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Context-dependent effect of mood: the regulatory role of personality

Abstract*: This study explored the influence of the context-dependent effect of mood as well as individual differences in neuroticism and action vs. state/volatility orientation on predecisional processing in a multiattribute choice task. One hundred and twenty participants acquired information about choice options after filling out personality questionnaires. Results showed that participants in a positive mood processed the information longer in enjoy than in done-enough context. In turn, participants in a negative mood processed the information more selectively in enjoy than in done-enough context. It also appeared that this effect is reinforced for participants with low neuroticism and volatility orientation, while it is weakened for those with low neuroticism and action orientation. Results were interpreted in accordance with the differential-processual approach.*

Key words: *context-dependent effect of mood, predecisional processing, neuroticism, action vs. state/volatility orientation*

Introduction

In advancing the mood as information hypothesis, Schwarz and Clore (1988, 1996) conceptualized mood as a source of information that influences individuals' perception and interpretation of events. The mood as input model (Martin, 2001) also follows this principle, but assumes that mood has informative value only in context – its influence on motivation for action depends on what discriminating criteria are considered for the task, i.e., how the goal of the action is defined. Mood operates like any other piece of information: it is processed in parallel with target and contextual information in such a way that its meaning influences and is influenced by the meaning of other information. Thus, it is possible for both negative and positive mood to convey various motivational implications, the nature of which depends on the context. Experiments by Martin, Ward, Achee, and Wyer (1993) have shown that the influence of mood on one's motivation and cognitive effort depends on the interaction of mood and the task's context, defined as the instruction to continue the task until it is no longer enjoyed or defined as the instruction to continue the task until the subject estimates she or he has done enough. This is the so-called context-dependent effect of mood. In an enjoy context, participants in a negative mood stop the activity sooner than participants in a positive mood, whereas in a done-enough context, participants in a positive mood stop the activity sooner than participants in a negative mood. This result suggests that the relation between mood and the way of processing information (the general amount of processing, i.e., decision time and the amount of information processed, as well as selectivity of processing) may not be fixed and differ depending on the interaction of mood and the context of the task. This view seems to be correct in the light of recent research indicating the context-dependence of mood in perseverative worry and rumination (Hawksley & Davey, 2010), negotiating stance in bargaining (Carnevale, 2008), and creativity (Davis, 2009). It is also relevant to predecisional information processing which is similarly influenced by criteria for stopping information search (Browne & Pitts, 2004).

The Differential-Processual Approach

The differential-processual approach (Pervin, 1976; Magnusson, 2001; Matthews, Deary & Whitman, 2003) is a trend that integrates bottom-up with top-down models. The model assumes that differences in personality traits rely on the existence of specific mechanisms, in addition to the common ones, that modify the cognitive

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and emotional processes, and behavior. Research under this approach (e.g., Johnson & Hezlett, 2008; Kihlstrom, 2013) provides evidence that the same situations can run different processes, and these same processes may lead to different behaviors in people with different traits. This approach is hardly used both in the psychology of individual differences, which is dominated by the classic top-down model (Watson, 2000), as well as in experimental psychology of emotions based on a bottom-up model (see Rusting, 1998). However, this approach can better predict and explain the context-dependent effect of mood by the disclosure of the specific impact of certain personality traits (temperamental, volitional, cognitive) in different situations on the one hand, and on the other, it shows the limitations of overall accuracy: some dependencies are true only for a certain condition and for people with certain personality traits (Marszał-Wiśniewska & Zajusz, 2010; Martin *et al.*, 1993). Nonetheless, the question of whether the context-dependent effect of mood is a general phenomenon or an inter-individual diverse (i.e., depending on stable personality traits) has still no clear answer.

