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Nota di contenuto Mirror Neurons and the Evolution of Brain and Language; Editorial page;

Title page; LCC data; Table of contents; Introduction; Part I: Mirror neurons systemPast, present, and future of a discovery; The neural correlates of action understanding in non-human primates; The mirror system in humans; Part II: Further developments in the study of mirror neurons system and interpretations of its functions; Is the human brain unique?; The co-evolution of language and working memory capacity in the human brain; Episodic action memory. Characterization of the time

course and neural circuitry

The role of objects in imitationThe mirror system and joint action; Brain activation to passive observation of grasping actions; Mirror neurons

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conversational interaction; Symmetry building and symmetry breaking in synchronized movement; Part III: Mirror neurons system and the

evolutionof brain, communication, and language; On the evolutionary origin of language; Mirror neurons, vocal imitation, and the evolution of particulate speech

Constitutive features of human dialogic interaction. Mirror neurons and what they tell us about human abilitiesSome features that make mirror neurons and human language faculty unique; Altercentric perception by infants and adults in dialogue. Ego's virtual participation in Alter's complementary act; Visual attention and self-grooming behaviors among four-month-old infants. Indirect evidence pointing to a developmental role for mirror neurons; The role of mirror neurons in the ontogeny of speech

Mirror neurons' registration of biological motion. A resource for evolution of communication and cognitive/linguistic meaningLooking for neural answers to linguistic questions; Mirror neurons and cultural transmission; Part IV: Applications; Mirror neurons and the neural basis for learning by imitation. Computational modeling; Mirror neurons and feedback learning; A connectionist model which unifies the behavioral and the linguistic processes. Results from robot learning experiments; Name index; Subject index

Sommario/riassunto

The emergence of language, social intelligence, and tool development are what made homo sapiens sapiens differentiate itself from all other biological species in the world. The use of language and the management of social and instrumental skills imply an awareness of intention and the consideration that one faces another individual with an attitude analogical to that of one's own. The metaphor of 'mirror' aptly comes to mind.Recent investigations have shown that the human ability to 'mirror' other's actions originates in the brain at a much deeper level than phenomenal awareness.