



**The Impact of Ethical Leadership on Employees’
Behavioural Support for Highly Uncertain Changes: An
Empirical Study on the Egyptian Health Sector**

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Bilbao- Spain, October 2019

Abstract

Ethical leaders are capable of illuminating the positive side of change uncertainty to their subordinates via various mechanisms. Firstly, they have a positive influence over their subordinate's cognition and perceptions which enables them to change their psychological and behavioural reactions to change positively. Secondly, their cognitive influence stems from their altruism, fairness, concern for people, ethical guidance, integrity which motivates people to trust them during turbulent and uncertain times. This research studies the impact of ethical leadership (EL) on subordinates' behavioural support for change (BSC) in health organizations, witnessing organizational changes and operating in uncertain external environments. It also examines the mediating effect of commitment to change and employees' perceived uncertainty on the relationship between ethical leadership and behavioural support for change. A dyadic multi-source cross-sectional design was adapted following the double rater recommendation of Podsakoff (2003) on leaders and subordinates' behaviour. *Individual level dyadic* data was obtained from 600 medical staff and their direct leaders (total N= 1100) on the *same hierarchal level*. Structural equation modelling (SEM) was used to test the research hypotheses. Results showed that ethical leadership has a direct positive impact on subordinates' behavioural support for change. This positive impact is positively mediated by subordinates' commitment to change and their perceived level of uncertainty. Future research using a longitudinal design is needed to test the ability of ethical leaders to transform their subordinates' resistance to change into behavioural support for change and to test the likely best inferred causal dynamics. These findings suggest that ethical leaders can enhance their subordinates' behavioural support for change during highly uncertain organizational changes. Organizations may, consequently, seek to increase the level of ethical leadership through new training, selection and change strategies that focus on the promotion of ethics. Furthermore, ethical leaders could also be capable of formulating more effective change strategies and of managing change resistance more effectively.

To the Memory of My Mother...I know that you are watching...

May this make you finally proud until we meet again...

To prof. Metwally the father and prof. Metwally the sister. who have always believed in me... A special dedication to those who thought that I am not strong enough to rise and shine up again. May they know that this is just the beginning.... & now It's now show time.

Acknowledgement

I would like to thank my thesis supervisors, Dr. Leire Gartzia and Dr. Daniel Lerner for their support and for being able to accept my imperfections. Work on this thesis was partially funded by Tokyo Foundation for Policy Research through Sylff fellowship (Sasakawa Royichi Young Leaders Fellowship) It's been a pleasure to be Sylff fellow and I am now proud to be a graduate Sylff fellow. I would like to thank them for believing in my scientific and leadership capabilities and I am looking forward for more support from you that would contribute to the development of Egypt. A special thanks to Yoko Kaburagi from Tokyo Foundation for her support.

A special thanks to my god father of statistics the late Professor Abdel Hamid Al-Abbasi, the Dean of the Statistics Institute in Cairo University who has shown me the way and for having believed in me, may you rest in peace, your oversight and extraordinary efforts with the analysis would always be appreciated. This project would not have come to an end without the psychological and financial support of Prof. Metwally the father and Prof. Dina Metwally, my sister. I would like to warmly thank them both for not losing their faith in me during my hard times. A special thanks to Prof. Iñaki Peña my team leader, the member of CAP and the head of my PhD program for his support and motivation. A special thanks to Eng. Zeyad Yasser, Eng. Morsi Atteya and Prof. David Whetham. Last not least, I am appreciative and thankful to my failure who has taught me what success really is. Finally, this PhD is just the beginning and I hope to benefit from these results in my non-governmental health organization which I am planning to establish in Egypt in few years to serve all marginalized Egyptians who could not afford covering their medical health care.

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Chapter 1 : An Introduction and Overview

Change is a key characteristic of organizations (Dawson, 1997, 2003). External business environments, for instance, have a great impact on internal organizational environments (Dawson, 2003). Contemporary organizations also tend to adjust their structures, operations and processes to cope with rapidly changing external environments (Piderit, 2000; Dawson, 2003). The sudden change of tasks, structures and processes implied in these transformations produces uncertainty, which at the same time hinders efforts towards change (Piderit, 2000; Vince, 2001). Uncertainty is the inability to make precise forecasting about the future (Bordia et al., 2004) and it is highly associated with employees' resistance to change hindering the success of change if not managed properly (Lewin, 1948; Dawson, 2003, Kotter, 2008). Uncertainty also tends to trigger resistance to change as it causes learned helplessness, anxiety, stress, absenteeism and distrust (Jackson et al., 1995; Hui & Lee, 2000; Morgan & Zeffane, 2003).

