

## **Theory of mind in rett syndrome: effects of a training**

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Two subjects with Rett syndrome (RS), aged respectively 10 and 19 years, have been submitted to a general training of cognitive rehabilitation and to a more specific training about the recognition and comprehension of emotions. These studies have a twofold goal: verifying whether it would be possible to teach the comprehension of subjectivity (or Theory of Mind) to patients with RS starting with non-epistemic mental states (emotions), that ontogenetically precede the epistemic ones (beliefs) in the normal development and, once the training is over, submitting these subjects to simplified false belief tasks. Since these kinds of tasks are successfully completed by clinically normal three year olds, the paradigm of Theory of Mind has been considered suitable to discuss the hypothesis of the irrevocability with which subjects with RS are put, from a piagetian point of view, not beyond the sensory-motor stage. Training for the development of subjectivity comprehension in people with RS was started, following the example of what Howlin, Baron-Cohen, Hadwin (2000) suggest for autistic subjects.

The results we have collected up to now are encouraging: the 19 years old girl successfully completed an explicit false belief task in both the acted out and symbolic procedures, showing abilities that clearly belong to the next stage after the sensory-motor stage. Therefore, more caution is needed before establishing in such a categorical way which evolutive level subjects with RS are able (or not able) to reach. Moreover, it does not only seem that the training has contributed to the positive answers of the older girl in the false belief task, but it is also clear that the training in the 10 years old girl is giving satisfying results, even if she is still involved in the training so she has not been submitted to a false belief task yet. The use of these trainings in the rehabilitation of patients with RS is believed to be promising for giving these subjects more accessibility to higher evolutive levels than those showed by literature up to now. Further studies are going to be undertaken by the writers.

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