

HIGH BAS AND LOW BIS IN OVERCONFIDENCE, AND THEIR IMPACT ON MOTIVATION AND SELF-EFFICACY AFTER POSITIVE AND NEGATIVE PERFORMANCE

Krupić, Dino

Source / Izvornik: **Primenjena psihologija**, 2017, 10, 297 - 312

Journal article, Published version

Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

<https://doi.org/10.19090/pp.2017.3.297-312>

Permanent link / Trajna poveznica: <https://um.nsk.hr/um:nbn:hr:142:029351>

Rights / Prava: [In copyright](#) / [Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2025-01-03**



FILOZOFSKI FAKULTET
SVEUČILIŠTE JOSIPA JURJA STROSSMAYERA U OSIJEKU

Repository / Repozitorij:

[FFOS-repository - Repository of the Faculty of Humanities and Social Sciences Osijek](#)



dabar
DIGITALNI AKADEMSKI ARHIVI I REPOZITORIJI

Dino Krupić¹

Department of
Psychology, Faculty
of Humanities and
Social Sciences,
University of J. J.
Strossmayer in Osijek

HIGH BAS AND LOW BIS IN OVERCONFIDENCE, AND THEIR IMPACT ON MOTIVATION AND SELF-EFFICACY AFTER POSITIVE AND NEGATIVE PERFORMANCE

Self-confidence, motivation, and performance outcome are vital for goal-directed behaviour. However, people do not react to a positive and negative performance in the same way. This study examines (a) the relationship between self-confidence and approach/avoidance motivation, and (b) how approach- and avoidance-oriented individuals respond to a performance outcome. The study was conducted on 93 participants. The first part of the study examined the relationship between self-confidence and approach/avoidance motivation within Reinforcement sensitivity theory, while the second part examined changes in motivation and self-efficacy in overconfident, avoidance- and approach-oriented individuals, following the positive and negative performance. Approach and avoidance tendencies were assessed by Reinforcement Sensitivity Questionnaire (RSQ) and Sensitivity to Punishment Sensitivity to Reward Questionnaire (SPSRQ). Correlational analysis showed that the Behavioural Approach System (BAS) and Sensitivity to Reward (SR) correlated positively, while Behavioural Inhibition System (BIS) and Sensitivity to Punishment (SP) correlated negatively with confidence. In addition, moderated regression analysis showed that (a) high BIS, SP and SR individuals were strongly demotivated following the negative performance, (b) while overconfident and high BAS individuals maintained their initial motivation. On the other hand, motivation in high SR, but not in the high BAS and overconfident individuals, increased after the positive performance. None of the scales predicted the change of self-efficacy either after the positive or negative performance. High BAS and low BIS in overconfident individuals may explain why they strive more toward the final goal despite drawbacks. The theoretical and practical implications of findings are discussed in the paper.

Keywords: Reinforcement sensitivity theory, motivation, self-efficacy, performance, experiment

¹ Author's address:
dkrupic@ffos.com.

Primljeno: 30. 01. 2017.
Primljena korekcija:
04. 04. 2017.
Prihvaćeno za štampu:
16. 06. 2017.

Important goals are often complex ones. To accomplish them, one can face with potential drawbacks and obstacles. The way how one cope with these drawbacks, may have a crucial importance for the outcome. This paper examines the role of approach and avoidance motivation in overconfidence, and their impact on self-efficacy and motivation after a positive and negative performance.

Overconfidence

Overconfidence manifests in three ways. First, overestimation is the case of overconfidence when one predicts greater success or performance in a task than one truly achieves. Overplacement is the second case of overconfidence, when one mistakenly believes that he or she will perform better than the others will. Finally, overprecision manifests in giving overly precise prognoses of the future events (Moore & Healy, 2008; Williams & Gilovich, 2008).

Overconfidence and its impact on the economy have been extensively studied in the context of managerial decision-making processes. For example, Patel and Cooper (2014) have found that overconfident CEOs are more driven by potential gains and less by avoiding potential losses, which may enhance the recovery of firms in the post-crisis period (Kilduff & Galinsky, 2013), but might be fatal during the crises (Foster, Reidy, Misra, & Goff, 2011). Further, overconfident individuals tend to have higher aspiration for a high social status (Anderson, Brion, Moore, & Kennedy, 2012). They are more risk-prone and entrepreneurship-oriented (e.g. Malmendier & Tate, 2005; Sadi, Asl, Rostami, Gholipour, & Gholipour, 2011), attracted by external motives (Sheldon, Gunz, Nichols, & Ferguson, 2010). At the same time they work less (Stone, 1994), and make more mistakes, which often result in poorer performance (Dunlosky & Rawson, 2012; Miller & Geraci, 2011). On the top of that, their overconfidence is highly persistent (e.g. Grossman & Owens, 2012). For example, Chen, Crossland, and Luo (2015) showed that overconfident CEOs are not willing to correct projections of corporate earnings after previously poor forecasting. Such individuals show the tendency to keep the same level of optimism (and act accordingly) notwithstanding previous poor performance.

The key question is how (and why) overconfident individuals persevere in achieving the final goal, despite the higher rate of experiencing a negative performance? This is an important issue, especially since it seems that this makes them more successful in a long run (Anderson et al., 2012), and that such individuals are usually those whose decisions have a strong impact on society (e.g. corporate CEOs, policy makers, etc.). Moreover, it seems that overconfidence of people in power is inevitable, since the position of power itself makes people overconfident (see for details Guinote, 2017).

