The emotionally intelligent use of attention and affective arousal under creative frustration and creative success

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ABSTRACT

Why are some individuals able to generate outstanding creative products despite repeated frustrating failures? This question has persisted across the centuries and deals with the nature of creativity itself. We hypothesize that the attitude characterizing how people experience and regulate their emotions (i.e., trait emotional intelligence; trait EI) can explain the differences emerging in creative performance under frustration or success. We explored this hypothesis by inducing, through artificial evaluations during a creative task, either creative frustration or creative success, and by measuring changes in attentional and affective processing through eye-tracking. We expected that trait EI, through a moderation of the attentional and affective components defining the creative process, could predict creative performance. Results supported our expectation, showing that through the regulation of the affect experienced during the creative process, trait EI allows the best use of the attentive and affective resources beneficial to creative thinking.

1. Introduction

In 1880, Vincent Van Gogh wrote to his brother Teo: "In spite of everything I shall rise again: I will take up my pencil, which I have forsaken in my great discouragement, and I will go on with my drawing". Why, despite repeated failures, was Van Gogh able to produce outstanding pieces of art, whereas other people would have given up? This question inspired the present work.

Difficulties always arise during the creative process and one should strive to achieve creative success, in search of appreciation of the process outcomes. Whatever the result of a creative act, one has to face evaluation, which is a potential source of stress during the ideational process (Byron, Khazanchi, & Nazarian, 2010). Although the impact is mostly concentrated on the final creative product, the creative process is paved by inconclusive solutions, which are fundamental intermediate steps on the path towards creative achievement (Corazza, 2016). Constant assessment characterizes the creative process, constituted by iterative cycling between idea generation and idea evaluation (Finke, Ward, & Smith, 1992).

Evaluative feedback provides information on the effectiveness of our ideational activity, estimating the failure or the success of the creative prototype, possibly accepting non-optimal solutions or pushing ahead, and refining our ideas by exploring alternative solutions (Lubart, 2001). Obviously, negative and positive feedbacks have different effects on the creative process. While repeated failure can lead to the perception of creative frustration (He, Yao, Wang, & Caughron, 2016; Sapp, 1992) that could produce a mortification of the creative attempts (Beghetto, 2014) and lower perceived self-efficacy (Baumeister & Tice, 1985), repeated success can generate an opposite overwhelming emotional condition, a sort of ecstasy in the face of repeated achievement (Ivcevic & Brackett, 2015). How much repeated evaluation leading to frustration or success affects creative performance is still an open question. Here we address this question, exploring whether individual differences in the management of attentive and affective resources during frustration and success can explain the emerging differences in creative performance.

1.1. Attentive processing

One of the most important findings in the study of the role of attention on creative performance reveals that less effective attentive filters are associated with better creative outcomes (Carson, Peterson, & Higgins, 2003; Mendelsohn, 1976; Mendelsohn & Lindholm, 1972; Necka, 1999; Peterson, Smith, & Carson, 2002). In particular, worse

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creative performance is associated with a narrow breadth of attention, which filters out apparently extraneous or irrelevant stimuli from awareness (Kasof, 1997). On the contrary, better performance is associated with a wider breadth of attention, which allows a larger range of stimuli into the thinking process through the mechanism of *irrelevance processing*, which has been recently proposed as the mechanism that relates openness (the personality trait more frequently associated with creativity; Batey & Furnham, 2006; Feist, 1998) with creative performance and creative achievement (Agnoli, Franchin et al., 2015). This evidence led to the assumption that a wider breath of attention might allow a much larger pool of associations during the ideational activity (Simonton, 1988).

Attentive mechanisms have also been implicated in the decrease of creative performance as a consequence of repeated stressors, such as repeated evaluation (Byron et al., 2010). Because of its stressful and arousing nature, constant evaluation diverts cognitive resources away from the creative task; evaluation (whether positive or negative) can leave fewer resources available for the creative task, which may result in simpler cognitive strategies, such as a narrow attentional focus (Eysenck, 1995). Due to the limited cognitive resources available during situations dominated by repeated evaluation, the processing of irrelevant information could further reduce creative performance. However, even if plausible, this observation seems insufficient to explain why individual differences emerge in creative performance during repeated evaluations.

