Neurohistology-Based Enterprise Organizational Change Model under Empathy Mechanism

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ABSTRACT
This paper aims to disclose the effect of individual organization members, especially their implicit attitude, on corporate organizational change (COC). From the perspective of neurohistology, the author explored the effect of implicit attitude on corporate organizational change (COC), and created the COC model under empathy mechanism. Through detailed analysis, it is concluded that the individual resistance to the COC can be mitigated if the corporate organization understands the neural bases of the formation and change of the implicit attitude among individual members. Besides, the enterprise should rely on empathy mechanism to resolve the negative impacts of individual implicit attitude on the COC. This research provides a positive guide on the successful implementation of the COC.

Key Words: Empathy Mechanism, Corporate Organizational Change (COC), Model, Implicit Attitude, Neurohistology

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Introduction
The fourth industrial revolution has kicked off the information age with unprecedented paradigm shifts. With the penetration of diverse information technologies (ITs), the corporate organizational environment and the basic organizational conditions, i.e. the relations between the enterprise and its members and among the members, have undergone substantial changes. The new situation poses severe challenges to the logic of organizational division of labor, which is critical to enterprises back in the industrial era (Huang, 2015). On the one hand, the changes of the information era have shaped an uncertain and complex external environment for corporate organization, turned the survival and development situation of the enterprise into a chaos, and added to the difficulty in corporate decision-making; On the other hand, the roles of corporate organization members have been revolutionized through a gradual shift from subordinates to organizers and from utility men to social men (Li, 2017). Moreover, the revamped relations between the enterprise and its members have brought changes to the form and incentives of the organizational structure. The organizational structure built on the traditional labor division theory can no longer adapt to these changes, and has bottlenecked the growth of the enterprise and its members in the new environment. For better corporate transformation and development, it is imperative to innovate and revolutionize the corporate organization from the individual level.

The existing studies on corporate organizational change (COC) mainly fall into the following categories: (1) Static research into the effect of the external environment (e.g. the economic, social, political and industrial situations) (Wang et al., 2007; Xie et al., 2006; Jing et al., 2008; Lv et al., 2008; Song, 2005) and...
internal environment (e.g. structure, culture, concepts and behaviors) on the COC, especially that of a single change event or period (Yao et al., 2006; Hu et al., 2005); (2) Research into the time, history, process and behavior of the COC, focusing on the continuity and results of the change (Liu et al., 2003; Wu et al., 2006; Meng et al., 2007; Wang, 2009); (3) Single-case research into the change process or large-sample empirical research into the results of organizational performance, through the combination of the change results and the organizational performance (Collins et al., 1995; Whipp et al., 1991; Pettigrew et al., 2000); (4) Research into the acceptance, contents and process individualization of occasional and continuous changes, aiming to disclose the influencing factors of the COC from the angle of context (Cai et al., 2017).

In addition, some scholars have discussed the COC from the perspective of employees. For instance, Chen (2015) investigated how the pressure of the COC affects employees' behaviors through questionnaire survey and empirical analysis, and concluded that, in the context of the COC, the involvement of employees in the organization is negatively correlated with the indirect impact of role overload/underload on their turnover tendency, task performance and helping behavior through affective commitment. From the aspects of context, process, results and contents, Zhang (2016) probed deep into the complex psychological process of the employees' reaction to the COC, and disclosed the relationship between different COC factors and organizational performance (Collins et al., 1995; Whipp et al., 1991; Pettigrew et al., 2000); (3) Single-case research into the time, history, process and behavior of the COC, focusing on the continuity and results of the change (Liu et al., 2003; Wu et al., 2006; Meng et al., 2007; Wang, 2009); (4) Research into the acceptance, contents and process individualization of occasional and continuous changes, aiming to disclose the influencing factors of the COC from the angle of context (Cai et al., 2017).

Taking emotion as the key antecedent variable of creativity, Tang (2011) discovered the following facts through an empirical analysis on research and development (R&D) teams: The intrinsic motivation of team members has no significant predictive effect on team creativity, while positive emotions of the members have a significant impact on team creativity and promote the effect of tacit knowledge sharing on team creativity.