Individual Differences in the Context-Dependent Effect of Mood

In line with the differential-processual approach, this research associates individual differences in the range of selected traits with the process of influence of mood on the course of activity. When analyzing this connection, it seems logical to heed those personality traits that facilitate or impede performance. The mere intention to do something is not sufficient for the enactment: even simple activities require control processes (volitional ones) that help shield a selected action tendency against the continuous pressure of alternative action tendencies. According to Kuhl's action control theory (Kuhl, 1985, 1994), the pursuit of goals depends on volitional traits, i.e., relatively stable individuals' disposition towards action or state orientation. Individuals with an action orientation are easily able to devote resources to the intended action, whereas those with a state orientation focus on ruminative thoughts (about alternative goals and affective states), which reduce the cognitive resources available for initiating or continuing the intended action. Kuhl (1994) conceptualized action-state orientation as comprising three dimensions which relate to different aspects of the goal-striving process: (1) failure-related action vs. state orientation (preoccupation with past failures, i.e., mental processing of past failures causing the passivity in action), (2) decision-related action vs. state orientation (i.e., hesitation, indecision, behavioral delays in implementation of the intention) and (3) performance-related action vs. volatility orientation (inability to continue rewarding activity, its premature abandonment and starting new actions). The first two dimensions are strongly intercorrelated (Kuhl, 1994). Their state-oriented poles are associated with the underfunctioning of the action initiation system, resulting from the elimination or weakening of the higher-order self-regulation system. However, they are uncorrelated with the third dimension, which state-oriented pole (volatility) reflects a particular type of self-regulatory failure – related to the overfunctionning of the action initiation system that manifests itself in the tendency to alternate activities and do more than one thing at a time (Kanfer, Dugdale, & McDonald, 1994; Kuhl, 1994).

Volition has been traditionally associated with temperament. According to the regulative theory of temperament (Strelau, 1996, 2008), temperament traits show inter-individual differences in all forms of behavior and reactions. The theory distinguishes six temperament traits: four in the energetic domain (endurance, emotional reactivity, activity and sensory sensitivity) and two in the temporal domain (briskness and perseveration); the traits that make up the energetic characteristics of behavior are assigned basic regulatory significance. Most of related empirical studies have examined emotional reactivity – the trait that influences the regulation of behavior by determining the individual's sensitivity threshold, as well as by determining the individual capacity to work. Individuals with a low emotional reactivity prefer activities of high simulative value – they need external stimulation to maintain an optimal level of physiological activation. Individuals with a high emotional reactivity, conversely, prefer low levels of stimulation – they choose behaviors that protect them against too intense a stimulation, such as procrastination in decision-making or focusing attention on bad feelings and the possible causes, as opposed to solutions (typical for state orientation). The existing empirical results (Eliasz & Klonowicz, 2001; Marszał-Wiśniewska, 1999; 2001; Marszał-Wiśniewska & Zajusz, 2010) showed that low emotional reactivity (related to a high need for stimulation) favors the development of action orientation (which finds expression in the high stimulation behavior), whereas high emotional reactivity (related to a low need for stimulation) favors the development of state orientation – manifested in the low stimulation behavior. This internal coherence occurs when one's action vs. state orientation makes one provide oneself with the appropriate dose of stimulation, as determined by one's psychological mechanisms of emotional reactivity (of temperament). However, action vs. state orientation, like other individual traits, is determined also by the social environment. So, specific social impact can cause also internal incoherence, with the result that one provides oneself either too little or too much stimulation. This implies the discrepancy between low emotional reactivity and state orientation, or high emotional reactivity and action orientation.

In summary, coherence (respectively incoherence) of temperament with other personality traits means the consistency (respectively inconsistency) of temperamental traits related to the need for stimulation with other personality traits (such as, for example, volitional traits) related to the fulfillment of one's need for stimulation, and is determined by the physiological mechanisms of temperament (Marszał-Wiśniewska, 1999, 2001). The term of "internal coherence/incoherence" is legitimate within the framework of Strelau's (1996, 2008) regulative theory of temperament, according to which ineffective regulation of stimulation is partly caused by a mismatch between biologically determined