The negative reactions of employees facing change may lead to the failure of organizational change (Coch and French, 1948). Thus, change management scholars have focused on formulating effective strategies to eliminate resistance to change (e.g., Lewin, 1948; Kotter and Schlesinger 1979; Nutt, 1986; Dawson, 2003; Kotter, 2008). Such resistance from employees also received great attention, as it is a negative behavioural response to change that dramatically hinders the success of change (Piderit, 2000; Oreg, 2006; Kotter, 2008). For instance, Meyer and Herscovitch (2002) focused on the prominence of transforming employees' resistance into behavioural support for change. Behavioural support for change could occur in various forms such as cooperation,

employees' helping behaviour and championing (Meyer & Herscovitch, 2002). Meyer and Herscovitch (2002), have also focused on the importance of positive psychological responses to change which contribute to the generation of behavioural support for change. They found that commitment to change (CoC) is a positive psychological state triggered by change that acts as an antecedent to behavioural support for change.

A factor that might help followers be psychologically more committed to change and support it behaviourally is ethical leadership, especially during changes that take place in highly uncertain and turbulent contexts. Ethical leaders have a concern for their followers and might make them more likely to get involved in the change process (Kalshoven et al., 2011; Scandura & Sharif, 2014). The presumed positive impact of ethical leaders on support for change is expected to occur because employees tend to trust ethical and fair leaders during times of uncertainty (Li, 2005). Moreover, fair and ethical leaders have more credibility during times of change, which motivates their subordinates to trust them and hence, involve themselves in the ongoing change (Morgan and Zeffane 2003; Li, 2005; Scandura & Sharif; 2014). Furthermore, employees' involvement in change makes them feel empowered and confident to have a voice as well (Fedor et al., 2006). This involvement can contribute to the treatment of employees' feelings of helplessness and lack of control triggered by uncertainty (Jackson et al., 1995). Indeed, employees' involvement in change enhances their sense of control during change (Morgan & Zeffane, 2003).

Behavioural change is generally based on cognitive representation of contingencies (Grings, 1973; M. E. Dawson & Furedy, 1976; Dawson & Buchanan 2005). Ethical leaders are able to stimulate new desired behaviours via their role modelling competencies (Bandura, 1978; Brown and

Triveño, 2006). In fact, behavioural reshaping would never occur without an unconscious recognition of the correlation between behaviour and its positive repercussions (Grings, 1973; Dawson & Furber, 1976). This unconscious association could effectively be conducted by ethical role models via an effective reinforcement system (Bandura, 1978). Thus, ethical leaders could presumably have a direct positive impact on medical staff's behavioural support to change and on their commitment to change as well.

This PhD thesis aims to extend this field of knowledge by studying organizational change and ethical leadership in highly uncertain contexts. The present PhD study mainly investigates whether ethical leadership could be a catalyst to generating positive organizational responses to change and prevent change resistance or not. It also examines whether ethical leadership could be a cure to the negative consequences of change uncertainty which lead to change resistance or not. This could be viable through the social learning and role modelling mechanisms of ethical leadership which are discussed in the next chapter.

Environments witnessing a high level of turbulence for either political, economic, social, legal or technological reasons could represent turbulent environments possibly perceived as highly uncertain by people affected by change (Dawson, 2003). Thus, this PhD study investigates the impact of ethical leadership on employees' behavioural support in medical organizations performing highly uncertain tasks in their daily processes and operations in Egypt, thereby representing an example of these challenges in a highly uncertain context with profound situations of organizational change. Because political changes are a major cause of turbulence (Dawson, 2003; 2005), authors like Dawson (2003) have also referred to political changes as the *politics of change* as any political activities outside and inside the organization (Dawson, 2003). This could involve various

government pressures that might affect the organizational decision-making process and the organizational change process (Dawson, 1997; 2003). For instance, these external political changes can affect the internal politics of the organization (Child, 1997; Buchnan & Badham, 1999; Dawson, 2003). Top management could be replaced as a result of political changes in external operating environments. This could, consequently, affect the perceived level of uncertainty of organizational members affected by changes in such environments.