Overconfident individuals perceive themselves as more open and extraverted (Buratti & Allwood, 2012; Sadi et al., 2011), proactive (Pallier et al., 2002), and, what was the most frequently studied, they appear to be narcissistic (Campbell,

Goodie, & Foster, 2004). Just as overconfident individuals, narcissistic individuals are highly motivated by positive reinforcers, and weakly motivated by negative reinforcers (Foster & Trimm, 2008). In addition, many studies have shown that narcissism correlates positively with approach, and negatively with avoidance motivation (Foster & Brennan, 2012). Thus, the case of narcissism implies that overconfidence might be explained within the approach/avoidance motivation, which has not yet been empirically examined, and therefore presents the aim of this study.

Reinforcement sensitivity theory

One of the most prominent approach/avoidance theories, Reinforcement sensitivity theory (RST), postulates three brain-behavioural circuits that represent general emotion-motivational systems. Behavioural Approach System (BAS) mediates all appetitive motives, and in evolutionary terms, it represents the resource acquisition mechanism. The Fight-Flight-Freeze System (FFFS) serves as a defensive mechanism important for survival, being triggered by life-threatening situations. At the end, Behavioural Inhibition System (BIS) acts as a conflict resolution mechanism in ambiguous situations when both the BAS and the FFFS are active. It elevates the level of anxiety, which urges an individual to choose between approaching to and escaping from the conflicting stimulus (Corr, 2008; Gray & McNaughton, 2003).

The aim of this study is to examine whether the BAS and the BIS may explain overconfidence. Although the FFFS along with the BIS represents the avoidance mechanism, its functions are more important in the life-threatening situations, while the BIS is more important in dealing with daily stressors. Thus, the FFFS is not discussed in this study. The first hypothesis is that confidence should positively correlate with the BAS, and negatively with the BIS. This is expected since narcissism correlates positively to overconfidence (e.g. Campbell et al., 2004) and approach, whereas it correlates negatively to avoidance motivation (Foster & Brennan, 2012). The second hypothesis is that the confidence and the BAS should positively predict the number of mistakes, while the BIS negatively predicts the number of mistakes, what is found in overconfident (e.g. Dunlowsky & Rawson, 2012), narcissistic (e.g. Campbell et al., 2004), and high BAS and low BIS individuals (Kim & Lee, 2011). Third, overconfident and high BAS individuals should maintain motivation and self-efficacy after a negative feedback, what is found in overconfident individuals (e.g. Grossman & Owens, 2012). In addition, Kim and Lee (2011) in their gambling study have found that (a) low BAS and high BIS individuals make less risky decisions after a losing condition, whereas in the same condition (b) high BAS individuals bet larger amounts. On the contrary, high BIS individuals experience higher negative affect following the negative performance (Ilies, Judge, & Wagner, 2010; Krupić & Corr, 2014), which may decrease their self-

efficiency. Hence, high BIS individuals should be less motivated and should feel less self-efficient after the negative performance.

Overview of the study

This study focuses on the overestimation type of overconfidence, measured by subtracting obtained score from the expected one. However, some task-characteristics in a study of overconfidence can bias interpretation of the data. First, the answer format may bias the estimate (Loftus, 1975). Hence, participants' estimation of performance score will be assessed by an open-ended question format. Secondly, the outcome of the task depends on the difficulty and complexity of the task (Klayman & Soll, 1999; Larrick, Burson, & Soll, 2007). However, this issue is more relevant for experimental designs examining overconfidence across tasks/domains, but in a study of individual differences in overconfidence, it is important that all participants are observed in the same conditions, i.e. by the same task.

The hypotheses will be examined by two behavioural tasks. The first task will test the first two hypotheses predicting that the BAS would positively predict the number of mistakes, while the BIS would negatively correlate with overconfidence and with the number of mistakes. The second task examines the role of the confidence (obtained by the first task), and the BAS and the BIS on the effects of positive and negative performance on motivation and self-efficacy. Finally, due to the existence of several competing RST questionnaires (Corr, 2016), two brief RST questionnaires will be used to improve the generalisability of the findings.

Method

Participants

In exchange for the experimental hours, 97 Psychology students in the age range from 19 to 29 ($M = 20.01$, $SD = 1.39$) participated in two serial tasks. Since there were only four male participants in the study, their data were not analysed, which reduced the final sample to 93.

Instruments

Sensitivity to Punishment and Sensitivity to Reward Questionnaire 20 (SPSRQ-20: Aluja & Blanch, 2011). SPSRQ-20 is a 20-dichotomous-item version of the SPSRQ (Torrubia, Avila, Molto, & Cesares, 2001). It contains two 10-item scales – Sensitivity to Punishment (SP) and Sensitivity to Reward (SR).

Reinforcement Sensitivity Questionnaire (RSQ: Smederevac, Mitrović, Čolović, & Nikolašević, 2014). RSQ is a 29-item questionnaire that contains five

scales – Behavioural Approach System (BAS), Behavioural Inhibition System (BIS), Fight, Flight, and Freezing. Items are answered on a four-point Likert-type scale.

Both questionnaires are validated in Croatian language (Krupić, Corr, Ručević, Križanić, & Gračanin, 2016).

