

CONNECTION BETWEEN COGNITIVE BIASES IN MANAGERS AND THE MANAGEMENT STYLE OF THE ORGANIZATION

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Abstract

This paper addresses the issue of cognitive biases in managers and their relationship to team leadership style. Cognitive distortions are understood as a destructive component of the experiential system of thought (within the framework of Cognitive Experiential Theory). The aim of the research is to identify the relationship between the manager's thinking style (constructive and destructive components of the experiential thinking style) and the team's leadership style (transformational, transactional, Laissez-faire). The research sample consisted of 44 top managers with decision-making authority. The primary findings of our research include the finding that constructive experiential thinking style is related to effective team leadership styles (transformational, contingent reward). A destructive experiential thinking style is related to laissez-faire.

Keywords: *Cognitive experiential theory, full-range leadership theory, the cognitive-experiential leadership model, transformational leadership, cognitive biases.*

1. Introduction

This paper addresses the issue of cognitive biases in managers and their relationship to team leadership style. We have grasped the issue theoretically by analyzing three theories:

Cognitive Experiential Theory, which deals with styles of thinking - rational (System 2) and experiential (System 1). Experiential is further divided into constructive and destructive (this includes cognitive biases) (Epstein, 1994, 2004);

Full-Range Leadership Theory, which discusses three types of leadership - transformational, transactional and laissez-faire (Bass & Avolio, 1994);

The Cognitive-Experiential Leadership Model (hereafter CELM), this theory links the two above and postulates that thinking style and leadership style are interrelated, and thinking style significantly influences leadership style, with the constructive elements of experiential thinking related to the most effective transformational leadership (Curtis & Wee, 2021).

The **Cognitive-Experiential Leadership Model** simplistically states that "leaders who think better also lead the organization better" (Curtis & Wee, 2021). In summary, CELM theory suggests that both the rational and experiential sides of thinking are important in the work of leaders. The rational system is important in tasks requiring abstract and symbolic thinking. The experiential system is important in tasks requiring the application of interpersonal skills, "reading" social situations, understanding the emotional states of employees, etc. The components of the experiential system consist of constructive and destructive thinking (including cognitive biases). Research has shown that only the components of the constructive experiential system have a positive association with transformational leadership, which has been shown in research to be the most effective leadership style (Cerni et al., 2008). An important component of experiential constructivist thinking is behavioral coping, which is a preference for realistic optimism, action orientation, conscientiousness, and taking action in the face of challenges. Behavioral coping is associated with effective transformational leadership, is related to proactive, action-oriented problem solving, and is associated with low stress levels, allowing leaders to remain calm and use their intelligence in decision making and interactions with subordinates (Curtis & Wee, 2021). The emotional and imaginative components of experiential constructive thinking are related to transformational leadership because transformational leaders use subordinates' emotions to

motivate them to work toward a goal (vision). Curtis & Wee (2021) conducted two studies to identify the relationships between leaders' rational and experiential thinking styles and their leadership styles. Among other things, they found that global constructive thinking was positively correlated with transformational leadership and negatively correlated with laissez-faire leadership. Behavioral coping was positively correlated with transformational leadership, also with transactional leadership, and negatively correlated with laissez-faire. Categorical thinking was correlated with both transformational leadership and laissez-faire, esoteric thinking correlated only with laissez-faire, and naive optimism correlated with both transformational and transactional leadership. As the authors of the study note, an important finding is the replication of the finding of a relationship between behavioral coping and transformational leadership, suggesting the most robust association between thinking styles and transformational leadership.

Tove (2019) examined the relationships between information processing style, conflict management, and transformational leadership. He found that behavioral coping and integrative conflict resolution style predicted perceptions of transformational leadership.

The CELM theory is an interesting theory (especially in the context of its applicability in the practice of occupational psychology), and therefore it is important to expand empirical knowledge in the field. Our research is a pilot study in the field of the socio-cultural conditions in the Slovak Republic. The aim of the research is to identify the link between manager's thinking style and team leadership style.