Because these turbulent environments can have an influence on the mechanisms of organizational change, external environmental turbulence such as that representing the Egyptian context is also likely to affect internal environments of organizations witnessing change/s (Miller and Friesen, 1983; Dawson, 1997; Dawson, 2003). These turbulent external business environments may trigger a high rate of strategic uncertainty during change (Bordia et al., 2004). In particular, focusing on highly uncertain tasks and operations in health organizations performing highly uncertain medical tasks in their daily processes and operations opens the door to studying the impact of structural (critical medical tasks) and job uncertainty on doctor's behavioural support for change. To improve the chances of achieving a high level of change perceived uncertainty, this study targets various forms and levels of uncertainty: task level, job level, organizational level and external environmental level. Particular attention will be given to organizational changes taking place in health organizations operating in turbulent external environments that could be perceived as highly uncertain by organizational members affected by change. Non-profit health organizations were selected for this PhD study, since it is totally based on charity and is witnessing greater financial and operational uncertainty.

Extending these associations, this PhD study also investigates the mediating effect of employees' commitment to change and the moderating effect of the levels of perceived uncertainty on the

relationship between ethical leadership and doctors' behavioural support for change. This PhD study argues that the positive impact of ethical leaders on their subordinates' behavioural support for change during highly uncertain changes is mediated by employees' commitment to change and moderated by their perceived change uncertainty. Moderating variables can enhance or change the direction and sign of a relationship (Baron & Kenny, 1986). The expected moderating role of uncertainty implies that employees' uncertainty would presumably be able to enhance the strength of that relationship and /or change its direction (Baron & Kenny, 1986).

Change uncertainty is being studied as a moderating variable for several reasons. The literature suggests that uncertainty tends to be attached to any form of change (Dawson, 2003; Dawson, 2005; Kotter, 2008), but note that this work focuses on studying change in health organizations operating in turbulent external environments that might impact ongoing organizational change, where subjective, perceived levels of uncertainty might vary in those contexts. The turbulence of external environments may trigger more uncertainty, which could, in turn, affect subordinates' behavioural support for change. Uncertainty could presumably lead to more behavioural support for change because subordinates tend to trust ethical leaders during such uncertain times (Li, 2005). Thus, uncertainty could presumably also lead to a positive influence of ethical leadership on behavioural support for highly uncertain changes. This could arguably happen if ethical leaders succeed in changing their subordinate's negative perceptions of change uncertainty during such contexts.

The presumed positive relationship between ethical leadership and employees' behavioural support for change is expected to be mediated by employees' commitment to change for various reasons. First, ethical leadership is positively associated with organizational commitment (Brown & Triveño, 2006; Ruiz et al., 2011) which is relatively similar to the essence of commitment to change (Meyer & Herscovitch, 2002). Second, there is a positive relationship between ethical leadership and affective commitment to change (Rowold & Borman, 2016). Furthermore, ethical leaders tend

to involve their subordinates in the change process (Scandura & Sharif, 2014) because they are likely to have a concern for their followers (Brown & Triveño, 2006; Kalshoven et al., 2011). Importantly, behavioural support for change is composed of various behaviours that are triggered by commitment to change (Meyer & Herscovitch, 2002). Consequently, it may be argued that ethical leadership is positively associated with commitment to change. It may further be posited that commitment to change has a positive mediating effect on the presumed positive influence of ethical leaders on their subordinates' behavioural support for change, thus fulfilling Baron and Kenny's (1986) criteria of mediating variables.

This study examines the positive mediating effect of commitment to change but does not examine commitment to change as an outcome for two main reasons. Firstly, the main aim of this thesis is to study the impact of ethical leaders on their subordinates' behavioural support for change. Meyer and Herscovitch (2002) found that commitment to change, as a positive psychological reaction to change, triggers a behavioural support for change. Hence, it might be reasonable to suggest that ethical leadership would not only have a positive influence on employees' positive behavioural responses to change (behavioural support for change) but also on their main psychological reaction to change which produces their behavioural support for change (commitment to change). Hence, a decision was taken to replicate the findings of Meyer and colleagues. This replication should take place via an examination of the role of commitment to change in the generation of the presumed positive effect of ethical leadership on behavioural support for change.

Secondly, the relationship between ethical leadership and commitment to change has previously been studied by Borman and Rowold (2016). Borman and colleagues reported a mediating role of affective (desire) commitment on the negative impact of ethical leadership and employees' silence behaviour. Silence behaviour is a negative behavioural reaction to change that represents a lack of participation and involvement (Bormann & Rowold, 2016). The mediating effect reported by Borman and colleagues was another motive for studying the presumed mediating effect of

commitment to change in the present study. Studying this presumed mediating effect helps to reveal whether the whole construct of commitment to change has a positive mediating effect on behavioural support for change or not. Extending these findings, this PhD study argues that ethical leaders could change their subordinate's perceptions of uncertainty through a cognitive reshaping process that helps followers perceive uncertainty as an opportunity rather than a threat. Such changes in psychological perceptions of change would subsequently translate into employees' enhanced behavioural support for change.