temperamental possibilities and personality mechanisms, as well as developed needs, and within the transactional model of temperament (where temperament and personality are viewed as transactionally related components of a general stimulation regulation system; Eliasz, 1985, 1990; Eliasz & Klonowicz, 2001). The studies by Marszał-Wiśniewska and Zajusz (2010), found that that the context-dependent effect of mood is modified only by mutual relations of action vs. state orientation with emotional reactivity of temperament. In particular, this effect is not simply impacted by single individual factors. These studies have shown that the context-dependent effect of mood is strengthened by the coherence between action orientation and low emotional reactivity, whereas it is weakened by incoherence between state orientation and low emotional reactivity. As has been emphasized (Costa & McCrae, 1992a, 2001), the factors representing the Big Five have the status of temperamental traits, and neuroticism according to this model is close to the actual characteristic of emotional reactivity by the regulative theory of temperament (Strelau, 1996). As the research by Zawadzki, et al. (1998; Strelau, 2008) has shown, both high emotional reactivity (the regulative theory of temperament) and neuroticism (Big Five) fall into a single factor known as emotionality, at the basis of which lies a chronic high level of activation associated with low need for stimulation. So the structural identity of these two traits originating from different taxonomies can be assumed. In this light, the problem of the relationship between context-dependent effect of mood and neuroticism-volition interaction (coherence and incoherence) seems to be important and worth testing.

In line with the differential-processual approach, the specific hypotheses are:

Hypothesis 1.—Mood influences predecisional information processing depending on the task's context. In an enjoy context, participants in negative mood process less information and are more selective than subjects in positive mood. Whereas in a done-enough context, participants in positive mood process less information and are more selective than subjects in negative mood.

Hypothesis 2.—The context-dependent effect of mood is reinforced for coherent participants with low neuroticism and action orientation (both related to high need for stimulation), while it is weakened for incoherent participants with low neuroticism and state orientation.

Method

Participants

A total of 120 undergraduate students were recruited from the University of Social Sciences and Humanities in Warsaw. The sample consisted of 78 female and 42 male participants with a mean age of 23.35 years (SD = 4.40). Participants participated in the research individually and anonymously.

Procedure

The presented research included two stages: a first stage, in which neuroticism and volitional traits were measured; and a second – an experiment (decision-making task) used to test the context-dependent effect of mood on predecisional information processing. The experimental design was consistent with that performed by Martin, *et al.* (1993). Participants were randomly assigned to one of four between-groups conditions created by the factorial combination of induced mood (positive or negative) and the task's context (enjoy or done-enough). Before starting, participants were told that the experiment was about the impact of various individual factors on decision-making.

Subsequent steps of the experiment were as follows. First, participants underwent mood induction by reading happy and sad stories (respectively an excerpt of a funny family tale, and an excerpt of the testimony of a homeless person) while listening to background musical pieces: Scott Joplin's "Pine Apple Rag" and Eric Satie's "Gnossienne no 1" for positive and negative mood, respectively (cf. Marszał-Wiśniewska & Zajusz, 2010). Later participants answered four masking questions about the presented material (such as "Do you know the musical instrument used in this track?" or "Do you know someone who has experienced something similar?") and then filled out the Mood Adjective Check List to estimate the efficiency of the previous induction. Then participants performed a brief unrelated one minute distractor task (consisting of drawing a map of their own apartment) to mark a break between self-rating of the current mood and the target task (Berkowitz & Trocolli, 1990). Afterwards, participants were presented the target task. Half of the participants were instructed to continue until they have done enough (i.e., until they acquired sufficient information to make a decision), while the other half – as long as they enjoyed the task (see also Martin, *et al.*, 1993).

Measures

Neuroticism.—Neuroticism was assessed using the NEO Five-Factor Inventory (Costa and McCrae, 1992b) in Polish adaptation by Zawadzki, Szczepaniak, and Strelau (1995). This inventory consists of a 60-item self-report measure of the Big Five traits. However, due to the research scope only one subscale was applied in this study – the participants rated on a 12-item neuroticism scale with higher scores indicating higher levels of neuroticism. The internal reliability for the neuroticism scale is satisfactory (Cronbach alpha = .80, which is analogous to the original version).

Volitional traits.—Individual differences in action vs. state orientation were assessed by the Action Control Scale-90 (Kuhl, 1994) in Polish adaptation by Marszał-Wiśniewska (2002). The Action Control Scale-90 consists of 36 dichotomous items, with 12 items each in (1) failure-related action vs. state orientation, (2) decision-related action vs. state orientation, and (3) performance-related action vs. volatility orientation subscales. The higher the score on each subscale, the greater the action orientation. The internal reliability of the Polish adaptation of the Action Control Scale-90 can be considered as satisfactory, and is similar to the original version (Cronbach alphas are: .79, .77 , and .70 for the failure-related action vs. state

orientation, the decision-related action vs. state orientation and the performance-related action vs. volatility orientation respectively).