1.2. Affective arousal

Creative frustration and creative success emerging as a consequence of evaluative feedback are undoubtedly affect-laden situations (Beghetto, 2014; Ivcevic & Brackett, 2015). The role of affect must therefore be taken into account to understand creative performance under these situations. Here, we relied on the influence of activation (De Dreu, Baas, & Nijstad, 2008) and of regulatory focus on creative performance (Higgins, 1997; Idson, Liberman, & Higgins, 2000). While the activation approach states that an activating mood, i.e., an increase in arousal, stimulates creative activity (Baas, De Dreu, & Nijstad, 2012), the regulatory focus approach suggests that approach-avoidance behaviours emerge in creativity as a consequence of a promotion or a prevention motivational focus. Under a promotion focus, people experience desires linked to the successful attainment of a task, whereas under a prevention focus, people feel a dejection-related negative state (e.g., frustration), linked to unsuccessful attainments (Higgins, 2006). Creative performance emerges as a result of both affective arousal and regulatory focus (Baas, De Dreu, & Nijstad, 2008). In situations of repeated evaluations, according to the activation hypothesis, we might expect that creative performance is associated to affective arousal. Moreover, according to the regulatory focus theory, an increase in affective arousal should be associated with an increase in creative performance during repeated successes in a creative task (leading to a perception of creative success), whereas it should be associated to a decrease in creative performance during failures in the task (leading to creative frustration). Again, this explanation might not suffice to explain individual differences emerging during success and frustration.

1.3. Trait emotional intelligence (Trait EI)

We propose that a useful approach that can help explain the differences emerging under creative frustration and success is to analyze individual differences in how people experience, recognize, and regulate their emotions. A construct that allows the study of individual emotional differences in a comprehensive way is trait EI (Sevdalis, Petrides, & Harvey, 2007), which is defined as a constellation of emotion-related dispositions and self-perceptions measured via self-report instruments (Petrides, Pita, & Konakki, 2007). This approach proposes that individuals varying in trait EI differ in the way they process, use, and manage affect-laden information (Petrides & Furnham, 2003), thus recognizing the subjective nature of human emotional experience. In particular, high-trait EI individuals are more able to deal with negative events (Sevdalis et al., 2007), to manage stress and emotions (Mikolajczak, Petrides, Coumans, & Luminet, 2009) and to increase performance in the face of failures (Agnoli, Pittarello et al., 2015). Physiological data confirm these results, finding an association between trait EI and affective arousal (Rubaltelli, Agnoli, & Franchin, 2016), and showing that trait EI can moderate the effect of arousal on behaviour (Pittarello, Conte, Caserotti, Scrimin, & Rubaltelli, 2017).

1.4. Hypotheses

In the present study, we tested two specific hypotheses on the moderating role of trait EI on irrelevance processing and affective arousal: (a) trait EI moderates the stressful effect of repeated evaluations on irrelevance processing, with high-trait EI participants showing an increase of creative performance with the increase of irrelevance processing, and low-trait EI participants showing an opposite associative trend; (b) trait EI moderates the impact of affective arousal on creative performance, especially in the frustration condition; while in the success condition both high- and low-trait EI individuals should increase their creative performance with the increase of affective arousal, in the frustration condition, the increase of arousal should be associated to a decrease in performance in low-trait EI participants and to an increase of performance in high-trait EI participants.

1.5. The current study

Creative performance was measured through a visual version of the Unusual Uses Test (UUT; Guilford, 1967), a classical divergent task asking participants to produce unusual alternative uses for common objects, with settings that contain both relevant (the object for which participants were asked to produce unusual uses) and irrelevant information (random objects apparently unrelated to the task; Agnoli, Franchin et al., 2015). Even if creative performance is the result of a complex ensemble of cognitive, motivational, and attitudinal elements, we decided to measure it through a divergent thinking task, since divergent thinking is not only a good metaphor for the cognitive abilities leading to original ideas, but it also represents the best characterization of creative potential (Runco & Acar, 2012). Through the use of repeated artificial positive or negative feedback to the outcomes of the task, we elicited frustration or success feelings in participants. Using eye movement tracking, the processing of irrelevant information as well as pupil dilation were measured, monitoring changes in irrelevance processing and affective arousal as a consequence of repeated evaluations. We measured participants' trait EI, and finally we assessed changes in affective reactions and task motivation to check the efficacy of our experimental manipulation.

2. Method

2.1. Participants

Fifty undergraduate students (38 females; mean age 22.2 years, $SD = 1.6$) participated in the study. Participants had normal or corrected-to-normal vision. Written consent was obtained from each participant upon their arrival in the laboratory. No participant declined to participate, displayed distress, or dropped out of the study. The institutional review board at the University of Trento gave ethical approval for the study. Ethical principles are adhered to in accordance with the Declaration of Helsinki.