2. Methods

2.1. Research methods

The Constructive Thinking Inventory (CTI) is a standardized measurement tool designed to measure people's "automatic" experiential constructive and destructive thinking. Consisting of 108 items, it is hierarchically constructed. Items are grouped into 6 scales, containing subscales and one global scale (Balcar, 2004). The questionnaire consists of the following domains: (a) **emotional Coping** (this includes the subscales - self-acceptance, absence of negative overgeneralization, nonsensitivity, absence of dwelling); b) **behavioral coping** (subscales include positive thinking, action orientation, conscientiousness); c) **personal superstitious thinking**; d) **categorical thinking** (subscales included here are polarized thinking, distrust of others, intolerance), e) **esoteric thinking** (ghosts, astrology), f) **naive optimism** (subscales included here are naïve optimism, overoptimism, stereotypical thinking, Pollyanna-ish thinking) (Epstein, 1998).

The Multifactor Leadership Questionnaire (MLQ 5x Short) identifies 3 leadership styles (**transformational**, **transactional** and **laissez faire**). It is a self-assessment inventory consisting of 45 items measured on a 5-point Likert scale (Bass & Avolio, 1994).

2.2. Research sample

The research population consisted of 44 managers with decision-making authority whose decisions had an impact on the leadership team. This was an available, criterion-based sample (the criterion was experience in a leadership position).

In terms of gender, 31 (70.5%) were women, 13 (29.5%) were men. The mean age was 42.05 years (SD 9.44), with respondents ranging in age from 25 to 63 years. The mean length of experience in the current job was 8.42 years (SD 7.26) and the mean length of experience in a managerial position was 9.86 years (SD 8.20).

3. Results¹

3.1. Research question (RQ) 1: Is there a link between experiential constructive thinking style and transformational leadership?

There is a positive moderate-level relationship between global constructive thinking and transformational leadership (.412**). There is no statistically significant relationship between emotional coping and transformational leadership. However, the emotional coping scale consists of several subscales, some of which were significantly related to transformational leadership. Specifically, it was the sub-scale of "absence of dwelling," which moderately correlated with transformational leadership (.320*).

There is no statistically significant relationship between behavioral coping and transformational leadership, except for its subscale "action orientation," which moderately correlated with transformational leadership (.411**).

¹ In this part, we present only significant correlations

3.2. RQ2: Is there a link between experiential destructive (cognitive distortion) thinking style and transformational leadership?

There is a moderate negative relationship ($-.416^{**}$) between personal superstitious thinking and transformational leadership style. Transformational leadership did not correlate with the other scales of destructive experiential thinking, but some subscales were significantly related. Specifically, intolerance (belonging to the categorical thinking scale) correlated with transformational leadership at a moderate negative level ($-.305^*$). Pollyanna thinking (belongs to the naive optimism scale) is also correlated with transformational leadership ($.322^*$).

3.3. RQ3: Is there a link between experiential constructive thinking style and transactional leadership?

There is a moderate positive relationship ($.413^{**}$) between global constructive thinking and transactional leadership. No statistically significant relationship exists between emotional coping (or its subscales) and transactional leadership. There is a statistically significant relationship between behavioral coping and transactional leadership ($.298^*$), and its only subscale is correlated with transactional leadership: action orientation ($.411^{**}$).

3.4. RQ4: Is there a link between experiential destructive (cognitive distortion) thinking style and transactional leadership?

There is no significant relationship between experiential destructive thinking style (or its scales and subscales) and transactional leadership.

3.5. RQ5: Is there a link between experiential constructivist thinking style and laissez-faire?

There is a moderate negative relationship between global constructive thinking and laissez-faire ($-.476^{**}$). There is a statistically significant moderate relationship between emotional coping and laissez-faire ($-.332^*$), and of the scales of emotional coping, "absence of negative overgeneralization" ($-.306^*$) and absence of dwelling ($-.409^{**}$) are correlated with laissez-faire. There is no statistically significant relationship between behavioral coping and laissez-faire, but two subscales of behavioral coping are correlated with laissez-faire, interestingly one in a positive relationship (positive thinking) ($.463^{**}$) and one in a negative relationship (action orientation) ($-.519$).

