

## 532 Plenary Lecture

### THE MIRROR MECHANISM IN MONKEYS AND HUMANS.

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Primates are exquisitely social species whose survival critically depends on their ability to understand what others do and feel. In my talk I will first describe the general properties of a neural mechanism – the mirror neuron mechanism- that allows individuals to understand the actions done by others and their emotions. This mechanism produces, in the brain of the viewer, representations of the observed actions and observed emotions in a motor format. Because the observing individuals know the outcome of their motor representations, they are able to achieve, through the mirror mechanism a *direct* knowledge of what the others do and feel. In the second part of my talk I will show that, while individual mirror neurons code the “what” of a given motor act (e.g. grasping), their “chained” organization enables the observer to infer the “why” of it (e.g. grasping-for-eating”), that is to read the agent’s motor intention. I will conclude discussing differences in the extent of the role played by the mirror mechanism in the behavior of macaque monkeys and humans