



How the social pressure influences creativity in children and adults ?

Lison Bouhours, Olivier Houde, Gregoire Borst, Anaëlle Camarda, Mathieu Cassotti

► To cite this version:

Lison Bouhours, Olivier Houde, Gregoire Borst, Anaëlle Camarda, Mathieu Cassotti. How the social pressure influences creativity in children and adults?. Society for Neurosciences of Creativity, Mar 2019, San Francisco, United States. hal-02885028

HAL Id: hal-02885028

<https://hal.science/hal-02885028>

Submitted on 30 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

How does social pressure influence creativity in children, adolescents and adults ?

Anaëlle Camarda¹ & Mathieu Cassotti^{2 3}

¹Centre de Gestion Scientifique, Mines ParisTech, France

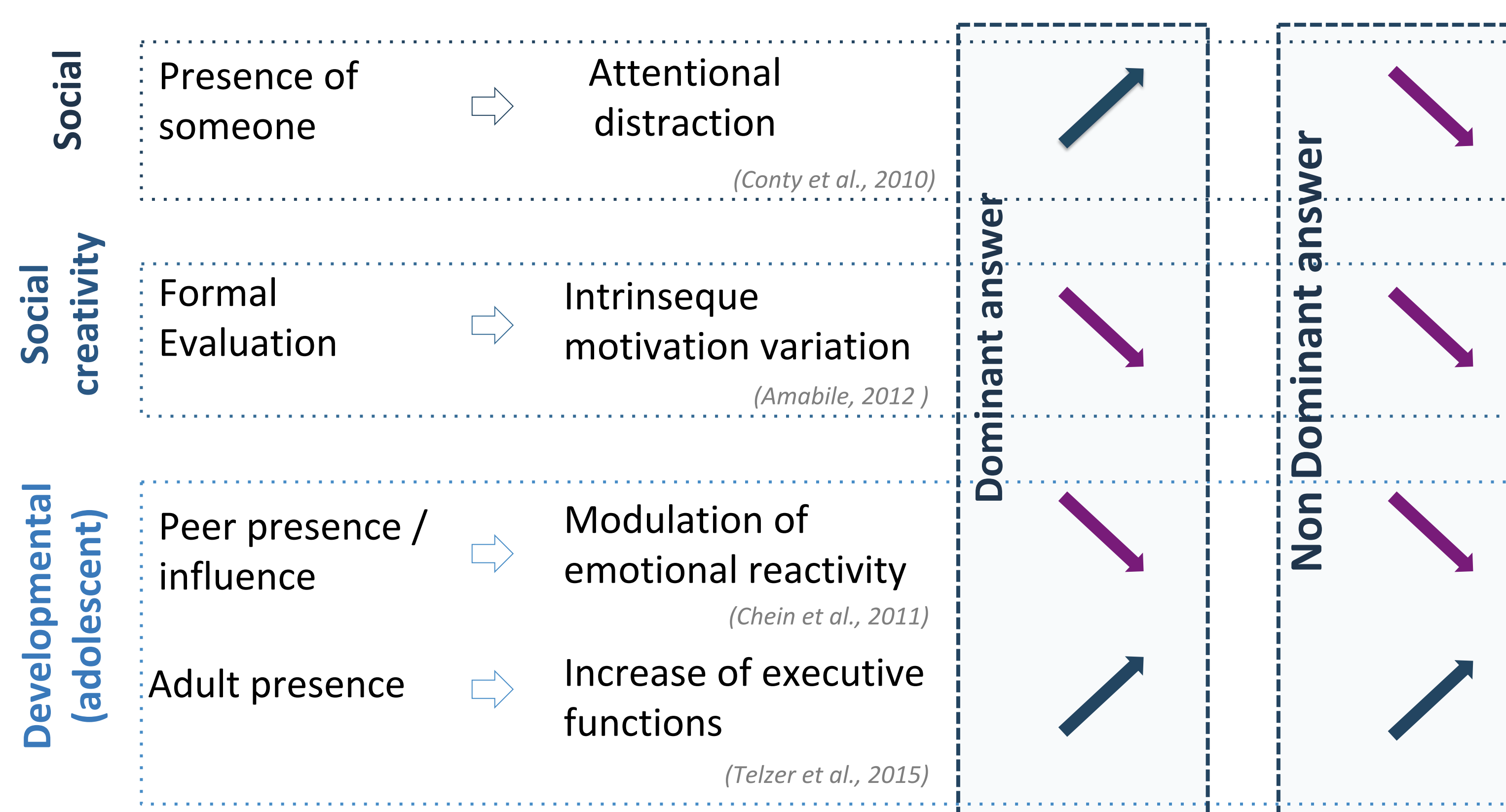
²LaPsyDÉ, UMR 8240, CNRS, Université Paris Descartes, Université de Caen, PRES Sorbonne Paris Cité, France

