The adolescent brain : unraveling the neural mechanisms of cognitive and affective development

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Propositions

accompanying the public defense of Sabine Peters' dissertation "The Adolescent Brain: Unraveling the neural mechanisms of cognitive and affective development" on 27 January 2016

1. Brain regions for cognitive control are not 'offline' in young children and adolescents (this thesis)

2. Longitudinal studies are the only way to truly investigate development (this thesis)

3. Future research should focus more on the possibilities of the adolescent brain, rather than the shortcomings (this thesis)

4. Neural measures can be used to predict future school behavior even better than behavioral measures alone, which justifies the additional cost (this thesis)

5. A healthy dose of risk taking during adolescence is adaptive and necessary to become a functioning adult

6. Researchers studying adolescence should listen more to which questions parents, teachers and adolescents would like to answer

7. The general public should be educated about common brain myths, including oversimplified accounts of adolescent brain development

8. FMRI research is still too much a science of 'blobology', i.e. assigning functions to isolated activated blobs. The field should move towards investigating connectivity between brain regions

9. Lack of reproducibility of results is one of the most pressing problems in science. Part of the solution would be to change the publication process

10. The best research generates more questions than answers