The study by Borman and colleagues focused only on the affective component of commitment to change. Extending on their approach my study contributes to the field of commitment to change by studying the whole construct of such commitment as a mediator, rather than focusing only on the affective component only (Affective Commitment, AC). This is important because there is a broad consensus that the mindset of employees towards commitment is a multi-dimensional construct (e.g., Gordon et al., 1980; Angle & Perry, 1981; Meyer & Allen, 1984; O'Reilly & Chatman, 1986; Penley & Gould, 1988, Allen & Meyer, 1990; Meyer & Allen, 1991; Mayer & Schoorman, 1998; Jaros et al., 1993, 1998; Meyer & Herscovitch, 2002, Meyer et al, 2010; Meyer et al., 2013) which is composed of three commitment components that interact with each other to produce a behavioural outcome (Meyer & Herscovitch, 2002). Meyer and Herscovitch (2002) found that the mindset of commitment has the same characteristics regardless of the target of the commitment (e.g., organization, team, department or change). Thus, it could be argued that the multi-dimensional nature of commitment is also applicable to the construct of commitment to change, which would imply that the construct cannot be composed only of affection. This PhD study adopts a multi-dimensional perspective to commitment for change using dyadic data by which participants of the

study are paired together participants of the study are paired together in the form dyads within a social or an organizational context (Kenny, 1990).

1.1 Research Questions

The Main Question

Can ethical leaders have a positive impact on their subordinates' behavioural support for change during highly uncertain changes? If so, then what is the role of perceived uncertainty and commitment to change on such relationship?

Sub-Research Questions

1. What is the impact of ethical leadership on employees' behavioural support to change?
2. What is the relationship between ethical leadership & subordinates' commitment to change?
3. What is the role of subordinates' commitment to change in determining the relationship between ethical leadership & employees' behavioural support to change?
4. What is the role of employees' perceived change uncertainty in shaping the relationship between ethical leadership and behavioural support for change?

1.2. Research goals

This study aims to achieve various objectives. Firstly, it aims to examine the influence of ethical leadership on employees' psychological and behavioural reactions to change. Although, this study focuses only on one psychological reaction to change (commitment to change) and one behavioural response to change (behavioural support to change). Nevertheless, future research shall also test the impact of ethical leadership on other positive responses to change.

On the other hand, this study aims to test psychological and behavioural consequences of ethical leadership during highly uncertain changes taking place in turbulent external environments. Furthermore, this study aims to change the conventional view of uncertainty in literature via illuminating the positive side of uncertainty which could be triggered by ethical leadership. Finally, this study aims to present ethical leadership as a therapy to the dark-side of change uncertainty and to employees' resistance to change.

1.3. Research Justification

Ethical leadership could be a catalyst to a more successful change management during times of change. This could happen through a more effective management of employees' psychological and behavioural responses to change as illustrated in the introduction. There **is a theoretical gap, however, about the behavioural and psychological repercussions of ethical leadership during times of change** (Scandura & Sharif, 2014).

This study mainly aims to contribute to filling this theoretical gap in many different ways. First, this research aims to contribute to the creation of a new research stream in the literature of ethical leadership and management of change that aims to test the direct impact of ethical leaders on their subordinate's behavioural support for change, which could be the most crucial behavioural response to change. Furthermore, this study investigates the influence of ethical leaders on subordinate's commitment to change, which has been suggested to be a relevant psychological reaction to change that may trigger a behavioural support for change (Meyer & Herscovitch, 2002). In addition, this study will be the first to incorporate the impact of change uncertainty on the influence of ethical

leaders on their subordinate's responses to change (commitment to change and behavioural support for change in specific). Importantly, only few studies have focused on studying the behavioural and psychological repercussions of ethical leadership during change (e.g., Scandura & Sharif, 2014, Bormann and Rowold, 2016).

A study focusing on the impact of ethical leaders on their subordinates' perceived uncertainty is important because uncertainty tends to be attached to organizational change (Kotter, 2008). Moreover, people tend to trust credible and moral leaders during times of uncertainty (Li, 2005). Thus, a better understanding of how these associations occur is needed. Such approach also contributes to previous research gaps by focusing on contexts of highly uncertain organizational changes, which are major characteristics of Middle Eastern organizations and have been generally under investigated in the field of ethical leadership (Resick, 2013). The approach adopted here is also useful to call attention to the consequences of ethical leadership during specific types of change that could differ in terms of their nature and in different sectors as well. Shedding the light to the impact of ethical leadership on highly uncertain changes in the specific context of the health sector that take place in turbulent macro-environments is also a major contribution to that study. This study focuses on the NGOs health sector in Egypt which is based on fund-raising and is subject to a higher level of economic turbulence which could have a great impact on individual's perceived change uncertainty (see page 54 for more details about the selection of sector). Finally, this study will contribute to the re-formulation of the negative academic perception on uncertainty as it will shed light to an expected positive intervening effect to uncertainty on the relationship between ethical leadership and behavioural support for change.