Assessment of mood.—Mood was measured using the Mood Adjective Check List by Matthews, Jones, and Chamberlain (1990) in Polish adaptation by Goryńska (2005). The respondent is requested to answer the question "Does this adjective describe your present mood?" on a four-point scale from "definitely not" to "definitely yes." The check list has three scales corresponding to the three dimensions of mood (Matthews, *et al.*, 1990, 2003): hedonic tone, tense arousal, and energetic arousal. The Polish adaptation of the UMACL was standardized on a national representative sample. The internal reliability scores are satisfactory (Cronbach alphas for hedonic tone, tense arousal, and energetic arousal were .89, .83, and .78, respectively). A high score on the scales of hedonic tone and energetic arousal (and a low score on the scale of tense arousal) indicates a positive mood. Conversely, a low score on the scales of hedonic tone and energetic arousal (and a high score on the scale of tense arousal) indicates a negative mood (Matthews, *et al.*, 1990).

Decision-making task.—The task consisted in selecting the most productive salesperson among six candidates. The candidates were described by the following cues (with corresponding validities): negotiation (0.90), cooperation (0.50), product knowledge (0.87), customer orientation (0.70), communication (0.95), organization (0.65), result orientation (0.85), procedure knowledge (0.55), engagement (0.92), and problem solving (0.70). Cue validities were defined as the conditional probabilities of the cue's efficacy in making a correct decision and were based on the correlation between sales results and a given skill (cf. Filipowicz, 2010). Cue values were presented as numbers ranging from 1 to 7, where 1 indicates the lowest evaluation of the cue and 7 the highest one. The task was implemented as a computerized information board (see related Mouse Lab program devised by Payne, Bettman, and Johnson, 1988) of a 6 by 10 table, with six options described by ten cues. The task of the participants was to choose one of the six options presented in the table. Participants could search the table by opening the covered cells with a mouse click. In order to open the next cell they had to close the previous one first. In total, participants were able to obtain up to sixty different pieces of information.

The data recorded during the task allowed the calculation of several variables describing predecisional information processing (see Payne, et al., 1988), which were: (1) variables describing the total amount of processing: (a) *decision time* – the total amount of time participants spent on the information pieces in the cells (i.e., time of ultimate selection of the most productive salesperson); (b) *acquisitions* – the total number of times new information cells were opened during the selection of the most productive salesperson, and (2) variables describing the selectivity of processing, i.e., reflecting the relative attention devoted to particular types of information: (c) *best cue* – the proportion of the total time acquiring information that was spent in cells involving the most important cue (i.e., with the highest validity); the increase in the value of this ratio indicates association with the selectivity of processing, and (d) *the search index*, as proposed by Payne (1976). The search index compared two types of search transitions: the number of cue-wise transitions with the number of alternative-wise transitions within the decision-making process and yields values from -1 to 1. Negative values indicate a more cue-wise search (associated with selectivity, i.e., heuristic processing), whereas positive values indicate a more alternative-wise search (associated with compensation, i.e., more systematic processing).

Results

Manipulation Check

The efficiency of the mood induction procedure has been confirmed in the participants' self-ratings of their current mood after induction (the Mood Adjective Check List) Three one-way ANOVAs (induced mood as the factor, and given dimension of mood as dependent variable) were significant: for the dimension of hedonic tone: $F_{1,118}$= 128.55, $p < .001$, energetic arousal: $F_{1, 118}$= 46.10, $p < .001$, and tense arousal: $F_{1,118}$= 44.82, $p < .001$. Thus, the experimental conditions differed in participants' perceived mood. The participants in whom a positive mood was induced, compared with those in whom a negative mood was induced, had significantly higher mean scores on the scales of hedonic tone (M = 34.73, SD = 4.02 vs. M = 23.03, SD = 6.90, respectively), and of energetic arousal (M = 31.70, SD = 4.78 vs. M = 19.58, SD = 5.33, respectively), and significantly lower mean scores on the scale of tense arousal (M = 13.95, SD = 3.71 vs. M = 19.58, SD = 5.33, respectively). The mood induction procedure was successful for both positive and negative target mood.

