

OBJECT PERMANENCE IN YOUNG HOODED CROWS AND BUDGERIGARS

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One of the basic components of animal perception and cognition is the understanding that there are invariant physical properties attached to objects in the world. The most commonly discussed aspect of object-concept is object permanence – the notion that objects are separate entities that continue to exist when out of sight of the observer (Piaget 1952; Krushinsky 1990). Pepperberg (1990) showed that different species of parrot are capable of reaching Stage 6 (Piaget 1952) but nothing is known about object permanence in young birds.

We studied this ability in seven hooded crows aged from 1–3 months using a set of 12 tests. Because we didn't know the exact age of birds, we used the time when the bird began to feed by itself as an index of sensorimotor development. This time varied from the 1st week in June (c 30–45 days old) to the 2nd week of July (c 60–75 days old). It was shown that crows are able to find food hidden behind an opaque screen from the 3rd week of June (c 40–55 days old) to the 4th week of July (c 80–95 days old). We didn't determine any link between this time and ability to find an object behind the screen. Crows were also able to find food hidden under an opaque cylinder. This ability emerged either at the same time as the previous test or after it. The same rule has been observed in children (see Bower [1974]). The crows that solved these two tests were capable of finding food hidden under the opaque cylinder after a delay of up to 30s. By the 3rd–4th week of August, young crows were not able to find food under the opaque cylinder after displacement. Therefore, the study showed that the upper limit, Stage 4, was reached in young crows at the age of 3 months.

We also studied the ability to solve object permanence tests in 10 young budgerigars aged 30 days and older. Previous data had revealed that some of them reached Stage 4 at the age of 32 days.

References

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