³Institut Universitaire de France

INTRODUCTION

Creativity, defined as the ability to think of something truly new (i.e., original, unexpected), and appropriate (i.e., useful, adaptive concerning task constraints), is a fundamental process that influences many areas of our daily life and is important for instance for education and scientific reasoning. Considerable efforts have been devoted at identifying the influence of social contexts (e.g., effect of the presence of peers or adults) in the domains of reasoning and decision making, leading to inconsistencies in the literature. In fact, while some show a cognitive stimulation effect of the social context, others show a partial or total decrease of individual's cognitive skills. Moreover, there are to date few study that have examined whether social contexts may facilitate (or constrain) creative ideation and whether the effect of social contexts on creativity change with age (Amabile, 2012). *This study aimed at examining how social pressure (i.e. an adult evaluator) affect the ability to generate creative ideas to a problem in children and adults.*

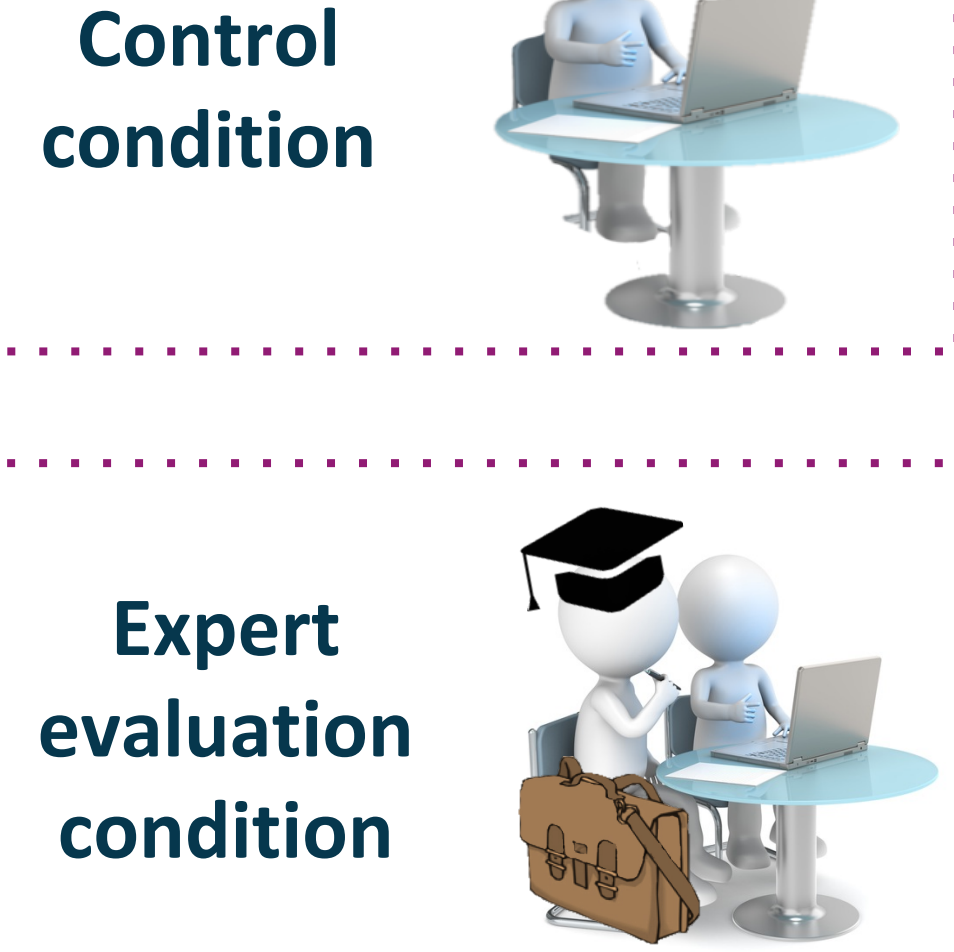
HYPOTHESIS FROM DIFFERENT FIELDS



METHOD & PROCEDURE

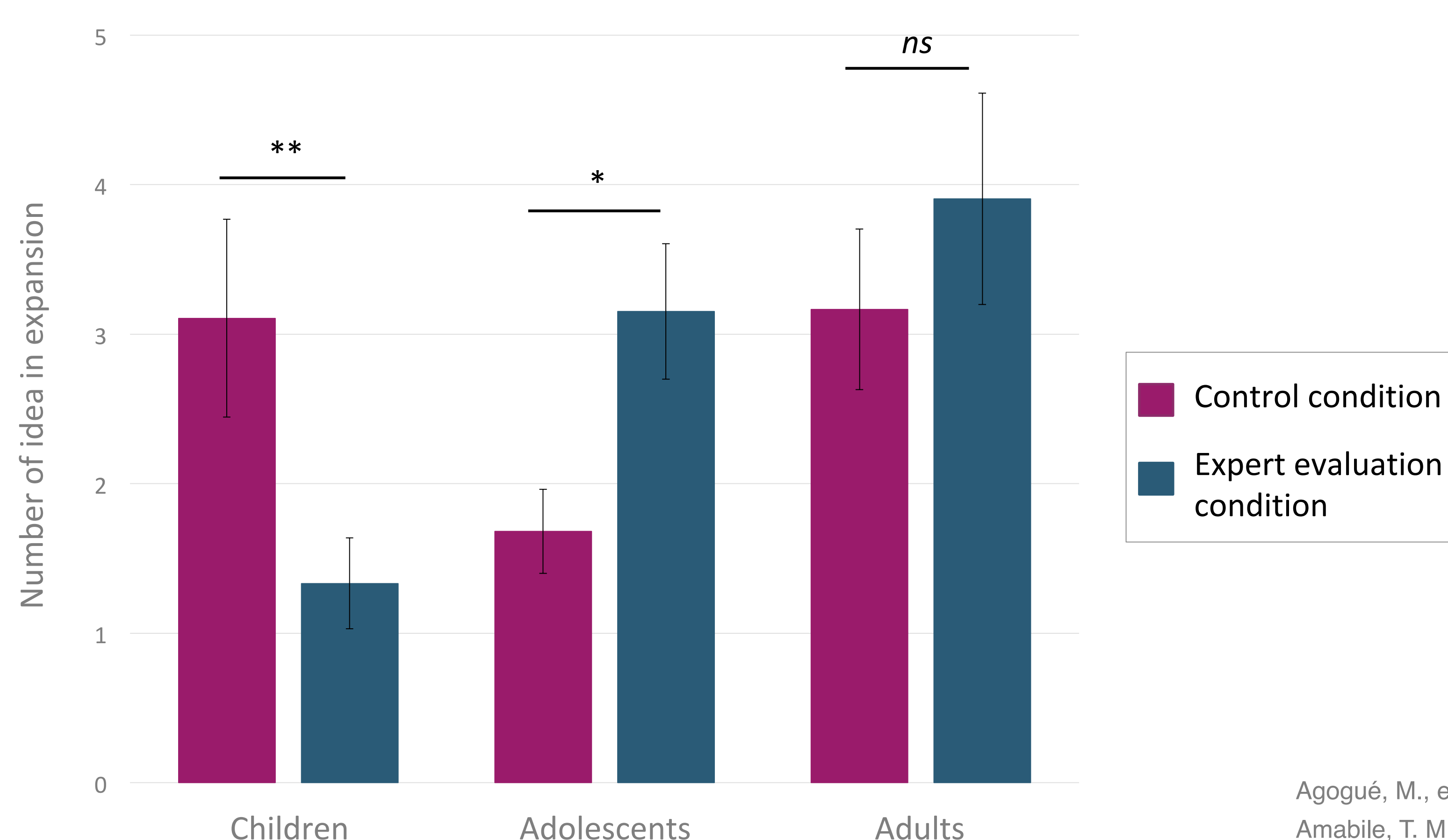
49 Children (from 10 to 12 years, $m = 11.25$), **55** adolescents (from 13 to 15 years, $m = 13.45$), and **45** adults (from 18 to 34 years, $m = 21.29$) were randomly assigned to one of our two experimental conditions (Control condition, and expert evaluation condition). In each condition, they were ask to resolved a creative task, named the « egg task », during five minutes.

Egg task
« Propose as many original solutions as you can to : Ensure that a hen's egg dropped from a height of 10m does not break »