Participants were randomly assigned to one of the two experimental conditions: 27 participants to the positive feedback (success) condition and 23 to the negative feedback (frustration) condition. Eight participants (5 in the success condition; 3 in the frustration condition) were

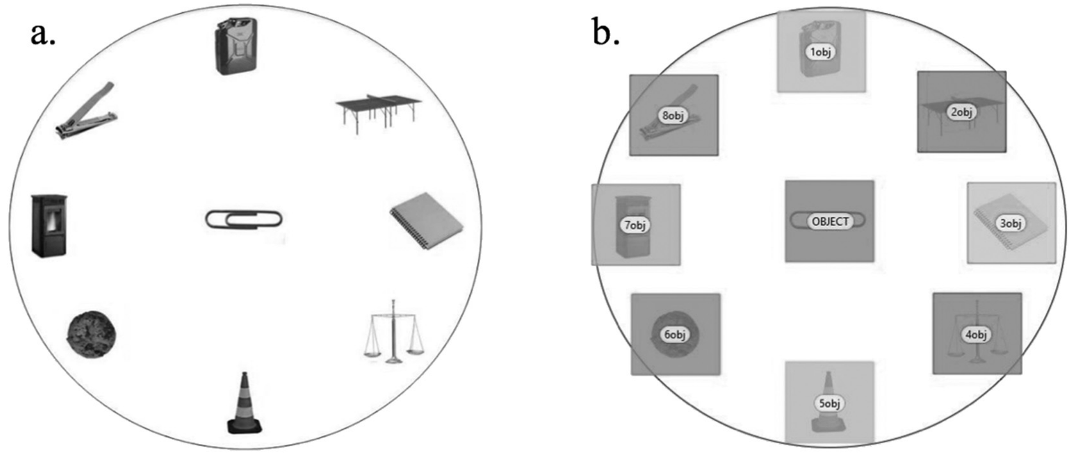

Fig. 1. On the left, an example of a stimulus with the target object in the centre and the 8 different peripheral objects next to the circumference (a). On the right, the AOIs drawn for the 9 objects presented in a stimulus (b).

excluded from analyses because they reported they had understood the experimental manipulation. Finally, 42 participants were included in the analysis (22 in the success condition, 20 in the frustration condition). In order to ensure that our sample size was sufficient to detect an adequate effect, we computed post hoc power analyses using G*Power 3.1 Software. Results revealed that our total sample size of 42 participants was sufficient to detect with a 0.99 power (critical $F = 2.42$) an effect size comparable to the one reported in previous research (Agnoli, Franchin et al., 2015).

2.2. Stimuli and apparatus

The visual stimuli used in the UUT task were 15 screens organized as a circle that enclosed in the centre a target object (the object for which the participants had to find as many unusual uses as they could) surrounded by a circle of 8 different objects. Each target object was surrounded by 8 different peripheral stimuli. For more details on the stimuli used in this study, see Supplementary Information and Fig. 1a for an example.

Participants' eye-movements were measured with a Tobii T120 eye-tracker. The eye-tracker was integrated with a 17″ monitor, where all stimuli were presented using the Tobii Studio software. Nine different fixed non-overlapping areas of interest (AOIs) were drawn around each object for all presented stimuli. Each AOI had the same size, 4.2 cm (4°) in width and 3.1 cm (3°) in height (see Fig. 1b). Two measures were derived: the fixation length of peripheral stimuli, as a measure of irrelevance processing (Agnoli, Franchin et al., 2015), and pupil dilation, as a measure of affective arousal (Bradley, Miccoli, Escrig, & Lang, 2008; Partala & Surakka, 2003; Rubaltelli et al., 2016). Changes in pupil dilation in particular were computed by subtracting the base rate pupil size (measured during the presentation of fixation crosses) from the average pupil dilation across all fixations of each experimental block.

2.3. Questionnaires

2.3.1. TEIQue-SF (Petrides, 2009)

This 30-item scale measures trait EI using a seven-point scale ranging from 1 (completely disagree) to 7 (completely agree). The items ask participants to self-report one's ability in regulating, expressing, and perceiving emotions. Items in the TEIQue-SF include sentences such as: "Expressing my emotions with words is not a problem for me", or "On the whole, I'm pleased with my life." The final score of the TEIQue-SF ranged between 112 and 169 (M = 142.69; SD = 14.39). The scale showed good reliability: $\alpha = 0.78$.