To sum up, the research into the effect of individual organization members, especially their implicit attitude, on the COC is still inadequate, despite the fairly intensive studies on the COC. To make up for the gap, this paper, considering the status quo and conditions of corporate organization in the information era, neurohistologically discussed how the COC is affected by the implicit attitude of corporate organization members, and examined the excitation process of empathy in the COC environment. On this basis, the COC model was created under the empathy mechanism, centering on the attentiveness of organization members, and applied to explore the successful implementation of the COC under the empathy mechanism.

**Effect of Implicit Attitude on the COC**

Considering the Neurological Roots of Cognition and Behavior

Traditionally, the corporate organizational structure is grounded on the employment relationship. As the strong side of the relationship, the organization dominates the allocation of information and resources. Within the prescribed period of time, the organization members are required to provide labor services to the enterprise in exchange for a certain amount of compensation. In essence, the employment relationship does not grant equal rights to the employer and the employees, but serves the dominance of the organization (Luo, 2017). In other words, the organization has the final say on the organizational structure and operation under the employment relationship, and the organizational mission supersedes the personal goals of the members. This employment relationship is unequal from the contractual level, turning the members into puppets of the organization.

With the dawn of the information era, however, the traditional employment relationship is being disintegrated. From the perspective of organizational practice, the penetration of the ITs has changed the production mode of the enterprise and the lifestyle of employees to varying degrees. Organization members are shifting from the traditional “employees 1.0” to “employees 4.0” (Li, 2017). Meanwhile, there is a gradual trend towards equality in the relationship between the enterprise and its employees, and a transformation of the relationship between rights and obligations in the organization. All these changes have created favorable conditions for the COC in the new era.

From the demand of organization members, the proliferation of the ITs has dissolved the information asymmetry, spreading information across organization members. Thanks to the information diffusion, the members become more proactive and independent. They are no longer the willing puppets of the organization, but aspirers of self-value realization.
and creation in the organization. Therefore, the enterprise and its members must work together to create common values and shoulder shared risks, and make joint contributions to the development of the organization. In this case, the employment relationship, vital to both the enterprise and its members, is bound to evolve towards the common partnership. The resulting COC ought to be investigated from a new perspective.

Unlike the past, the individual-level resistance is now the key inducement of COC failure. So far, certain results have been achieved on personal attitudes in the course of the COC from the angle of neurohistology. In general, the organization may make a constructive change to itself, with the aim to suit the changing external environment or stimulate internal innovation. The constructive change is a long-term endeavor, which may fail due to the personal attitudes of organization members. Specifically, the personal attitudes can be divided into implicit attitude and explicit attitude (Wilson et al., 2000). The two types of attitudes are controlled by different neural regions (Barsade et al., 2009; Botha et al., 2013). The implicit attitude comes from the primitive and deep limbic system in charge of emotion processing. Originating from the long-term accumulated memories of the body, this type of attitude is featured by the unconsciously matching between the current environmental stimuli and the past experience, regardless of the subsequent effects of the stimuli (Cunningham et al., 2007). By contrast, the explicit attitude comes from the more evolved frontal lobe, which executes logical control. Originating from the acquired reflection and reasoning abilities, this type of attitude is featured by the rational view and source analysis of environmental stimuli (Gazzola et al., 2006).

Becker et al., (2010) pointed out that the manager tends to emphasize the explicit attitude of employees over their implicit attitude, and thus overestimate the adaptability of employees, sowing the seeds of COC failure. There are two main reasons for this conclusion: First, it is impossible for employees to clearly explain why they resist the COC during the change; if the manager cannot find a proper way of communication, he/she may ignore the implicit attitude of the employees, and fail to implement his/her thoughts on the COC; Second, the implicit attitude occurs to the employees once the COC begins; thus, their attitude towards the COC may be prejudiced by first impressions, leading to irrational behaviors and decisions (Wilson et al., 2000) In the course of the COC, organization members also experience some changes in behaviors, such as the dressing code and communication protocol (Beach, 2006). If these external changes are inconsistent with implicit attitude, it will be impossible to realize efficient COC even under external stimuli (Becker, 2010). Deeply rooted in the past experience, implicit attitude cannot be adjusted thoroughly in a short period of time (Fernandez-Duque et al., 2003). Any adjustment may trigger short-term negative emotions (e.g. pain and tension) among the employees, forcing them to resist or evade the COC (Li, 2016).

