Immanuel Kant and the Song of the House Sparrow

WOLFGANG WICKLER
Max-Planck-Institut für Verhaltensphysiologie, D-8131 Seewiesen, West Germany

Recently, I had to read Immanuel Kant's "Über Pädagogik" (1803), the first lectures on educational theory in German, and found the following paragraph (in my translation): "To become convinced that birds do not instinctively know, but in fact have to learn, how to sing it is worthwhile to make a test and for instance replace half a clutch of canary eggs by sparrow eggs, or else exchange their very young nestlings for sparrow nestlings. If these are then taken into a room where they cannot hear sparrows from outside, they will learn the canary song and one obtains singing sparrows. It is indeed very admirable that every bird species keeps a certain basic song through all generations, and song tradition appears to be the truest in the world."

"Instinct" here obviously means any ability to perform an adaptive behavior without learning, as is defined in the famous paper on instinct by D. A. Spalding (1873, reprinted 1954). Kant's distinction between instinct and tradition is valid, too, and it is especially important to treat tradition separately from nonsocial learning (Wickler 1965). Kant is also right in that bird song may be acquired even from foster parents. This occurs naturally in some brood parasites (Nicolai 1973), and bird breeders make good use of it in many bird species, although learning of alien songs is not common in finches (Baptista and Morton 1981). To my surprise, Kant turned out to be right even in the particular case of the sparrow. My surprise comes from the fact that there is no reference to this early knowledge of song learning in the sparrow in modern textbooks and review articles, although singing House Sparrows have obviously been known among bird fanciers. From their literature it can be concluded that Kant referred to the House Sparrow, *Passer d. domesticus*.

As early as 1773, Barrington described an experiment to teach a House Sparrow to sing: "I took a common sparrow from the nest when it was fledged and educated him under a linnet; the bird, however, by accident heard a goldfinch also, and his song was, therefore, a mixture of the linnet and goldfinch." Witchell (1896) in his book on the evolution of bird song mentions that the House Sparrow occasionally tries to sing, and, "if reared under birds of another species in a cage, the sparrow has their notes, and not sparrow notes, though he retains the sparrow tone of voice, and he may then become quite a pleasing singer." Conradi (1905) attempted to raise English sparrows in the nest of canaries. He obtained "two young sparrows which in about nine months not only imitated some of the song of the canary but also adopted the canary's call note." Conradi gives a brief description of the intermediate stages of song perfection of one of his sparrows. When 2 months old, the sparrow "began to give notes in rapid succession running up the scale from three to five notes and then giving five to six of the higher notes all in one run." At 3 months "he was observed to run up and down and up the scale all in one run." Also, "he was for the first time observed to give a trill." Sanborn (1932) raised one male sparrow from about a week old to maturity, together with 30 singing canaries, all Seifert rollers. His sparrow did not copy the canary song but uttered "merely a rather continuous succession of sparrow chirps or trills." Sanborn also failed to train other birds to sing foreign songs. Stoner (1942) mentions a House Sparrow, hand-reared in New York, that had "acquired a remarkable proficiency in singing ability through the medium of two canaries which were his companions—in separate cages—for about six years. His imitations of the 'rolling' notes of the one and the 'chopping' notes of the other were sometimes so well done as to deceive even his mistress." Dost (1954: 123) states that young male House Sparrows will learn call-notes and fractions from other finches' songs. One is reported to have precisely imitated a siskin song, another to have learnt human words. Kipps (German edition 1956) describes a London House Sparrow that imitated melodies played on the pianoforte. She gives a notation of one of his phrases. Portmann (1956) also mentions a sparrow from Vienna that imitated melodies.

This, I think, allows the following conclusions: (1) The fact of song tradition in birds was known even before 1773. The importance of traditional traits (in parallel to genetic traits) in animal behavior was known to Kant in 1803. (2) The House Sparrow can imitate foreign sounds, specifically from individuals that he accepts as parents or group members early in life. [Stoner (1942) and Kipps (1956) mention a very intimate relationship between singing House Sparrows and their keepers, including courting and mate attachment on the part of the sparrow.]

This points to the possibility that the acquisition of the vocalizations of social partners is important in the normal life of a sparrow. Supposedly, the usual sparrow vocalizations contain as many definite and variable characteristics as the melodious songs of other birds, though they are not as easily recognized by human ears [a situation comparable to the consistent differences in tonal and temporal structure of single calls in the Kittiwake Gull (*Rissa tridactula*); see Wooller 1978]. Deckert (1969) lists about 20 different vocalizations of the House Sparrow, though these are scarcely identifiable from her written description. There are other birds—the corvids, the

mynas, and the parrots—that have unmelodious harsh voices, intimate social attachments (including the attachment to man as a substitute conspecific), and a remarkable versatility in copying foreign sounds. It is possible that the brief, noise-like vocalizations of such birds, including the House Sparrow, are compressed melodies that may contain many characteristics of a melody except its sequential arrangement.