2.3.2. PANAS-X (Watson & Clark, 1999)

This 60-item scale consists of a number of words that describe different feelings. Participants rated the intensity of the feelings they experienced on a 5-point scale ranging from 1 (very slightly) to 5 (extremely). Here, for the purpose of the study, we used only 33 items, measuring hostility, fatigue, sadness, joviality, self-assurance, and attentiveness affect. The reliability of the scale was good ($\alpha > 0.68$).

2.3.3. Questionnaire on current motivation–short form (QCM; Freund, Kuhn, & Holling, 2011)

This 12-item scale is a measure of task motivation that assesses four factors of current achievement motivation (anxiety, challenge, interest, and probability of success). Here, for the purposes of the study, only the interest in the task and probability of success factors were measured on 7-point rating scales, with the labels "completely disagree" at 1 and "completely agree" at 7. Reliability of the two subscales was acceptable (interest, $\alpha > 0.68$; probability of success, $\alpha > 0.61$).

2.4. Procedure

The experimental session (about 35–40 min) was individual and included both a computer task and paper and pencil tasks. Upon arriving in the laboratory, participants were asked to answer the PANAS-X questionnaire (Watson & Clark, 1999). In this first phase of the experiment, individuals were instructed to rate the intensity of their feelings according to "how they felt at that present moment" (Watson, Clark, & Tellegen, 1988). Subsequently, they were told that they would participate in a computer task with an eye-tracker and they were informed about the eye-tracking equipment and how it worked. Participants sat in a chair placed 60 cm away from the stimulus monitor. The room lights were lowered.

A cover story was used to make the manipulation more realistic. Participants were told that the aim of the study was to test a new automated algorithm that in real time would be able to evaluate the creativity of their responses. Specifically, they were instructed to produce as many possible creative uses as they could for the objects they saw at the centre of the screen (target objects). Participants were told that, to be considered creative, their answers should be both original and effective. They had to say their answers loudly in order to allow the experimenter to transcribe their responses in a software, within which the algorithm would have scored the creativity of their answers. After the initial briefing, participants were asked to answer the QCM questionnaire (Freund et al., 2011), in order to measure their perceived probability of success and interest in the task before the beginning of the experiment.

Then, participants were presented with an example trial. They were informed that before the appearance of the target object, a fixation cross would appear (for 2 s) at the centre of the screen. They had to fixate on this cross and the target object would appear in its place. Moreover, they were informed that the target object would be surrounded by other objects, which they could decide to look at or not, but that their task was related only to the production of creative uses for the central object. Participants could look at the target object for as long as they wanted. Once ready to answer, they could press the space key, then a blank screen appeared and they had 30 s to produce all creative uses for the target object they could think of. They were then presented with five different blocks containing three different target stimuli each. An eye-tracker calibration was performed before each block of trials. All uses produced by participants were recorded by an audio-recorder and transcribed off-line by the experimenter.

Two experimental conditions were manipulated as follows. In the negative feedback condition, participants constantly received the same feedback at the end of each of the five blocks: “The creativity of your responses is LOW”. Instead, in the positive feedback condition, participants constantly received the following feedback: “The creativity of your responses is HIGH”. In both conditions, at the end of each block, feedback presentation was preceded by the slide “End of the block. The computer is calculating the creativity of your responses” for 10 s to inform participants that their results were being computed by the algorithm. For a schematic representation of the procedure, see Fig. 2.

Note that although the participants' performance was real, the feedback provided was artificial; it did not reflect their actual performance and was adopted solely to manipulate the different experimental conditions. At the end of each block, participants in both conditions were again asked to complete the PANAS-X scale, rating the intensity of the feelings they were experiencing at the present moment, and the QCM, rating the probability of success and their interest in the task at the present moment. Finally, at the end of the computer task, TEIQue-SF was completed by participants. At the end of the experiment, as a manipulation check, participants were asked to explain, in their opinion, the purpose of the study. Participants reporting that they understood the experimental manipulation were excluded from the analysis. Finally, before leaving the laboratory, participants were debriefed and thanked. Originality and fluency of the responses given by each participant were calculated off-line (see Supplementary Information for more information on originality scoring).