Procedure

Behavioural tasks and personality data were obtained independently. First, participants fulfilled personality questionnaires. A few days later, they enrolled in the first task labelled Throwing disks, and later in the second task labelled Learning labyrinth. The score of confidence from the Throwing disks task was used as the predictor of motivation and self-efficacy after the performance in Learning labyrinth task. The relationship between personality traits and behavioural tasks were not explained to the participants in order to keep them unaware of the hypotheses. All measurements were conducted individually. After the data collection, all participants were thanked and fully debriefed. In order to assure that the participants were hypothesis-naïve during measurement, they were asked for the purpose of the study during the debriefing after the measurement. In general, the implicit hypotheses may inflate an error variance, and therefore increase the chance of the Type II error, while knowing the hypothesis may increase the Type I error. Since none of the participants saw the connection between personality data and two behavioural tasks, the results of this study are more likely under influence of Type II error rather than Type I.

Throwing disks. In the first behavioural task, participants had to hit the target with DVD disks from ten equidistant places. The nearest place was 30 cm, while the most distant place were 3 m away from the target. The target, which was of four A4 format papers, was placed on the floor. Participants had ten throws, and were instructed to collect as many points as possible. During the throwing phase, they could change their distances, i.e. move closer or away from the target. Points were coded according to the distance from which the participant had hit the target, while misses were coded by zero. Hence, the lowest possible score was 0 (if the participant had all ten misses), and the highest 100 (if the participant hit the target ten times from the farthest distance), which was explained to the participants. Before the throwing phase, the participants had to estimate the amount of points which they expected to collect (i.e. an expected score). The number of hits, chosen distances, and points were recorded by the experimenter, while the level of confidence was calculated by subtracting the expected minus from the obtained score. The measurement was conducted individually, and it lasted from five to ten minutes per participant.

Learning labyrinth. The measurement was also conducted individually, and lasted from 15 to 45 minutes, depending on the participant's performance. At the beginning of the task, the participants were blindfolded, and guided to the table with the hand-maze or labyrinth. They were informed that the labyrinth-learning

phase was limited to 30 attempts. The labyrinth was considered as learned if the participant underwent the labyrinth twice in a row without a mistake (entering into the blind alley). After the instruction, and just before the first attempt of learning the labyrinth, the participants were asked to rate their motivation (“Rate your motivation for the task on a scale from 1 = Completely unmotivated to 10 = Highly motivated”) and self-efficiency (“Having in mind that you have a total of 30 attempts to learn the labyrinth, can you predict how many attempts will it take until you learn the labyrinth?”). If the participant reached the 30th attempt of learning, the learning was stopped, and the participant was informed that he/she did not learn the labyrinth (negative performance). Otherwise, he/she was informed that the labyrinth was learned successfully (positive performance). Afterwards, still blindfolded participants were told that they learnt the second labyrinth, and they were asked the same two questions from the beginning of the task (motivation2 and self-efficacy2). When the participant answered these questions, the measurement was stopped, and the participant was thanked and debriefed. The change in motivation (Δ Motivation) and self-efficacy (Δ Self-efficacy) was calculated by subtracting motivation2 – motivation1 and self-efficacy2 – self-efficacy1, respectively. In order to rule out the potential role of the experimenter’s gender, and minimise the social desirable responding, experimental demands, and expectancies, this task was conducted by female psychology students for the experimental hours. They were instructed how to conduct the measurement, but the same as participants, they were not aware of the hypotheses of the study. The Ethical Board of the Department of Psychology in Rijeka, Croatia, gave the consent for the study.

Results

The BAS and SR correlated positively, and the BIS and SP correlated negatively with confidence, what supported the first hypothesis. In addition, confidence and the BIS, but not the BAS, SR and SP, predicted the number of hits, in the first task (Table 1). This indicated that overconfident had more misses, while the high BIS individuals had fewer misses. Also, as it could be seen from the table, confidence and the BAS correlated positively, and the BIS correlated negatively with the average distance from which the participants were aiming the target.

In the second task, two separate mixed ANOVAs were conducted to test the effects of performance on motivation and self-efficacy. Forty-five students performed successfully, and forty-eight students were not successful, indicating that this task was moderately difficult. An average number of learning attempts in the successful group was 14.75 ($SD = 6.78$). Box’s test of equality of covariance matrices was not significant at $p < .05$ in either case. Since the main effects were not informative, only interactions were reported. Interactions were significant for motivation ($F(1, 77) = 11.03, p < .01, \eta^2 = .13$) and for self-efficacy ($F(1, 77) = 7.83,$

$p < .01$, $\eta^2 = .09$). The Figure 1 shows that the negative performance decreased motivation and self-efficacy (which is seen in the increase of estimated attempts for learning the new labyrinth), while the positive performance produced no effects.

The role of personality and confidence (obtained in the Throwing disks task) in changing motivation (Δ Motivation) and self-efficacy (Δ Self-efficacy) after the performance was tested by moderated regression analysis, where the performance was treated as a dichotomous moderator variable. The BIS, SP, SR, and confidence were found to interact with performance on motivation, while there were no significant interactions concerning the self-efficacy (Table 2). Interactions concerning only motivation are presented in Figure 2. The results showed that the high SR (but not the BAS) students were more motivated for the next task following the positive performance. In line with the third hypothesis, the BIS correlated negatively, and confidence correlated positively with motivation after the negative performance, while no effects were found for the BAS. In addition, the interaction of the BAS and BIS in correspondence to the performance outcome was not significant.

