CHAPTER TWO

UNDERSTANDING AVIAN INTELLIGENCE

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No situation appears more tragic, more offensive for the heart and the mind—despite the ink clouds projected by the Judeo-Christian tradition to mask it—than that of a humanity that coexists with other species of life on Earth which they share in enjoying, but with whom it cannot communicate. It is understandable that the myths refuse to take this flaw in creation as original, that they see in its apparition the inaugural event of the human condition and its infirmity.

—Claude Lévi-Strauss and Didier Eribon, De près et de loin.

How different are these two kinds of bipeds, humans and birds, whose bodies and evolution are so remote from each other! The more intriguing then some of the feats of intelligence and ingenuity performed by birds; of all the mammals only humans are capable of anything remotely like them. Birds born in the spring that autumn fly by night thousands of miles south to return the following spring to the very backyard in which they were born. Who was the first human to think of unraveling the cocoons of moths to make clothing? Is it the upright posture and the reversed thumb that led to the hand-eye correlation in the human primate, and, also lost in the mists of prehistory, made possible the weaving of fibers into containers and clothing? Sociable Weaverbirds employ some ten different movements to cross weave and knot fibers into nests, where they fashion inverted entrances and also false entrances to deceive predators. Hardly any mammals sing, but song is the most important cultural activity in most known human cultures and generational subcultures. Some paleoanthropologists suggest that humans must have picked it up from birds. Many species of birds incorporate extensive mimicry of other species, including humans and inanimate sounds, into their songs. In courtship birds parade their ornamentation, sing and dance; bowerbirds construct stages, theaters,
and gardens for their performances and collect decorative objects for them (Barber 1993, 46–57).

The astonishing advances made in microbiology, genetics, and biochemistry in recent decades have brought new understanding to the internal constituents of living organisms and their evolution. The behavior of protein molecules, DNA, chromosomes, enzymes, and the processes that distribute nutrients to cells have become intelligible. Intelligible not simply in the sense that the constituents and interactions of inert matter are intelligible; they are understood also to be intelligent: adapted to the constitution, maintenance, survival, and reproduction of these living organisms. To be sure, there is a huge factor of waste: a fetus conceived is the product of the accidental joining of one sperm out of millions with one egg out of hundreds, the outcome of one chance out of three billion which misfire. The estimated ten to one hundred million species of living organisms have evolved as a result of mutations, occurring once in some ten billion replications of the DNA molecules, and of horizontal gene transfer, that of transposons, genes which are able to cut themselves out of one chromosome and splice themselves into another, jumping from organism to organism, species to species. The immense majority of these mutations are malfunctional and maladapted to survive. But this process results in the unending variety of species and individual organisms adapted to survive and reproduce in the unending variety of material and biological environments.

Simple organisms and non-independent organisms such as spermatozoaa do not simply react to their environments but are sensitive to them. Sperms and eggs are not free swimmers in the uterine fluids; the ovarian follicle secretes a fluid for which the sperm has olfactory receptors, and the egg rejects sperm of another species (Spehr et al. 2003). Simple plants extend their growth in the direction of light and air. Complex animate organisms are not only sensitive to their environment, but perceive, that is, their motor adaptations are responses to the way their sense organs focus upon and organize the details of the visible, audible, olfactory, and tangible field. A spider selectively responds to vibrations of a certain range; it will not respond to a dead fly put on its web, but will to a tuning fork vibrating at a certain frequency (Boys 1880). Ethologists exhibit the intelligibility of animal perceptions and behaviors by showing how they are intelligent: means of adapting to the environment individuals find themselves in, adapted to the constitution, maintenance, survival, and reproduction of these living organisms. The eight thousand species of birds show the most extreme variation