3. Results

3.1. Manipulation check

Preliminarily, we tested the effectiveness of the experimental manipulation (see Supplementary information for more details on the analyses and design used to test the effects of the two experimental conditions). It clearly emerged that the two conditions impacted participants' affective and visual processing differently, with results showing (a) a decrease in the perceived probability of success and interest in the task and a reduction of positive affective states in the frustration condition as compared to the success condition; (b) higher arousal in the success condition than in the frustration condition, as well as a progressive increase of arousal with the repetition of feedback; (c) longer fixations on peripheral stimuli during the frustration than during the success condition. On the basis of these differences in the affective and visual processing emerging as a consequence of the experimental manipulation, we explored whether irrelevance processing (as measured through the fixation length on peripheral stimuli; Agnoli, Franchin et al., 2015), affective arousal (as measured through pupil dilation; Bradley et al., 2008; Partala & Surakka, 2003), and emotional dispositions (trait EI) were able to explain participants' creative potential (as measured by fluency and originality scores obtained by participants in the five task blocks) in the success and frustration conditions.

3.2. Irrelevant processing and creative performance

Fluency and originality were explored in two separate generalized linear mixed models and treated as repeated dependent variables. Robust error estimation was used in order to control for the effect of outliers (Wu, 2009). Block was entered in the models as a categorical within-subjects effect; Trait EI level (median split in high and low level; Petrides & Furnham, 2003) and Condition (success or frustration) were entered as categorical between-subjects effects, whereas the fixation

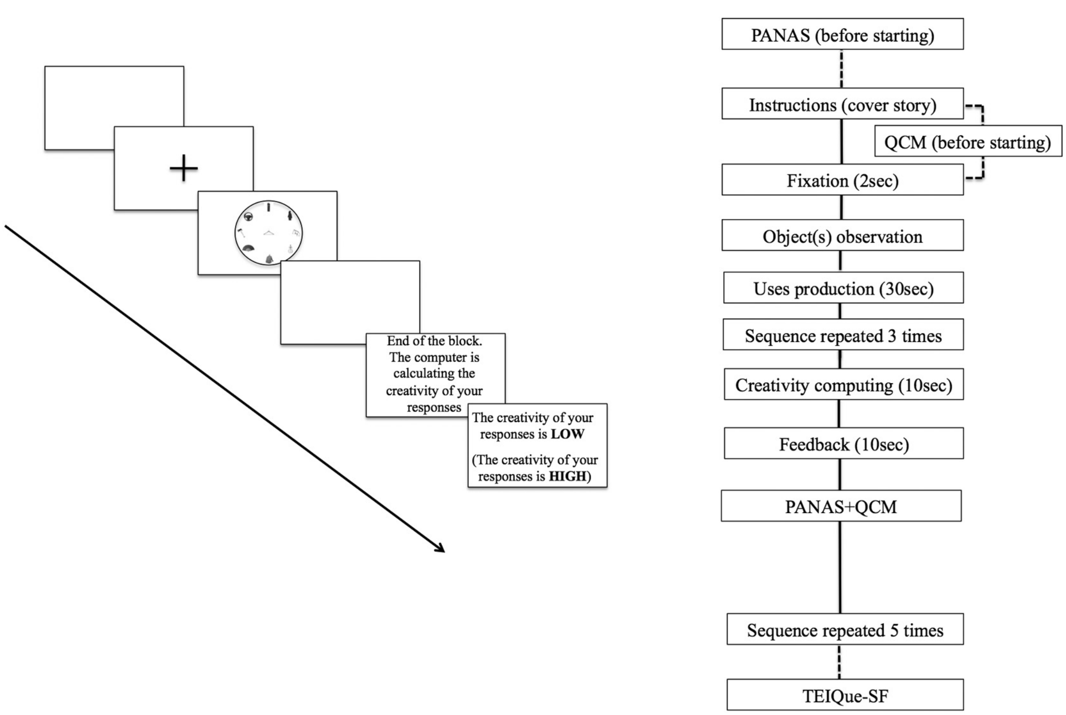

Fig. 2. Schema of the experimental procedure.