Table 1

Descriptive statistics, Pearson's correlation coefficients for "throwing disk" behavioural tasks and personality traits

	α	M	SD	Over- confidence	Expected result	Total score	Number of hits	Average distance
Confidence		7.73	15.29	-	-	-	-.52**	.25*
RSQ								
BAS	.77	15.97	3.34	.39**(.44)	.40**(.46)	-.12(-.14)	-.22(-.25)	.30**(.34)
BIS	.74	17.21	3.78	-.27*(-.31)	-.24*(-.28)	.15(.17)	.26*(.30)	-.35**(-.40)
SPSRQ-20								
SP	.73	4.81	2.60	-.24*(-.28)	-.29*(-.34)	.00(.00)	.08(.09)	-.22(-.26)
SR	.62	4.48	2.02	.36**(.46)	.38**(.48)	-.09(-.11)	-.05(-.06)	.10(.13)

Note. Correlation coefficients corrected for attenuation in brackets. M = arithmetic mean; SD = standard deviation; BAS = Behavioural Approach System; BIS = Behavioural Inhibition System; SP = Sensitivity to Punishment; SR = Sensitivity to Reward.

* $p < .05$. ** $p < .01$.

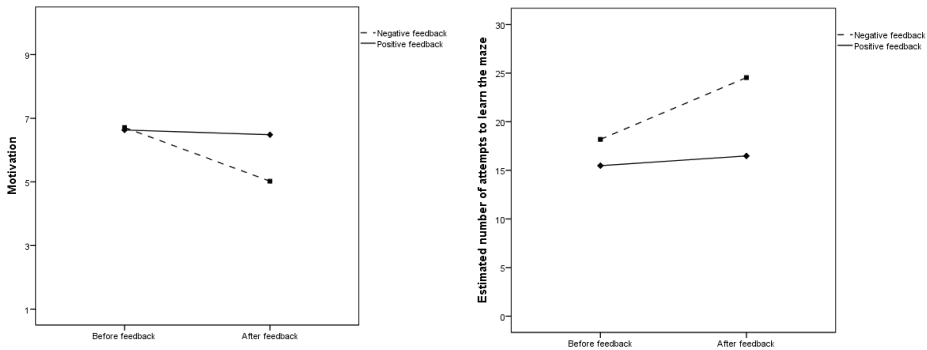


Figure 1. Arithmetic means of motivation and self-efficacy in two measurement point.

Table 2

Moderated regression analyses for RST scales in predicting changes in motivation after the positive and negative performance

	RSQ			SPSRQ-20			
	β	SE	t	β	SE	t	
Constant	-0.73**	0.19	-3.92	Constant	-0.87**	0.18	-4.84
BAS	-0.04	0.06	-0.80	SR	-0.06	0.09	-0.67
BIS	-0.1	0.06	-1.76	SP	-0.08	0.07	-1.22
BIS X BAS	0.02	0.01	1.70	SP X SR	-0.02	0.03	-0.58
Performance	1.49**	0.37	4.01	Performance	1.71**	0.36	4.79
BIS X Performance	0.25*	0.11	2.26	SP X Performance	0.28*	0.13	2.15
BAS X Performance	0.08	0.11	0.76	SR X Performance	0.46*	0.19	2.46
BIS X BAS X Performance	-0.02	0.03	-0.64	SP X SR X Performance	0.00	0.07	-0.02
$R = .58$				$R = .56$			
$R^2 = .33$				$R^2 = .31$			
$F(7, 82) = 5.25^{**}$				$F(7, 83) = 4.88^{**}$			

Note. β = unstandardized beta coefficient; Performance = negative performance coded by 0, and positive by 1; BAS = Behavioural Approach System; BIS = Behavioural Inhibition System; SP = Sensitivity to Punishment; SR = Sensitivity to Reward.

* $p < .05$. ** $p < .01$.