3.6. RQ6: Is there a link between experiential destructive (cognitive distortion) thinking style and laissez-faire?

A moderate positive relationship exists between personal superstitious thinking and laissez-faire ($.409^{**}$). There is no statistically significant relationship between categorical thinking (nor its subscales), naive optimism (nor its subscales), and laissez-faire. There is a statistically significant weak-level relationship ($.299^*$) between esoteric thinking and laissez-faire.

4. Discussion

This paper addresses the issue of cognitive biases in managers and their relationship to team leadership style. Cognitive distortions have been understood as part of the Cognitive-Experiential Theory, in which they are part of the so-called destructive thinking style. The aim of the research was to identify the link between a manager's thinking style and team leadership style.

The first two research questions explored the relationship between **transformational** leadership style and constructive and destructive experiential thinking. We found that there was a relationship between constructive experiential thinking and transformational leadership, specifically the emotional coping subscale of "absence of dwelling" and the behavioral coping subscale of 'action orientation'. Non-soothingness means that managers tend not to soothe themselves with thoughts about adverse events, and are able to mentally detach from them, which promotes the ability to lead their team transformationally. More action-oriented managers act more purposefully and effectively, making them more competent to lead their team transformationally.

We then addressed whether there is a relationship between destructive experiential thinking and transformational leadership style. We found a negative relationship between personal superstitious thinking and transformational leadership style. It is typical for people with higher levels of personal superstition to anticipate unfavorable events in advance, thereby protecting themselves against disappointment should they expect a favorable outcome and it does not materialize. It would be difficult to inspire in others a vision of goal achievement, to articulate a positive vision of the future, to try new

approaches, etc., which are characteristic of transformational leadership, if the leader anticipates failure and an unfavorable outcome in advance. Among destructive experiential thinking, "Pollyanna thinking", which is an exaggerated belief that "everyone has a good heart", was positively correlated with transformational leadership; managers with this belief have a higher propensity for transformational leadership. This suggests that a certain amount of over-optimism is part of transformational leadership and although it has both positive and negative aspects, it contributes to transformational leadership which is inherently positive, inspirational, visionary, belief in people, it just needs to reflect the boundaries and real events and conditions in the team.

Analysis of the above suggests that the transformational leader thinks in a constructive experiential way and uses elements of emotional and behavioral coping. The transformational leader leads the team in an inspiring way, creates a supportive atmosphere, encourages the self-actualization of team members, approaches them individually, and focuses on a vision to which he or she motivates others, i.e., uses elements of transformational leadership.

The following research questions tested the relationship between **transactional** leadership and experiential constructive and destructive thinking. We found that there is a relationship between experiential constructive thinking and transactional leadership. Furthermore, the only significant relationship within the subscales was demonstrated with action orientation, which is related to transactional leadership. Transactional leaders do not use emotional coping, which distinguishes them from transformational leaders, in whose actions emotionalization is an important element of leadership. This also agrees with Cerni, Curtis, & Colmar (2014) who suggest that transformational leaders use elements of emotionalization to connect the values of the organization with the individual needs of team members, taking their leadership to the next level. Experiential destructive thinking is not correlated with transactional leadership.

The last set of questions addressed the relationship between **laissez-faire** and constructive and destructive thinking. As we hypothesized, laissez-faire was negatively related to global constructive thinking. The same trend was observed for emotional coping, which laissez-faire leaders possessed to a lesser extent. It is mainly complacency that is related to emotional 'not coping'. Leaders who tend to ruminate on negative overgeneralization have a higher tendency to be laissez-faire. Also, the presence of overgeneralization of negative events contributes to laissez-faire.