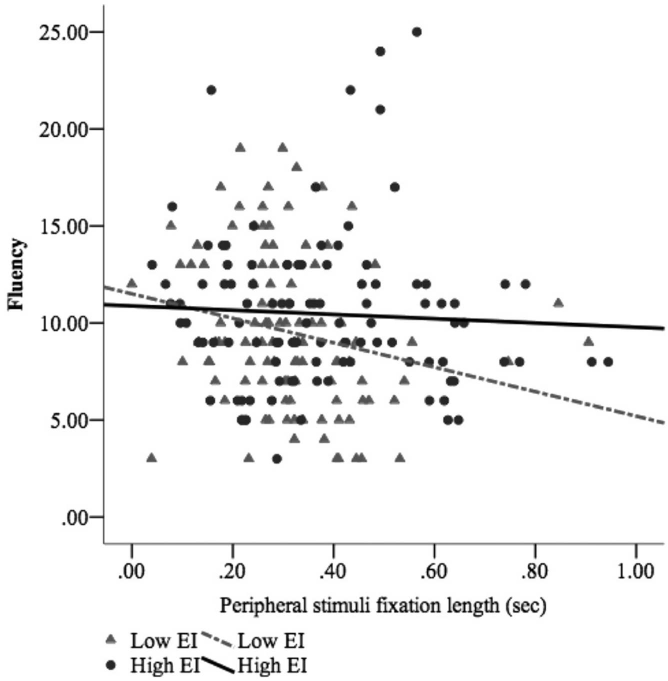

Fig. 3. Relationship between irrelevance processing (fixation length of peripheral stimuli) and fluency in low trait EI (grey triangles and dotted line) and high trait EI (black dots and continuous line) participants.

length of peripheral stimuli was entered as a continuous covariate effect. Finally, two- and three-way interactions between the previous variables were added to the models.

The model predicting fluency revealed a significant interaction between trait EI level and the fixation length of peripheral stimuli, $F(1, 174) = 4.34$, $p = 0.039$ (Fig. 3). In comparison to high-trait EI participants, who did not show any association between fluency and irrelevance processing, low-trait EI participants showed a significant decrease in response fluency in association with the increase in the fixation of peripheral stimuli, $b = -9.28$, $t(174) = -2.62$, $p = 0.010$, 95% CI [−16.28, −2.292].

The model predicting response originality revealed an interaction effect between Block and Trait EI level, $F(4, 174) = 2.85$, $p = 0.026$, which was further specified though a significant three-way interaction between Block, Trait EI level, and peripheral stimuli fixation length, $F(4, 174) = 3.07$, $p = 0.018$. As shown in Fig. 4, except for the first block (when participants had not yet received any feedback), irrelevance processing was associated to an increase in originality scores in high-trait EI participants and to a decrease in originality in low-trait EI participants. This difference emerged as significant in the second $b = 1.40$, $t(174) = 2.33$, $p = 0.020$, 95% CI [0.219, 2.583], fourth $b = 2.09$, $t(174) = 2.33$, $p = 0.021$, 95% CI [0.321, 3.859], and fifth blocks $b = 1.88$, $t(174) = 3.04$, $p = 0.003$, 95% CI [0.662, 3.105], while it was only marginally significant in the third block, $b = 1.28$, $t(174) = 1.94$, $p = 0.053$, 95% CI [−0.017, 2.581].

3.3. Affective arousal and creative performance

Two separate generalized linear mixed models explored the influence of arousal, the five task blocks, the two trait EI levels, and the two experimental conditions on fluency and originality. The first model predicting response fluency showed a significant effect of Condition, $F(1, 164) = 4.93$, $p = 0.028$, 95% CI [−0.6.188, −0.681], highlighting a lower fluency in the frustration condition than in the success condition. Moreover, a significant interaction between Block and Trait EI level emerged, $F(4, 164) = 3.08$, $p = 0.018$, which was further specified by a significant interaction between Block, Trait EI level, and pupil dilation, $F(4, 164) = 2.87$, $p = 0.025$ (Fig. 5). Specifically, while in high-trait EI participants, the interactive effect between Block and pupil dilation was not significant, $F(4, 82) = 2.19$, $p = 0.077$, in low-trait EI participants, a significant interaction between these two variables emerged, $F(4, 78) = 5.06$, $p = 0.001$. In particular, for low-trait EI participants, a change in the relationship between pupil dilation and fluency emerged by comparing the first block (when participants had not yet received any feedback) to the second, $b = -4.51$, $t(78) = -4.48$, $p < 0.001$, 95% CI [−6.511, −2.507], the third, $b = -7.44$, $t(78) = -2.79$, $p = 0.007$, 95% CI [−12.745, −2.136], and the fifth blocks, $b = 1.53$, $t(78) = 2.58$, $p = 0.012$, 95% CI [0.350, 2.702], where, as depicted in Fig. 5, the increase of affective arousal was associated to a decrease of response fluency.