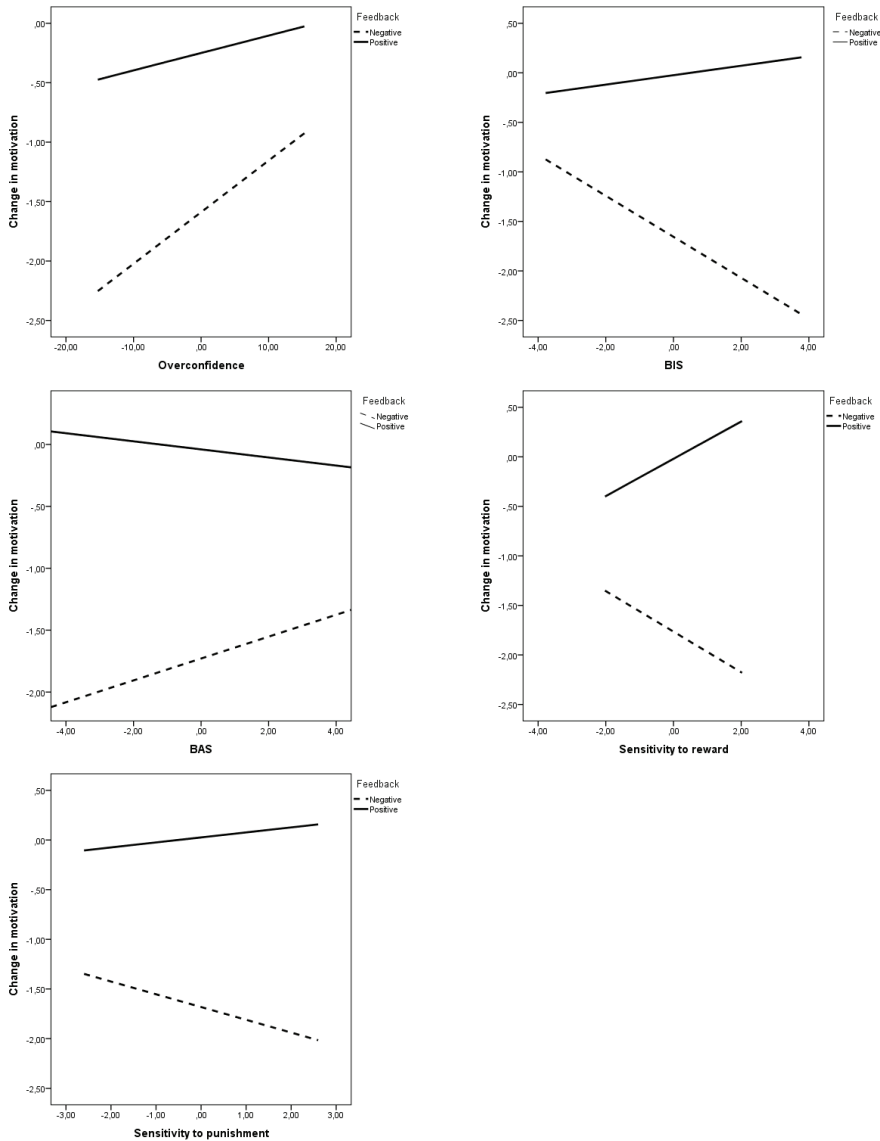


Figure 2. Role of individual differences in predicting change in motivation after the positive and negative performance.

Discussion

The aim of this study was to examine the relationship between individual differences in the activity of brain-behavioural systems (the BAS and the BIS) and

confidence, as well as to examine the role of these individual differences in changing motivation and self-efficacy after the positive and negative performance.

This study has confirmed earlier findings, obtained from a real-world studies exploring e.g. corporate investment decision-making (e.g. Barber & Odean, 2000), that the overconfident individuals make more mistakes and take higher risks. These findings have been confirmed in this study by laboratory tasks with no real reinforcement, which evidence the ecological validity of the results. Furthermore, the BAS/SR and the BIS/SP correlated with overconfidence, whereas only the BIS correlated with the number of misses as predicted in the first hypothesis. The BAS did not achieve significant correlation to the number of hits, but it correlated with other aspects of overconfidence. Namely, the high BAS individuals had higher expectations, and were ready to risk more. Reasonably, due to higher average distance in the throwing disks task, overconfident individuals had more misses, while the high BIS individuals performed the opposite. An additional analysis, which was not provided in the result section, revealed that the overconfidence was not the result of mutually effects of the BAS/BIS or the SR/SP, predicted by the joint subsystem hypothesis.

In the second task, the high SR, but not the BAS, individuals reported the increase in motivation following the positive performance, while motivation of the high BIS (anxious) individuals remained the same. When faced with the negative performance, the anxious individuals tended to be more demotivated, while motivation in the high BAS individuals remained approximately the same. As expected, the overconfident individuals tended to increase their motivation after the negative performance, what might increase their chances for the success in a long run. As it could be seen from the Figure 2, the high BAS individuals tended to display a similar pattern, but the effect was not strong enough to achieve the significance level.

To summarise the key findings of this study, data suggest that the high BAS and the low BIS in overconfident individuals may explain their persistence after the negative performance.

How to explain the divergent findings between the BAS and SR, the scales designed to measure the same construct? Currently, there are several competing RST questionnaires (for more details see Corr, 2016), which complicate the interpretation of the data. Krupić et al. (2016) have found that the RST questionnaires differ in operationalisation of the BAS, which may bias the interpretation of the findings about the core features of RST dimensions (for example see Krupić, Gračanin, & Corr, 2016). The BAS from RSQ reflects the incentive motivation part, while the SR reflects the wanting part of the reward system. In the recent article, Krupić and Corr (2017) argue that these scales may reflect activities of different biological factors. Specifically, the BAS scale from the RSQ (reflecting incentive motivation) is related to the activities of dopaminergic system, while the SR (reflecting the wanting part of the reward system) is related to testosterone (for de-

tails see Krupić & Corr, 2017). Hence, distinct predictions of the SR and BAS scales may reflect activities of different aspects of the approach motivation.

The finding that the high SR individuals are more motivated following the positive performance while the high BIS individuals are less motivated after the negative performance, is in accordance with the original version of RST, upon which the SPSRQ has been designed. The results of the SR are in line with the findings of the increased levels of testosterone after reward (Stanton, Beehner, Saini, Kuhn, & LaBar, 2009), reflecting the extrinsic motivation. On the contrary, the BAS and overconfidence have achieved almost the opposite effects, which could be explained within the goal orientation theory. Namely, a general task orientation includes a number of related beliefs about the purposes, competence, success, ability, effort, errors, and standards (Pintrich, 2000). Dweck and Elliot (1983) distinguish performance and learning goal-orientations. Individuals concerned by gaining favourable judgments on their competence are focused on the performance goals, while individuals focused on improving competences are focused on learning (mastery) goals. Later, Elliot and McGregor (2001) have introduced the extended 2×2 framework of purpose goals, covering: (a) mastery-approach goals – learning and achieving personal growth; (b) performance-approach goals – motivation to outperform others; (c) mastery-avoidance goals – avoiding deterioration or losing skills; (d) performance-avoidance goals – avoiding failure and looking incompetent (Elliot, 1999; Senko, Hulleman, & Harackiewicz, 2011). Elliot and Thrash (2002) argue that learning goal-orientation mediates the temperamental traits in the prediction of education-related outcomes, where the BAS positively correlates with mastery-approach goals, and the BIS positively correlates with mastery and performance avoidance-goals (Bjørnebekk, 2007; Elliot & Thrash, 2002). There are no changes in motivation and self-efficacy in the high BAS and overconfident individuals after the positive performance, and a slight increase of both after negative performance is typical for individuals adopting mastery approach goal orientation. Such individuals seek for new and challenging tasks (Senko et al., 2011), and persist in tasks after a negative feedback (Sideridis & Kaplan, 2011). Thus, it is most likely that the high BAS, but not SR, individuals adopt more mastery approach goal-orientation, something that should be empirically examined in the future studies.