Information Processing Analysis

Four two-way ANOVAs were conducted: 2 (positive mood vs. negative mood) x 2 (enjoy context vs. done-enough context) were performed. Significant interaction between mood and the task's context was revealed in all of the four variables describing predecisional processing: decision time $F_{1,116}$= 4.23, $p < .05$, $\eta^2 = 0.04$; acquisitions $F_{1,116}$= 4.52, $p < .05$, $\eta^2 = 0.04$; best cue $F_{1,116}$= 4.52, $p < .05$, $\eta^2 = 0.04$, and search index $F_{1,116}$= 4.23, $p < .05$, $\eta^2 = 0.04$. However, simple effects tests confirmed the context-dependent effect of mood only in the enjoy group. In this condition, participants in positive mood processed the information longer and more accurately than those in negative mood [decision time $F_{1,116}$= 9.21, $p < .01$, $\eta^2 = 0.07$; acquisitions $F_{1,116}$= 5.03, $p < .05$, $\eta^2 = 0.04$; best cue $F_{1,116}$= 5.17, $p < .05$, $\eta^2 = 0.04$; search index $F_{1,116}$= 4.55, $p < .05$, $\eta^2 = 0.04$]. In the done-enough context, the amount and selectivity of processing did not depend on experimental factors (all $p > .05$).

Interestingly, simple effects tests also revealed that people in positive mood process the information significantly longer in enjoy than in done-enough context: decision time $F_{1,116}$= 3.18, $p = .07$, $\eta^2 = 0.03$ and acquisitions $F_{1,116}$= 5.70, $p < .05$, $\eta 2 = 0.05$. In turn, people in negative mood processed the information significantly more selectively

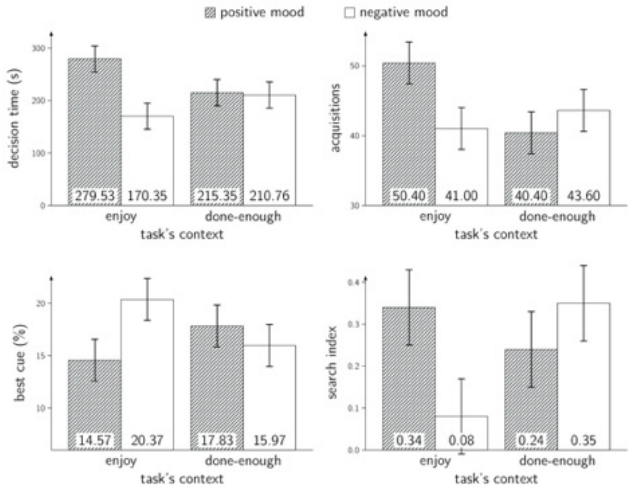

Figure 1. Predecisional processing as a function of mood and task's context.

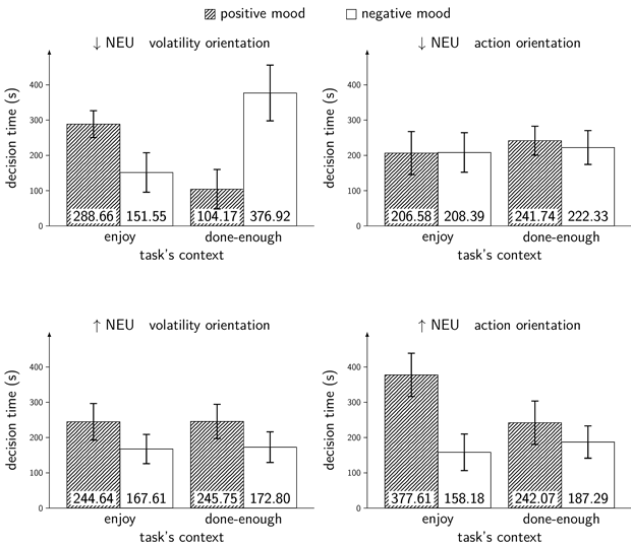

Figure 2. Decision time as a function of mood, task's context, low (↓) vs. high (↑) neuroticism (NEU), and performance-related action vs. volatility orientation (volitional trait).

in the enjoy than in the done-enough context: best cue $F_{1,116}$= 2.98, p = 0.08, η^2 = 0.03; search index $F_{1,116}$= 4.27, p < .05, η^2 = 0.04 (see Figure 1).

