The big question in the science of psychology is: Why are human cognition and behavior so different from the capabilities of every other animal species on Earth – including our close genetic relations, the chimpanzees? This book provides a coherent answer by examining the aspects of the human brain that have made triadic forms of perception and cognition possible. Mechanisms of dyadic association sufficiently explain animal perception, cognition and behavior, but a three-way associational mechanism is required to explain the human talents for language, toolmaking, harmony perception, pictorial depth perception and the joint attention that underlies all forms of social cooperation.

Harmony, Perspective and Triadic Cognition

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Most of the ideas presented here are based on experimental results obtained in the twenty-first century, but genuine progress in cognitive psychology began in the 1950s, and the cognitive revolution has deep roots going back to Renaissance Europe. Moreover, a still-controversial aspect of human psychology – known since antiquity, but “rediscovered” in the 1960s – concerns cerebral laterality. The importance of hemisphere differences for specifically human cognition was brought to my attention when I heard Julian Jaynes lecture on the evolution of consciousness in 1969 – fascinating, erudite and persuasive, but far from the experimental science that cognitive psychology was gradually becoming. That stimulus eventually led me to rather inconclusive attempts at exploring laterality issues in Sendai, Japan, and Oxford, England, but I was later fortunate to join a group of neuropsychologists in Zurich, Switzerland, where hemisphere differences were an essential aspect of the study of abnormal human behavior. There, in the good company of Thedi Landis, Marianne Regard and Peter Brugger, I found research topics that were both experimentally tractable and conceptually fundamental and, over the past two decades in Zurich, Philadelphia and Osaka, I have been able to address what I believe to be the “big question” in psychology: What is unusual about the human mind?

It turns out that brain laterality is only one part of the story, but the most important topics in human psychology involve the “left hemisphere talents” of language and tool use and the “right hemisphere talents” of music and art. Unrelated to questions of brain localization, what they have in common is a “triadic” cognitive foundation, which is described in detail in the following chapters. Others have previously commented on the significance of triadic processes for higher cognition, but I introduce several new aspects and try to show how the step from simple (dyadic) associations to three-way associations is the huge cognitive leap of Homo
sapiens. Explicating the nature of triadic cognition is the primary motivation for writing this book.

My arguments concerning high-level cognition will probably not settle easily with two fringe groups. The first are those who attempt to explain the special status of human beings on Earth by postulating the existence of supernatural forces, and then documenting that assumption by reference to sacred texts. I acknowledge the good intentions of religious thinkers in their emphasis on the “higher” human sentiments, but I deny that their arguments have any explanatory power. On the contrary, logical coherency is lost as soon as tradition, cultural norms or metaphysical speculations are treated as indisputable facts. At best, the preachers end up entertaining their flocks – stating and restating the assumptions they started with – but they do not further our understanding of what it means to be a human being.

The other fringe group – and the one I try to engage in the pages that follow – is the disorganized cabal of scientists who have come to believe that there are no qualitative differences between man and beast. I acknowledge their sincere efforts at the scientific explication of the phenomena of humanity in a material world, but the behaviorist research program comes to an abrupt and totally unsatisfactory halt with clever oxymorons: “the talking ape,” “the toolmaking ape,” “the singing ape.” Well, yes, that is who we are, but what makes those rather un-ape-like capabilities possible? Reminding us that our unusual behaviors evolved in a biological world does not explain the underlying psychology.

Compromise between opposing lunacies is not necessarily the road toward truth, but I show that some progress can be made if we do not begin with the presumed answers of either religion or behaviorism.