Before conclusion, it is important to emphasise that this study was conducted on relatively small and non-representative sample. In the light of these limitations, the contribution of this study should be seen in presenting a promising avenue for the research in RST, especially in the field of motivation (see Corr & Krupić, 2017). Nevertheless, the study was conducted in the manner to favour Type II error. First, data for personality and both behavioural tasks were obtained separately, which reduced the measurement error that could artificially inflate the correlations between variables measured at the same time and place (see Podsakoff, McKenzie, Lee, & Podsakoff, 2003). Secondly, variables in behavioural task represented single item measure, which reduced variability and reliability, and

therefore attenuated correlations between variables. Thereby, despite the higher level of Type II error, significant and, in some cases, moderate correlations present a strong argument that observed effects truly exist, and could be the most likely replicated in the future studies.

To sum up, approach and avoidance motivation play an important role in overconfidence. Furthermore, the negative performance has a stronger negative effect on motivation in anxious individuals, but not in approach-oriented individuals, which is important in accomplishing complex and/or long-term goals. According to this study, the anxious individuals would benefit if the complex task is decomposed into a number of less difficult subtasks, which would lower their chance of the negative performance, while for the high BAS and overconfident individuals challenging tasks may have positive effects on their motivation.

References

- Aluja, A., & Blanch, A. (2011). Neuropsychological behavioral inhibition system (BIS) and behavioral approach system (BAS) assessment: A shortened sensitivity to punishment and sensitivity to reward questionnaire version (SPSRQ-20). *Journal of Personality Assessment*, *93*, 628–636. doi:10.1080/00223891.2011.608760
- Anderson, C., Brion, S., Moore, D. A., & Kennedy, J. A. (2012). A status-enhancement account of overconfidence. *Journal of Personality and Social Psychology*, *103*, 718–735. doi:10.1037/a0029395
- Barber, B. M., & Odean, T. (2000). Trading is hazardous to your wealth: The common stock investment performance of individual investors. *The Journal of Finance*, *55*, 773–806. doi:10.2139/ssrn.219228
- Bjørnebekk, G. (2007). Reinforcement sensitivity theory and major motivational and self-regulatory processes in children. *Personality and Individual Differences*, *43*, 1980–1990. doi:10.1016/j.paid.2007.06.010
- Buratti, S., & Allwood, C. (2012). Improved realism of confidence for an episodic memory event. *Judgment and Decision Making*, *7*, 590–601. Retrieved from <http://journal.sjdm.org/11/111121a/jdm111121a.html>
- Campbell, W. K., Goodie, A. S., & Foster, J. D. (2004). Narcissism, confidence, and risk attitude. *Journal of Behavioral Decision Making*, *17*, 297–311. doi:10.1002/bdm.475
- Chen, G., Crossland, C., & Luo, S. (2015). Making the same mistake all over again: CEO overconfidence and corporate resistance to corrective feedback. *Strategic Management Journal*, *36*, 1513–1535. doi:10.1002/smj.2291
- Corr, P. J. (2008). Reinforcement sensitivity theory (RST): Introduction. In P. J. Corr (Ed), *The Reinforcement sensitivity theory and personality* (pp. 1–28). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511819384.002

- Corr, P. J. (2016). Reinforcement sensitivity theory of personality questionnaires: Structural survey with recommendations. *Personality and Individual Differences*, *89*, 60–64. doi:10.1016/j.paid.2015.09.045
- Corr, P. J., & Krupić, D. (2017). Motivating personality: Approach, avoidance, and their conflict. In A. Elliot (Ed.), *Advances in Motivation Science*, Volume 4 (pp. 39–90). London: Elsevier. <http://dx.doi.org/10.1016/bs.adms.2017.02.003>
- Dunlosky, J., & Rawson, K. A. (2012). Overconfidence produces underachievement: Inaccurate self evaluations undermine students' learning and retention. *Learning and Instruction*, *22*, 271–280. doi:10.1016/j.learninstruc.2011.08.003
- Dweck, C. S., & Elliott, E. S. (1983). Achievement motivation. In P. Mussen, & E. M. Hetherington (Eds.), *Handbook of Child Psychology: Socialisation, Personality and Social Development* (Vol. 4, pp. 643–691). New York: Wiley. doi:10.1016/B978-0-12-373951-3.00002-8
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, *34*, 169–189. doi:10.1207/s15326985ep3403
- Elliot, A. J., & McGregor, H. A. (2001). A 2×2 achievement goal framework. *Journal of Personality and Social Psychology*, *80*, 501–519. doi:10.1037/0022-3514.80.3.501
- Elliot, A. J., & Thrash, T. M. (2002). Approach-avoidance motivation in personality: Approach and avoidance temperaments and goals. *Journal of Personality and Social Psychology*, *82*, 804–818. doi:10.1037/0022-3514.82.5.804
- Foster, J. D., & Brennan, J. C. (2012). Narcissism, the agency model, and approach-avoidance motivation. In W. K. Campbell & J. D., Miller (Eds.), *The handbook of narcissism and narcissistic personality disorder: Theoretical approaches, empirical findings, and treatments* (pp. 89–100). Hoboken, NJ: John Wiley & Sons Inc. doi:10.1002/9781118093108.ch8
- Foster, J. D., & Trimm, R. F. (2008). On being eager and uninhibited: Narcissism and approach-avoidance motivation. *Personality and Social Psychology Bulletin*, *34*, 1004–1017. doi:10.1177/0146167208316688
- Foster, J. D., Reidy, D. E., Misra, T. A., & Goff, J. S. (2011). Narcissism and stock market investing: Correlates and consequences of cocksure investing. *Personality and Individual Differences*, *50*, 816–821. doi:10.1016/j.paid.2011.01.002
- Gray, J. A., & McNaughton, N. (2003). *The neuropsychology of anxiety: An enquiry into the function of the septo-hippocampal system* (No. 33). Oxford: Oxford University Press. <http://dx.doi.org/10.1093/acprof:oso/9780198522713.001.0001>
- Grossman, Z., & Owens, D. (2012). An unlucky feeling: Overconfidence and noisy feedback. *Journal of Economic Behavior & Organization*, *84*, 510–524. <http://dx.doi.org/10.1016/j.jebo.2012.08.006>
- Guinote, A. (2017). How power affects people: Activating, wanting, and goal seeking. *Annual Review of Psychology*, *68*, 353–381. doi:10.1146/annurev-psych-010416-044153