The Influence of Neuroticism and Volitional Traits on The Context-Dependent Effect of Mood

In order to analyze the influence of neuroticism and volitional traits on the context-dependent effect of mood and to verify the second hypothesis a four-way ANOVA was conducted: 2 (positive mood vs. negative mood) x 2 (enjoy context vs. done-enough context) x 2 (low neuroticism vs. high neuroticism) x 2 (action orientation vs. state or volatility orientation).

A median split was used to classify participants into "low" and "high" groups on the measures of neuroticism, failure-related action vs. state orientation, decision-related action vs. state orientation, and performance-related action vs. volatility orientation. The results showed significant interaction between mood, task's context, neuroticism and performance-related action vs. volatility orientation: for decision time $F_{1,104}$= 7.61, p < .01, η^2 = 0.07, acquisitions: $F_{1,104}$= 3.76, p < .05, η^2 = 0.04, and search index: $F_{1,104}$= 5.17, p < .05, η^2 = 0.05. A pattern of results typical of the context-dependent effect of mood is characteristic for participants with low neuroticism coexisting with a volatility orientation, while it is not relevant in participants with low neuroticism and action orientation (Figure 2).

Although Figure 2 shows data for the decision time alone, similar results were obtained for acquisitions, and search index. When in the enjoy context, participants with low neuroticism and volatility oriented process less information and are more selective in positive than in negative mood [decision time $F_{1,104}$= 7.45, p < 0.01, η^2 = 0.07; acquisitions $F_{1,104}$= 5.86, p < .05, η^2 = 0.05; search index $F_{1,104}$= 6.71, p < .05, η^2 = 0.06]. When in the done-enough context, participants with low neuroticism and volatility oriented process less information and are more selective in positive than in negative mood [decision time $F_{1,104}$= 7.89, p < .01, η^2 = 0.07; acquisitions $F_{1,104}$= 5.61, p < .05, η^2 = 0.05; search index $F_{1,104}$= 4.78, p < .05, η^2 = 0.05].

What is relevant, the ANOVAs with failure-related and decision-related action vs. state orientation were non-significant. There were no significant interactive effects (mood, task's context, and neuroticism) both with failure-related action vs. state orientation, or with decision-related action vs. state orientation.

There was also no independent impact of the two dispositional determinants of demand for stimulation. All conducted three-way ANOVAs (separately for neuroticism and separately for action vs. state or volatility orientation) were not significant (p > .05). These results are in line with our assumptions based on the results obtained in an earlier study (Marszał-Wiśniewska & Zajusz, 2010).

Discussion

The present procedure allowed to go beyond the previously used indicator in the mood as input research (i.e., limited only to the time of target task execution; Martin, *et al.*, 1993) – enabling to demonstrate how specific aspects of predecisional processing (amount and selectivity) vary as a function of mood and task's context. The results supported the first hypothesis. On the basis of the mood as input hypothesis (Martin, 2001), it was predicted that mood would influence predecisional information processing depending on the task's context. This prediction was confirmed. However, it turned out that the mood-task's context interaction effect works only for the enjoy context in which participants in negative mood processed less information and were more selective than subjects in positive mood. Instead, in the done-enough context the amount and selectivity of processing did not depend on mood nor context. The data also showed that participants in positive mood processed the information