Overall, non-leadership was not correlated with behavioral coping. Still, upon closer analysis, we found that it was surprisingly positively related to positive thinking in a moderate relationship and negatively related to action orientation in a strong relationship. This is surprising because we would expect positive thinking (constructive) to be more likely to be associated with the types of leadership analyzed above. This is a mindset that is realistically positive and thus differs from naive optimism, which is unrealistically positive. It seems as if these two subscales do not clearly differentiate between constructive and destructive positive thinking, and other authors should examine the wording of the Slovak items measuring positive thinking and naive optimism to see if they are indeed worded to differentiate between realistic and unrealistic positive thinking. The correlation with action orientation is not surprising; individuals who manage in a laissez-faire style are inherently avoidant, leaving both responsibility and decision-making to others.

Laissez-faire has also been correlated with destructive thinking, specifically personal superstitious thinking and esoteric thinking. Personal superstitious thinking - is related to a cognitive bias in which random phenomena are considered non-random. The analysis shows that the less a leader thinks constructively, the lower the leader's emotional coping and action orientation, the more destructive the leader thinks, the higher the tendency to laissez-faire, which is characterized by a passive approach, the leader leaves both responsibility and decision-making to others, hesitates with active intervention, and is unavailable when it is needed. This suggests that cognitive distortions are indeed related to an ineffective team leadership style.

As Curtis & Wee (2021) note, many studies on the relationship between mindset and leadership of managers arrive at varied results that depend on whether leaders "self-assess" or are judged by subordinates, what research instruments are used, in what socio-cultural settings, etc. the research is conducted, but the consensus across research is mainly on the importance of behavioral coping, which is related to more effective organizational/team management styles. They state that replication of finding a relationship between behavioral coping and transformational leadership suggests the most robust link, confirmed in our study. Our results are consistent with those of Humphreys & Zettel (2002), Cerni et al. (2008), Tove (2019), and Curtis, Wee (2021), which mainly demonstrated a relationship between transformational leadership and constructive experiential thinking.

If we understand experiential thinking as useful and beneficial on the one hand, but also as misleading and inaccurate on the other, we can conclude that the constructive part of experiential thinking is related to transformational leadership and contingent reward, which are constructive and effective

leadership styles. On the other hand, experiential thinking is not only constructive and beneficial, but can also be destructive and misleading, containing various cognitive errors and distortions, and it is this destructive thinking that is related to the non-constructive, passive style of team leadership (*lazier-faire*). Destructive thinking can be seen as a barrier to adequate decisions and judgments. It is particularly dangerous in the top-management profession, where a poor decision can have a significant negative impact on the company's financial or human resources. A person who thinks destructively actively creates an environment of a certain kind, e.g., if he is convinced that people cannot be trusted, it greatly affects not only his own survival and behavior, but also approaches other people, his team, with this "bias", in whom he does not inspire trust, but rather feelings of distrust and insecurity.

7. Limitations of the study

A significant limitation of the study is the size of the research sample. Due to the unrepresentative nature of the sample, our results are only valid to a limited extent, however, we believe that we have conducted research on an interesting research sample (top managers) and the results can serve as some initial insight into the issue in Slovakia.

Other limitations include the problematic psychometric properties of the instruments used, in particular, the positive thinking subscale, which is part of constructive thinking, and the "naive optimism" subscale, which is part of destructive thinking. These subscales did not sufficiently differentiate between constructive and destructive thinking, as evidenced by their high intercorrelation (.851**).

The leadership questionnaire also has some limitations, especially the transactional leadership scale, whose subscales are not correlated with each other; even contingent reward is correlated with transformational leadership. Lowe et al. (1996) arrived at similar problems in a meta-analysis. The authors note that even assuming that transformational leadership and contingent reward are distinct constructs (which they argue is debatable), it may be difficult to formulate the items discriminatively. They note that multicollinearity poses a challenge to the overall model, and highly influences the ambiguity of this instrument's results.

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