(Go) Right (A)		

^aInstructs a touch of an object with the tail flukes.

^bInstructs a touch with a pectoral fin.

P = Item in Phoenix's vocabulary only; A = item in Akeakamai's vocabulary only.