longer in the enjoy than in the done-enough context, and participants in negative mood processed the information more selectively in the enjoy than in the done-enough context. So the question is to what extent general principles for deriving meaning from mood can be established. Based on the obtained results it can be hypothesized that positive mood is associated more strongly with the general amount of processing, while negative mood is associated with the selectivity of processing. Perhaps positive mood indicates assimilation of the environment to the internal state and negative mood indicates accommodation of the internal state to the requirement of the environment. It means that positive mood implies assimilative, top-down processing and greater reliance on existing schematic knowledge and heuristics. In contrast, negative mood implies accommodative, bottom-up processing, a style of thinking that focuses on the details of the external world and new stimulus information (Bless, 2001; Bless & Fiedler, 2006). In this study, in the enjoy context, the attention of participants was fixed on the affective evaluation criterion (that is own preferences, which can be derived directly from the mood). The affective criterion could have been exposed to the mood-congruency effect. Negative mood showed a decrease in positive affect and thus resulted in the termination of the activity, while positive mood consistently motivated to further activity, reinforced by positive affective information, towards testing a greater number of hypotheses and divergent thinking (e.g., Baas, de Dreu & Nijstad, 2008). In turn, in the done-enough context, the assessment of the sufficiency of information was associated with logical inference rules and required deep, systematic information processing. One consequence of this interpretation of the context (enjoy vs. done-enough) in the direction of the affective vs. cognitive criterion (the systematic calculation of characteristics of a target person) is that the obtained results seem to be justified. They indicated that moods perform an important adaptive function in the individuals' interaction with the environment and confirm the growing trend to see mood as dependent on its personal interpretations, rather than to see invariant connections between mood and information processing (Clore & Huntsinger 2009).

Contrary to expectations, the results related to the regulatory role of temperamental and volitional traits in the context-dependent effect of mood show that the context-dependent effect of mood was reinforced only for participants with internal incoherence of low neuroticism and volatility orientation. This effect does not occur in individuals with internal coherence of low neuroticism and action orientation, contrary to the second hypothesis. It should be noted that both theoretical considerations and numerous empirical studies (Kuhl, 1994) refer mainly to the underfunctioning of the action initiation system associated with failure-related and decision-related state orientation. Performance-related volatility orientation is different from the other two types of state orientation and is associated with the overfunctionning of the action initiation system. This may mean that situational factors can determine whether being volatility oriented leads to negative, positive, or neutral outcomes (c.f., Kuhl, 1994). The fact that performance-related action vs. volatility orientation had an impact on the context-dependent effect of mood is likely due to the nature of the target task paradigm. It may be that in individuals with a high temperamental need for stimulation (i.e., low neuroticism) there is no noticeable cost of switching from one task to another, by what such person can effectively perform several activities simultaneously. Such a shift of attention, associated with volatility orientation, provides an adequate dose of simulation in contrast to the performance-related action orientation which may, by understimulation, be more expensive, resulting in a subjectively felt monotony to continue the task. On this basis internal coherence for individuals with low neuroticism and volatility orientation also can be hypothesized. Although interesting, the obtained results require further verification, but still cannot be the basis for invalidating the second hypothesis.

There are two main limitations in the present study, the first of which arises from the replication of the procedure by Martin, *et al.* (1993). It is related to the use of such and no other instructions to the task's contexts (enjoy vs. done-enough) which, as noted above, in conjunction with the nature of the decision-making task (target task) used in our research, have their meaning changed. However, the repetition of instructions used by Martin, *et al.* (1993) was made on purpose, to allow comparison of results. Subsequent studies should focus on the comparison of various task contexts, which are directly related to cognitive criteria. This will more completely answer the question of how context can influence the connections between mood and information processing associated with logical inferences rules (the degree to which the subject processes in a systematic way).

The second limitation is the relatively small sample size compared to the number of variables in analyses of the regulatory role of neuroticism and volitional traits, which resulted in relatively low indicators of effects of power. Therefore the results concerning the regulatory role of neuroticism and volitional traits should be regarded as exploratory and requiring further research.

The issue of the regulatory role of personality in differential-processual approach to informative functions of mood is certainly complex. The results are encouraging but require confirmation in future studies. However, the findings support the usefulness of differential-processual approach for the analysis of individual differences pertaining to the informative function of mood. This type of research and analysis makes it possible to showcase the limitations of general dependencies or regularities by demonstrating that some of them are true only for people with certain individual traits. One of the challenges for future research may be to determine the boundary conditions defining the application of discussed context-dependent effect of mood hypothesis. Such research should be directed towards refining the mood as input model, both by introducing new contextual and personality variables and by analyzing the possible interaction of these variables and mood and their effect on predecisional processing.

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