ANALYSIS & RESULTS

As shown in previous studies (Agogué et al., 2014; Cassotti et al., 2016), individuals tend to use the path of least resistance, leading to Fixation effect. In other words, more than 80% of the answer given try to **damp the shock, protect the eeg or slow the fall**, even if many other categories of ideas exist. Then, we analysed the effect of our experimental condition and age groups on the number of idea given in **the fixation path (dominant answer)** ($F(1, 143) < 1$), and in the **expansion path** (outside of fixation – **non dominant answer**) ($F(2, 143) = 5.14, p < .01$).



CONCLUSION

Our results suggest that social context might have opposite influence on creativity in children, adolescents and adults. While it reduces the ability to generate specifically creative ideas for children, it has opposite effect on adolescents. Interestingly, social pressure have no effect on adults' creative performances, in opposition to previous results discussed in the litterature (Amabile, 2012). Moreover, given our results, we can hypothesized that executive skills will be a factor driving emotional regulation, and then the emotionnal reactivity in a contexte of social pressure.

CONTACT

camarda.anaelle@gmail.com

Center for Scientific Management, 75005, Paris

BIBLIOGRAPHY

Agogué, M., et al. (2014). *The Journal of Creative Behavior*, 48(1), 1–12.
Amabile, T. M., & Pillemer, J. (2012). *Journal of Creative Behavior*, 46(1), 3–15.
Cassotti, M., et al. (2016). *NDCAD*, 150, 61–72.

Chein, J., et al. (2011). *Developmental Science*, 14(2), 1–10.
Conty, L., et al. (2010). *Cognition*, 115(1), 133–139.
Telzer, E. H., et al. (2015). *SCAN*, 10(10), 1383–1391.