The model predicting originality highlighted a significant interaction between Condition and Block, $F(4, 164) = 3.31$, $p = 0.012$, which showed overall higher originality in the frustration condition than in the success condition across blocks, emerging as significant in the fifth block, $b = 0.94$, $t(164) = 2.59$, $p = 0.010$, 95% CI [0.070, 0.519]. Moreover, a significant interaction between Condition and pupil dilation emerged, $F(1, 164) = 5.25$, $p = 0.023$, which was further specified by a significant interaction between Condition, Trait EI level, and pupil dilation, $F(1, 164) = 4.43$, $p = 0.037$. As depicted in Fig. 6, whereas in the success condition an increase of affective arousal was associated to an enhancement of response originality irrespective of the trait EI level, in the frustration condition, an increase of arousal was associated to a decrease of originality in low-trait EI participants and to an enhancement of originality in high-trait EI participants, $b = 0.72$, $t(164) = 2.10$, $p = 0.037$, 95% CI [0.045, 1.403].

4. Discussion

The results of the present study confirm the central role of trait EI in the management of attentive and affective resources under frustration and success conditions, determining people's creative performance, and

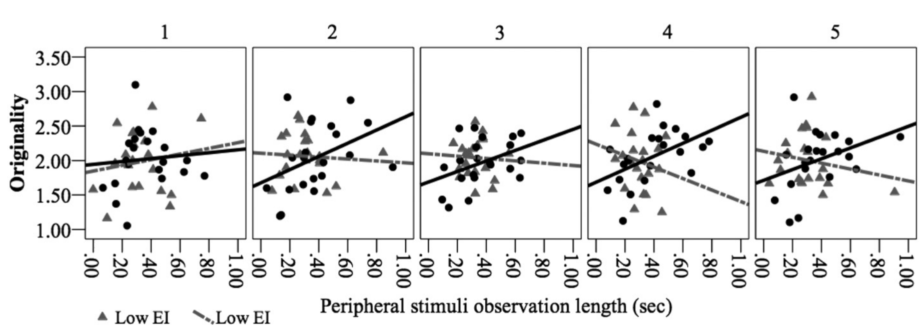

Fig. 4. Relationship between irrelevance processing (fixation length of peripheral stimuli) and originality in low trait EI (grey triangles and dotted line) and high trait EI (black dots and continuous line) participants in the five task blocks.

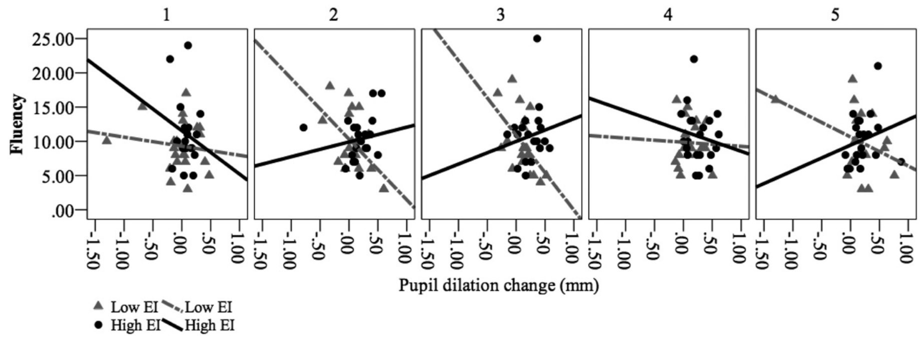

Fig. 5. Relationship between affective arousal (pupil dilation change) and fluency in low trait EI (grey triangles and dotted line) and high trait EI (black dots and continuous line) participants in the five task blocks.

in particular, a higher probability of expressing their creative potential as measured though a divergent thinking task. First, eye-tracking results confirmed that evaluation is a stressful event that has an impact on creative performance (Byron et al., 2010), in particular through its influence on attentive processing. However, the role of trait EI emerged as central in explaining the extent of this impact. We found that in low-trait EI individuals, irrelevance processing was associated with a decrease in creative performance, both in the number (fluency) and in the originality of participants' responses. This effect emerged after the first evaluation of originality, whereas before the first round of feedback, high- and low-trait EI participants did not diverge; in low-trait EI participants, a negative associative trend between irrelevance processing and creative performance appeared after the first evaluation. This finding could suggest that irrelevant information becomes distracting for people overwhelmed by the stressful nature of the evaluations (i.e., low-trait EI individuals). As hypothesized by Eysenck (1995), we can assume that all elements outside the immediate focus of the attention (i.e., irrelevant information) could be considered, in this situation, as taking away resources from the task. On the contrary, in high-trait EI participants, a positive association between irrelevance processing and creative performance emerged, in line with past research on the benefit of irrelevant information on creative thinking (Agnoli, Franchin et al., 2015; Carson et al., 2003; Kasof, 1997). In this case, irrelevant information did not take cognitive resources away from the thinking process, but it is instead used to obtain a larger pool of associations during ideational activities (Simonton, 1988). Trait EI, by its ability to counteract the detrimental effect of stressful events such as repeated evaluations (Mikolajczak et al., 2009), therefore allows a wider breath of attention using the potential beneficial effect of irrelevant information on the creative behaviour. This result is in line with past research, which found a generalized positive association between trait EI and creative behaviour, as measured both by divergent thinking and convergent thinking tasks (Sánchez-Ruiz, Hernández-Torrano, Pérez-González, Batey, & Petrides, 2011).