From the angle of neurohistology, scholars have discovered the solution to the conflict between implicit attitude and the COC: the employees should be attentive enough during the COC. In the state of deep focus, the goal orientation system in the brain will be activated, so that the person could make judgments specific to the current stimuli. To put it in another way, the attentiveness excites the explicit attitude, allowing it to compete with the preconceived implicit attitude. Hence, the person is enabled to make the optimal choice (Zeidan et al., 2013). Furthermore, the vision pursued by the partners can also trigger changes in personal preferences, which in turn affect the original perception. The existence of the vision will also activate the brain regions related to memory, reward, learning and trust behaviors, exerting a long-lasting positive influence on employees (Klucharev et al., 2008). The organization member will form new cognitions under the joint action of the vision and high-frequency attention, especially the self-excitation mode of organizational empowerment (Lieberman, 2007). In this way, the new implicit attitude can gradually form and consolidate, marking the end of the conflict between implicit attitude and the COC (Matsumoto et al., 2004). In the meantime, the individual resistance to the COC can be converted into the impetus to cooperation.

According to the above analysis, it is possible for the organization to mitigate the conflicts of the COC when it understands the neurological roots of how implicit attitude forms and changes among individual employees. On this basis, the organization should, considering its development trends, set common partnership as the ultimate goal of the COC, and attract the attention of organization
members through vision building, diversified communication and organizational empowerment, thus achieving the continued development of the COC.

**Empathy Excitation in the Context of the COC**

The previous section reveals that the COC is heavily influenced by the attentiveness of members on organizational development. To keep track of the attentiveness, it is necessary to encourage the communication among organization members, particularly their feelings about the organizational development and changes. This is fundamental to the making of timely adjustments. At present, there are two different views on how one understands the feelings of others: empathy and theory of mind (Hein, *et al.*, 2008; Eisenberger, 2003). In contrast to the theory of mind, empathy involves not only the cognitive system but also the motor system, personal feelings and emotional system (Singer *et al.*, 2006; Singer, 2006). In terms of information processing, the theory of mind mainly talks about the brain region in charge of cognition control and processing, while empathy covers a wide range of brain regions responsible for automatic processing of emotions, including but not limited to ventral anterior cingulate cortex, amygdaloid nucleus, and ventromedial prefrontal cortex (Lieberman, 2007). Therefore, the author decided to discuss how to maintain the attentiveness of organization members from the perspective of empathy, and then analyze the empathy excitation process in the context of the COC.

Empathy is the capacity to understand another person’s emotions and mental states and to predict his/her behaviors. It is similar to the idiom “standing in other’s shoes” (Cui *et al.*, 2008). The concept has been defined rigorously to distinguish it from sympathy, compassion, emotional contagion, and theory of mind. The definition goes as follows (De Vignemont *et al.*, 2006):

1. The empathizer will enter an emotional state.
2. For each person, there exists a person with the same emotional state.
3. The emotional state is excited by observing or imaging the state of another person.
4. The empathizer knows that the emotional state is affected by another person instead of originating from himself/herself.

From the functional perspective, empathy can be divided into emotional empathy and cognitive empathy (Cui, 2008). The former refers to the sharing of one’s feelings about external emotional stimuli. The electroencephalography (EEG) experiments have shown that the external emotional stimuli can activate the brain regions related to the emotions or feelings, which converts the external stimuli into personal emotions. The process is externalized as an emotional consensus. Thus, the neural activities of emotional empathy depend on the nature of the external emotional stimuli which causes the empathy. In contrast, the cognitive empathy means judging and understanding the ideas of another person and predicting his/her follow-up behaviors. These behaviors are consistent with those manifested in the parietal lobe, which is responsible for advanced cognition (Stone *et al.*, 1998). Emotional empathy and cognitive empathy are mutually independent and supplementary. The organic integration of them helps to enhance the communication skills of individuals in the organization. In the context of the COC, the emotional empathy enables a person to perceive the emotions of others, suppress the inner dissatisfaction, and adopt altruistic behaviors; cognitive empathy assists the organization in helping others, such as easing their negative moods (Smith, 2006). The integration of the two empathsies is essential to the adjustment of organization members during the COC. If they are out of balance, the organization members will face enormous barriers in communication (Liu *et al.*, 2009).

**Figure 1.** Empathy excitation in the context of the COC

Empathy is the dynamic result of interactions between multiple systems, namely individual cognition, emotion, and follow-up behaviors. In view of the timeline, empathy evolves through three phases: beginning, diffusion...
and ending. The emotional state is time-varying. Considering these features, the COC-based empathy excitation process is illustrated in Figure 1.