I thank L. F. Baptista, A. M. Dufty, Jr., and D. Schmidl for valuable comments.

LITERATURE CITED

BAPTISTA, L. F., & M. L. MORTON. 1981. Interspecific song acquisition by a White-crowned Sparrow. Auk 98: 383–385.

BARRINGTON, D. 1773. Experiments and observations on the singing of birds. Philosophical Transact. London No. 63, part i: 249–291.

CONRADI, E. 1905. Song and call-notes of English sparrows when reared by canaries. Amer. J. Psychol. 16: 190–198.

DECKERT, G. 1969. Zur Ethologie und Ökologie des Haussperlings (*Passer d. domesticus* L.). Beitr. z. Vogelkunde 15: 1–84.

DOST, H. 1954. Handbuch der Vogelpflege und Züchtung. Leipzig/Jena, Urania-verlag.

KANT, I. 1803. Über Pädagogik. Königsberg, Friedrich Nicolovius (I. Kant's Vermischte Schriften, K. Vorländer ed., Verlag Felix Meiner, Leipzig 1922).

KIPPS, C. 1956. Clarence der Wunderspatz. Zürich, Die Arche (original English title: Sold for a Farthing).

NICOLAI, J. 1973. Das Lernprogramm in der Gesangsausbildung der Strohwitwe *Tetraenura fischeri* Reichenow. Z. Tierpsychol. 32: 113–138.

PORTMANN, A. 1956. Vum Wunderspatzen zum Spatzenwunder. Pp. 72–79 *In* Clarence der Wunderspatz (Kipps, C., author). Zürich, Die Arche.

SANBORN, H. C. 1932. The inheritance of song in birds. Comp. Psychol. 13: 345–364.

STONER, D. 1942. Longevity and other data on a captive English Sparrow. Auk 59: 440–442.

SPALDING, D. A. 1873 (reprint 1954). Instinct. Brit. J. Anim. Behav. 2: 2–11.

WICKLER, W. 1965. Über den taxonomischen Wert homologer Verhaltensmerkmale. Naturwiss. 52: 441–444.

WITCHELL, C. A. 1896. The evolution of bird song, with observations on the influence of heredity and imitation. London.

WOOLLER, R. D. 1978. Individual vocal recognition in the Kittiwake Gull, *Rissa tridactyla*. Z. Tierpsychol. 48: 68–86.

Nest-sharing by a Lark Sparrow

DIANA K. CROWELL,[1] CHARLES C. CARPENTER,[2] AND DAVID G. HUFFMAN[3]
[1]*Biology Department and* [3]*Aquatic Station, Southwest Texas State University, San Marcos, Texas 78666 USA, and* [2]*Zoology Department, University of Oklahoma, Norman, Oklahoma 73019 USA*

Both the Lark Sparrow (*Chondestes grammacus*) and the Mockingbird (*Mimus polyglottos*) commonly nest in weedy fields, grasslands with scattered trees and bushes, pastures, and prairies. During a study of Lark Sparrow nesting behavior, a nest was observed that was shared by both species. The nest was located 2.2 m above the ground in an eastern red cedar tree (*Juniperus virginiana*) in Willis Cemetery on Highway 99 near Willis, Oklahoma. The cemetery consists of 4 ha of grasses beneath a 30% cover of ornamental trees and shrubs.

When first discovered on 15 June 1981, the nest consisted only of a base of twigs. On the same day, two Lark Sparrows were observed copulating on a nearby grave marker. On 16 June, the Lark Sparrows were observed to make 13 attempts at building the nest, but a Mockingbird interfered with the building. Bent (1968) noted a similar example of interference in this same area in 1957 when a Lark Sparrow attempted to build near an active Mockingbird nest. Whenever a sparrow approached the nest with building material, the Mockingbird would fly to the nest and chase the sparrow to the ground. On 18 June, the nest was completed, with a cup composed primarily of horse hair, and it contained one Mockingbird egg and one Lark Sparrow egg. The Mockingbird egg was pale blue with dark splotches, while the Lark Sparrow egg was cream-colored with dark brown scrawl markings on the blunt end of the egg. On 19 June, another Mockingbird egg was observed in the nest. On 20 June, a third Mockingbird egg was present, but no Lark Sparrow egg could be located in the nest or on the ground near the nest. During this period and for several days that followed, a Lark Sparrow was found incubating the eggs more often than the Mockingbird, but the Mockingbird always had priority if both birds were present. A Lark Sparrow usually remained in the upper branches of the tree, if not on the nest. On 22 June, two additional eggs had been laid in the nest by the Mockingbird