- Ilies, R., Judge, T. A., & Wagner, D. T. (2010). The influence of cognitive and affective reactions to feedback on subsequent goals. *European Psychologist, 15*, 121–131. <http://dx.doi.org/10.1027/1016-9040/a000011>
- Kilduff, G. J., & Galinsky, A. D. (2013). From the ephemeral to the enduring: How approach-oriented mindsets lead to greater status. *Journal of Personality and Social Psychology, 105*, 816–831. doi:10.1037/a0033667
- Kim, D. Y., & Lee, J. H. (2011). Effects of the BAS and BIS on decision-making in a gambling task. *Personality and Individual Differences, 50*, 1131–1135. doi:10.1016/j.paid.2011.01.041
- Klayman, J., & Soll, J. (1999). Overconfidence: It depends on how, what, and whom you ask. *Organizational Behavior and Human Decision Processes, 79*, 216–247. <http://dx.doi.org/10.1006/obhd.1999.2847>
- Krupić, D., & Corr, P. J. (2017). Moving forward with the BAS: Toward neurobiology of multidimensional model of approach motivation. *Manuscript submitted for publication.*
- Krupić, D., & Corr, P. J. (2014). Individual differences in emotion elicitation in university examinations: A quasi-experimental study. *Personality and Individual Differences, 71*, 176–180. doi:10.1016/j.paid.2014.08.001
- Krupić, D., Corr, P. J., Ručević, S., Križanić, V., & Gračanin, A. (2016). Five Reinforcement sensitivity theory (RST) of personality questionnaires: Comparison, validity, and generalization. *Personality and Individual Differences, 97*, 19–24. doi:10.1016/j.paid.2016.03.012
- Krupić, D., Gračanin, A., & Corr, P. J. (2016). The evolution of the Behavioural Approach System (BAS): Cooperative and competitive resource acquisition strategies. *Personality and Individual Differences, 94*, 223–227. doi:10.1016/j.paid.2016.01.044
- Larrick, R. P., Burson, K. A., & Soll, J. B. (2007). Social comparison and confidence: When thinking you're better than average predicts overconfidence (and when it does not). *Organizational Behavior and Human Decision Processes, 102*, 76–94. doi:10.1016/j.obhdp.2006.10.002
- Loftus, E. F. (1975). Leading questions and the eyewitness report. *Cognitive Psychology, 7*, 560–572. doi:10.1016/0010-0285(75)90023-7
- Malmendier, U., & Tate, G. (2005). Does overconfidence affect corporate investment? CEO overconfidence measures revisited. *European Financial Management, 11*, 649–659. doi:10.1111/j.1354-7798.2005.00302.x
- Miller, T. M., & Geraci, L. (2011). Unskilled but aware: Reinterpreting overconfidence in low-performing students. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 37*, 502–506. doi:10.1037/a0021802
- Moore, D. A., & Healy, P. J. (2008). The trouble with overconfidence. *Psychological Review, 115*, 502–517. doi:10.1037/0033-295X.115.2.502
- Pallier, G., Wilkinson, R., Danthiir, V., Kleitman, S., Knezevic, G., Stankov, L., & Roberts, R. D. (2002). The role of individual differences in the accuracy

