19th Advanced Course

Thinking, Reasoning, and Development

30 June – 2 July 2010

Thursday morning, July 1, 2010

11h 30 **V. Girotto**, University IUAV of Venice, Université de Provence, CNRS

Rational inferences about uncertainty in infancy and childhood

Abstract:
According to Piaget & Inhelder (1951), children are not able to reason correctly about probability. Young children lack the most basic logical abilities necessary to compute a probability ratio. Older children are not able to conduct a combinatorial analysis until the acquisition of complex logical abilities during adolescence. We defend an alternative hypothesis. According the extensional reasoning view (Johnson-Laird et al., 1999), naïve adults assess probabilities extensionally, by considering the possible ways in which events may occur. Following this view, we have hypothesized that children, like naïve adults, draw probabilistic inferences extensionally. We have corroborated this hypothesis, by showing that 12-month-olds have rational expectations about future events based on their estimation of possibilities (Teglas et al., 2007); preschoolers draw correct posterior inferences when they can reason extensionally (Girotto & Gonzalez, 2008); 7-year-olds assess probabilities from combinations (Girotto & Gonzalez, 2009). We consider the import of these findings for the Piagetian view, and for some recent accounts of probabilistic reasoning, according to which the human mind is intrinsically unable to deal with probabilities.