The stressful nature of evaluation emerged both under success and frustration, with a generalized detrimental effect on creative performance for people without sufficient emotional resources. This effect was corroborated by the results on affective arousal, where the increase of arousal resulting from repeated evaluations was associated to a decrease in the ability to produce alternatives (fluency) in low-trait EI participants. However, results on affective arousal revealed clear differences between success and frustration. Under success, originality increased with the increase of affective arousal, irrespective of participants' trait EI level. According to the regulatory focus theory (Higgins, 1997; Idson et al., 2000), we can infer that under success, creative behaviour is driven by a promotion focus, whereby people experience a successful satisfaction of their creative drives. Arousal is therefore used to promote original creative behaviours. On the contrary, under frustration, the motivation attitude should prevent participants from attending the task, in the attempt to avoid repeated dejection-related negative states. Critically, this trend emerged in low-trait EI participants, who showed a creative performance decrease with the increase of affective arousal in the frustration condition. On the contrary, under the same situation, high-trait EI participants showed an increase of originality, exhibiting a promotional attitude towards the creative task. We can therefore infer that the tendency to avoid arousing negative

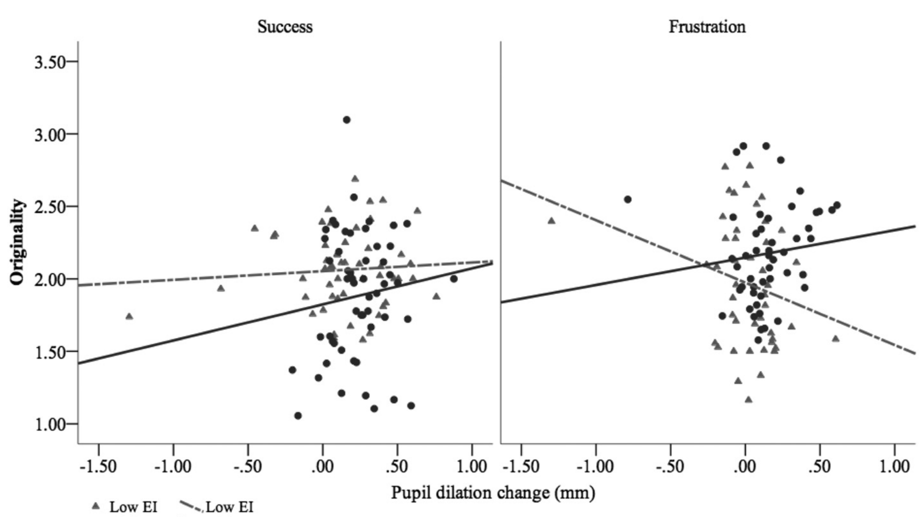

Fig. 6. Relationship between affective arousal (pupil dilation change) and originality in low trait EI (grey triangles and dotted line) and high trait EI (black dots and continuous line) participants in the success (left panel) and in the frustration (right panel) condition.

states as a consequence of repeated negative evaluations was restructured by high-trait EI participants, who exploited the arousing potential of the situation to increase their ability to produce original responses, in line with results showing the protective role of trait EI from negative feedback (Agnoli, Pittarello et al., 2015).

5. Conclusions

To conclude, our results set trait EI as a cornerstone in unravelling the role of individual differences in determining creative performance and creative potential. High-trait EI individuals proved to be sheltered from the narrowing of attention resulting from stressful repeated evaluations and from the overwhelming affective arousal stemming from repeated failures. Through an optimal regulation of the affect experienced during the creative process, trait EI allows an individual to make the best use of the attentive and affective resources beneficial to creative thinking.

Does this mean that Vincent Van Gogh was a high-trait EI individual? We cannot answer this question definitively, but we can state that he was able to extract energy from deep frustration to produce some of the most beautiful works of art our world has known.

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