- of confidence judgments. *Journal of General Psychology*, 129, 257–299. doi:10.1080/00221300209602099
- Patel, P. C., & Cooper, D. (2014). The harder they fall, the faster they rise: Approach and avoidance focus in narcissistic CEOs. *Strategic Management Journal*, 35, 1528–1540. doi:10.1002/smj.2162
- Pintrich, P. (2000). An achievement goal theory perspective on issues in motivation terminology, theory, and research. *Contemporary Educational Psychology*, 25, 92–104. doi:10.1006/ceps.1999.1017
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903. <http://dx.doi.org/10.1037/0021-9010.88.5.879>
- Sadi, R., Asl, H. G., Rostami, M. R., Gholipour, A., & Gholipour, F. (2011). Behavioral finance: The explanation of investors' personality and perceptual biases effects on financial decisions. *International Journal of Economics and Finance*, 3, 234–241. doi:10.5539/ijef.v3n5p234
- Senko, C., Hulleman, C. S., & Harackiewicz, J. M. (2011). Achievement goal theory at the crossroads: Old controversies, current challenges, and new directions. *Educational Psychologist*, 46, 26–47. doi:10.1080/00461520.2011.538646
- Sheldon, K. M., Gunz, A., Nichols, C. P., & Ferguson, Y. (2010). Extrinsic value orientation and affective forecasting: Overestimating the rewards, underestimating the costs. *Journal of Personality*, 78, 149–178. doi:10.1111/j.1467-6494.2009.00612.x
- Sideridis, G. D., & Kaplan, A. (2011). Achievement goals and persistence across tasks: The roles of failure and success. *The Journal of Experimental Education*, 79, 429–451. doi:10.1080/00220973.2010.539634
- Smederevac, S., Mitrović, D., Čolović, P., & Nikolašević, Ž. (2014). Validation of the measure of revised Reinforcement sensitivity theory constructs. *Journal of Individual Differences*, 35, 12–21. doi:10.1027/1614-0001/a000121
- Stanton, S. J., Beehner, J. C., Saini, E. K., Kuhn, C. M., & LaBar, K. S. (2009). Dominance, politics, and physiology: Voters' testosterone changes on the night of the 2008 United States presidential election. *PLoS One*, 4, e7543. <http://dx.doi.org/10.1371/journal.pone.0007543>
- Stone, D. N. (1994). Overconfidence in initial self-efficacy judgments: Effects on decision processes and performance. *Organizational Behavior and Human Decision Processes*, 59, 452–474. doi:10.1006/obhd.1994.1069
- Torrubia, R., Avila, C., Moltó, J., & Caseras, X. (2001). The Sensitivity to Punishment and Sensitivity to Reward Questionnaire (SPSRQ) as a measure of Gray's anxiety and impulsivity dimensions. *Personality and Individual Differences*, 31, 837–862. doi:10.1016/S0191-8869(00)00183-5
- Williams, E. F., & Gilovich, T. (2008). Do people really believe they are above average? *Journal of Experimental Social Psychology*, 44, 1121–1128. doi:10.1016/j.jesp.2008.01.002

Dino Krupić

Odsjek za psihologiju,
 Filozofski fakultet
 Sveučilišta J.J.
 Strossmayera u
 Osijeku

VISOKI BAS I NISKI BIS KOD PRETJERANE SAMOUVJERENOSTI, I NJIHOV UTJECAJ NA MOTIVACIJU I SAMOEFIKASNOST POSLIJE USPJEHA I NEUSPJEHA

Ostvarivanje raznih ciljeva u životu ovisi o mnogim faktorima. Veliku ulogu u tome ima upornost pri postizanju ciljeva. Pretjerano samouvjereni pojedinci imaju visoka očekivanja od sebe, vjeruju u svoj uspjeh, no istovremeno češće griješe, više riskiraju i manje rade (ulažu manje napora). Unatoč češćem doživljavanju neuspjeha, samouvjereni pojedinci ne postaju oprezniji ili manje samouvjereni, već nastavljaju djelovati na isti način. Prvi cilj istraživanja je empirijski provjeriti može li se takav obrazac ponašanja objasniti visokom osjetljivosti na dobitke/nagrade i niskom osjetljivosti na gubitke/kazne. Kao mjera razine osjetljivosti na nagrade i kazne pojedinaca u ovom radu su korišteni Upitnik osjetljivosti na potkrepljenje (eng. Reinforcement Sensitivity Questionnaire - RSQ) te Upitnik osjetljivosti na kazne i osjetljivosti na nagrade (eng. Sensitivity to Punishment Sensitivity to Reward Questionnaire - SPSRQ) kojima su se mjerili ponašajni sustav približavanja (eng. Behavioural Approach System - BAS) i ponašajni sustav inhibicije (eng. Behavioural Inhibition System - BIS). Promatrana je uloga sustava osjetljivosti na nagrade i kazne u dva povezana bihevioralna zadatka. Cilj prvog zadatka je bio utvrditi povezanost osjetljivosti na nagrade i kazne sa samouvjerenosti. Rezultati korelacijske analize na 93 ispitanika su ukazala na pozitivnu povezanost BAS-a i SR-a, te negativnu BIS-a i SP-a sa samouvjerenosti, čime se prva hipoteza potvrdila. Isti ispitanici su promatrani i u drugom bihevioralnom zadatku u kojem su promatrane promjene u motivaciji i samoefikasnosti nakon uspješno i neuspješno odradenog zadatka. Cilj drugog zadatka bio je ispitati mogu li tendencije izbjegavanja i približavanja predvidjeti promjenu u motivaciji i samoefikasnosti nakon pozitivnog ili negativnog učinka. Mjere samoefikasnosti i motivacije su zabilježene prije i poslije samog zadatka. Moderatorskom regresijskom analizom je utvrđeno kako motivacija kod osoba visokih na BIS-u, SP-u i SR-u pada nakon neuspjeha i raste nakon uspjeha, dok samouvjerene i osobe visoke na BAS-u zadržavaju istu razinu motivacije nakon neuspjeha. Razlike u predikciji promjene motivacije kod pojedinaca visokih na BAS-u i SR-u se raspravljaju u kontekstu novijih razmatranja uloge različitih aspekata sustava osjetljivosti na nagrade. Iste osobine ličnosti se nisu pokazali značajni prediktori samoefikasnosti. Zaključno, ovaj rad predstavlja empirijski doprinos o ulozi crti ličnosti u predviđanju reakcija nakon uspjeha i neuspjeha, što može imati važne praktične implikacije.

Ključne riječi: Teorija osjetljivosti na potkrepljenje, motivacija, samoefikasnost, povratna informacija