As shown in Figure 1, the empathy excitation in the context of the COC consists of three main parts (i.e. personal motions, personal cognition and behaviors under established goals), an external stimulant (i.e. another person’s emotions, a cause of empathy), and the diffusion process. In the COC environment, when a person encounters the external stimulant, his/her cognitive and emotional systems are first awakened. At this moment, the person will establish emotional sharing with the other person, that is, “stand in other’s shoes”. Then, the person will judge if the empathy is in line with his/her behaviors under establish goals through cognitive assessment of the external stimulant and against his/her own value system. If the answer is positive, the person will combine the emotional consensus with the cognitive judgement into unique feelings, and exhibit them with relevant behaviors or motives. That is how empathy is excited. Throughout the process, all the behaviors of the person are centered on the established goals, His/her attention is always focused on the goals, no matter if the empathy is excited or not. Such an excitation process prevents the implicit attitude from interfering in personal judgements. Besides, the COC-based empathy excitation relies heavily on the setting of the established goals, and their interaction with the other parts of the process.

The COC Model under Empathy Mechanism

**Empathy mechanism in the context of the COC**

Under the trend of informatization, new development situation is taken hold in many sectors, bringing changes to the operation mode of corporate organization. The form of organization is moving from the unequal employment relationship to common partnership. Meanwhile, the organization construction no longer attempts to realize internal control through rights allocation or mobilize/motivate organization members to actively pursue the organization goals. Instead, the new goals of organization construction are enhancing the performance of the organization, and optimizing the abilities of organization members. For these purposes, it is necessary to create a positive internal environment for organization members, allowing them to stay attentive and overcome their implicit attitude. Besides, the empathy should be introduced to stimulate the internal value creation and cultivate the self-excitation habits of the members.

The new development situation also influences the external environment, a key determinant in the traditional COC. The previous goals of adaptation and productivity enhancement have been gradually replaced by the behaviors under the established goals. Through the analysis of these behaviors, it is possible to optimize the resource allocation ability of the organization. In the meantime, organizational empowerment can give the members a greater say, enhance their self-excitation, and promote the formation of an internal incentive mechanism. Together, the above measures help to overcome individual resistance to the COC, fully mobilize the organizational enthusiasm, and boosts the change and development of corporate organization.

The empathy mechanism among organization members can fully attract the attention of organization members, and suppress the negative impacts of individual implicit attitude on the COC. On the organizational level, the corporate organization should integrate the behaviors under the established goals with the development of the employees, creating the environment, incentives and coordination mechanism for their growth. The purpose is to elevate the attentiveness of organization members, and encourage them to forge a positive COC atmosphere through empathy. In this way, the employees can fully unlock their potential of value creation, and implement the development goals of the organization as partners. The individual goals thus achieved will add up to the organization goals. On the procedure level, the corporate organization, as the subject of the COC, should establish an effective collective action mechanism based on the behaviors under the established goals, such that the employees can actively join the COC and continuously strive for organizational development. During this period, the employees will experience rapid improvement in knowledge acquisition, autonomous learning and decision-making, while the entire organization will also enjoy a sound COC atmosphere, laying a solid basis for a new implicit attitude.
Construction of the COC model under empathy mechanism

Through the above analysis on empathy mechanism in the context of the COC (4.1), the author constructed the COC model under empathy mechanism (Figure 2), that reflects the basic logic (bases-processes-results) and operation of the COC under empathy mechanism.

It can be seen from Figure 2 that the technology paradigm shift is the basis of the COC under empathy mechanism. Following the shift, there is a high uncertainty in the market, which also has a certain impact on the COC: the “distance” generated by information asymmetry within the organization is gradually eliminated. The new technologies facilitate information acquisition and processing, and create favorable conditions for the organization to “care” about its employees. In general, the IT-oriented technology paradigm shift becomes a necessary condition for implementing the COC under empathy mechanism. Meanwhile, the employees, with enhanced basic qualities and the desire for role shift, are motivated to work hard continuously. Compared to “employees 1.0”, the employees in the new era have a strong urge to realize and create self-values, play an important role in the organization, and work in an equal and open...
environment of autonomy, mutual help and win-win cooperation. The changing internal demands of the employees must be considered by the corporate organization. The traditional employment relationship should be modified accordingly as a partnership with more respect to employee values. To this end, the enterprise is forced to adjust its COC strategies from the perspective of its members, especially their implicit attitude.

Next, the high attentiveness of the members is critical to the COC under empathy mechanism. Under the effect of empathy mechanism, the organization is bound to adjust its behaviors in the COC process against the established goals, aiming to achieve profit sharing and common growth among its members. The adjustment pushes the employment relationship in the organization towards an equal and cooperative organizational relationship. At the same time, the members are attracted by the in-depth analysis of the behaviors under the established goals and the correct information on the COC. On the level of personal emotion, they tend to be positive and optimistic about the COC, and have a high sense of belongings to the organization. Besides, the employees are willing to actively involve in the COC and help other members to join the course. On the level of personal cognition, the members are constantly looking for personal cognitive enhancements, with the aim to improve their judgement, decision-making, adjustment and action abilities. Facing the gradual changes in the personal emotions and cognitions, the corporate organization should also pay attention to the employees’ sense of security, sense of involvement, sense of honor, and sense of being respected (Spreitzer, 1996), so that the individual demands could be satisfied to the highest possible extent. In addition, the enterprise ought to highlight the alignment between individual demands and the organizational goals. Once the personal demands are fulfilled and aligned with the organizational goals, a good organizational atmosphere will emerge, allowing organization members to concentrate their attentions on the COC, make right judgments of others’ emotions, and decide whether to adopt empathy based on these emotions. In this scenario, it is easy for them to discover individual resistance to the COC, receive feedbacks on the COC implementation, and take actions in light of the feedbacks. Under empathy mechanism, the old employees can set a role model for new employees. For example, an old employee should make adaptive adjustment by themselves, and find feasible strategies to attract the attentions of organization members. These moves will facilitate organizational behaviors under established goals, and provide the prime power to the implementation of the COC. Amidst the excellent atmosphere created by the old employees, the new employees can align their own goals with the organizational goals, fully unlock their potentials of self-value realization and creation, and inject new vitality into the implementation of the COC. Throughout the COC, the effects of empathy mechanism fall into two categories. On the one hand, the initiative of organization members is fully mobilized, so that they can learn about organizational goals and make corresponding decisions and adjustments; on the other hand, the traditional top-down management mechanism of employee behaviors is replaced by a self-motivated mechanism of employee behavior adjustment and organizational atmosphere optimization.

Finally, the COC is successfully implemented under the alignment between individual and organizational goals, resulting in the expected results. In the course of the COC, both the implicit and explicit attitudes of organization members are altered under empathy mechanism, the individual behaviors are effectively improved and corrected, and personal goals are established and aligned with the organizational ones. In this case, the organization is willing to endow the employees with more rights, and create a common vision of development with them, so that they can take part in the COC and give timely feedbacks on the COC situation. In the COC, the employees simultaneously act as the participants and leaders. The dual roles fundamentally resolves the negative impacts of individual implicit attitude on the COC. Moreover, empathy mechanism helps to build a good organizational atmosphere, in which both the employees and the organization keep positive attitudes, and guarantees the successful completion of the COC.

Conclusions
Currently, the external environment of the enterprise is increasingly complex under the shift of technology paradigm, and the organization members are more and more eager to participate in the transformation and development of the enterprise. With the deepening involvement of
employees in organizational development, their implicit attitude now directly bears on the results of the COC and the subsequent development of the enterprise. Based on neurohistology, this paper considers the implicit attitude of organization members as a major influencing factor of the COC, and attempts to disclose the root cases and core issues of the COC. Through the COC modelling under empathy mechanism, it is learned that the enterprise should rely on empathy mechanism to resolve the negative impacts of individual implicit attitude on the COC. This research provides a positive guide on the successful implementation of the COC. Of course, there are still some deficiencies in need of further research.

First, the proposed COC model under empathy mechanism is a theoretical model. Relevant empirical testing is required to further clarify the COC mechanism based on individual implicit attitude. Second, this paper only explores the empathy excitation in the context of the COC, failing to consider the effects of different contexts on empathy. Third, the author mainly discussed the empathy mechanism of the COC from the individual perspective; in future, the empathy mechanism will be investigated from the perspective of the organization (team).

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