Overall, the main aim of this chapter was to introduce the main theoretical arguments related to this study. A deeper theoretical discussion will take place in the next chapter. The research methodology and the main research design will be explored in chapter three. The main focus of the fourth chapter will be on the presentation of the statistical analysis and main findings. A discussion of results will finally take place in the fifth chapter where the main research limitations, implications and recommendations for future research will also be highlighted.

Testing the influence of ethical leaders on their subordinates' reactions to change in health organisations operating in highly turbulent macro-environments, is also another major objective of this study. Predicting behavioural and psychological responses of medical staff specialized in highly severe medical specialities, is also a major objective of this study. This illumination opens the door to future researchers to predict the behaviour of health workers operating in the context of wars and humanitarian crisis. Moreover, a major theoretical objective of this study is contributing to the re-contextualisation process of Meyer and Herscovitch's (2002) extension of the three components model of behavioural support to change through incorporating ethical leadership and levels of perceived uncertainty into the model. This would, in turn, shed light on the role of ethical leadership as a major pillar of effective change management strategies and as a treatment to the negative consequences of change uncertainty, which are two major objectives of this research.

Chapter 2: Literature Review and Hypothesis

2.1 Introduction

The aim of this chapter is to review the literature related to the variables of this study. The first section explores the term uncertainty. It defines it and delves into its psychological and behavioural repercussions. A connection will be made between the literature of ethical leadership and with that of commitment to change and uncertainty. This connection is crucial to understand the influence of ethical leaders on their subordinate's reactions to change. It is also important because this PhD study argues that ethical leadership could be a solution to the negative consequences of change uncertainty, influencing their follower's behaviour during highly uncertain changes. In particular, this PhD thesis contends that ethical leaders could change their subordinate's perceptions of uncertainty through an effective reward system. This cognitive reshaping process could help followers perceive uncertainty as an opportunity rather than a threat. Such changes in psychological perceptions of change would subsequently translate into employees' enhanced behavioural support for change, triggered by ethical leadership too. Research hypotheses will be formulated in the light of the following theoretical discussion and the theoretical research model will finally be presented.

2.2 A Closer Look at Ethical Leadership

Brown, Treviño and Harrison (2005) took the first initiative in developing a construct of ethical leadership. They defined ethical leadership as *'The demonstration of normatively appropriate conduct through personal actions and interpersonal relationships and the promotion of such conduct to followers through two-way communication, reinforcement and decision-making'* (Brown et al., 2005, p. 120). The definition will be decomposed into various parts for the sake of demonstration. Firstly, *'The demonstration of normatively appropriate conduct through personal actions and interpersonal relationships'* refers to the ideal leaders' conduct that would be imitated by followers and would lead their being perceived as ethical leaders (Brown et al., 2005, p.120). For instance, warmth, trustworthiness, care, and honesty would lead to leaders being perceived as legitimate and credible role models (Brown et al., 2005). Indeed, the term 'normatively appropriate' was described by Brown and colleagues as deliberately vague because what is considered as normatively inappropriate is highly dependent on various contextual variables (Brown et al., 2005). For instance, public speaking about some organizational actions might be considered as a normatively inappropriate behaviour in some cultures. Other cultures, however, might perceive it as a normatively appropriate behaviour (Brown, et al., 2005).

The second pillar of the definition focuses on the promotion of ethically desirable conduct towards subordinates through an effective communication process (Brown, et al., 2005). Ethical leaders should not only draw their followers' attention to ethics and make it salient. Rather, they must also provide them with support via procedurally and interpersonally fair processes (Bass &

Steidlmeier, 1999). Support is essential to motivate followers to engage in the desired, promoted behaviour (Bandura, 1977; Brown & Triveño, 2006).

Reinforcement is the third component of Brown and colleagues' definition. It implies that ethical leaders should reward ethical behaviour and discipline deviant ones (Treviño et al., 2003). The process of rewards and punishments is called behavioural reinforcement (Bandura, 1977). The reinforcement process should be conducted on the basis of clear standards set by ethical leaders (Bandura, 1977; Brown & Triveño, 2006). Praising ethical behaviour is important as it motivates followers to maintain the momentum of the new desired behaviour (Bandura, 1977; Brown & Triveño, 2006).

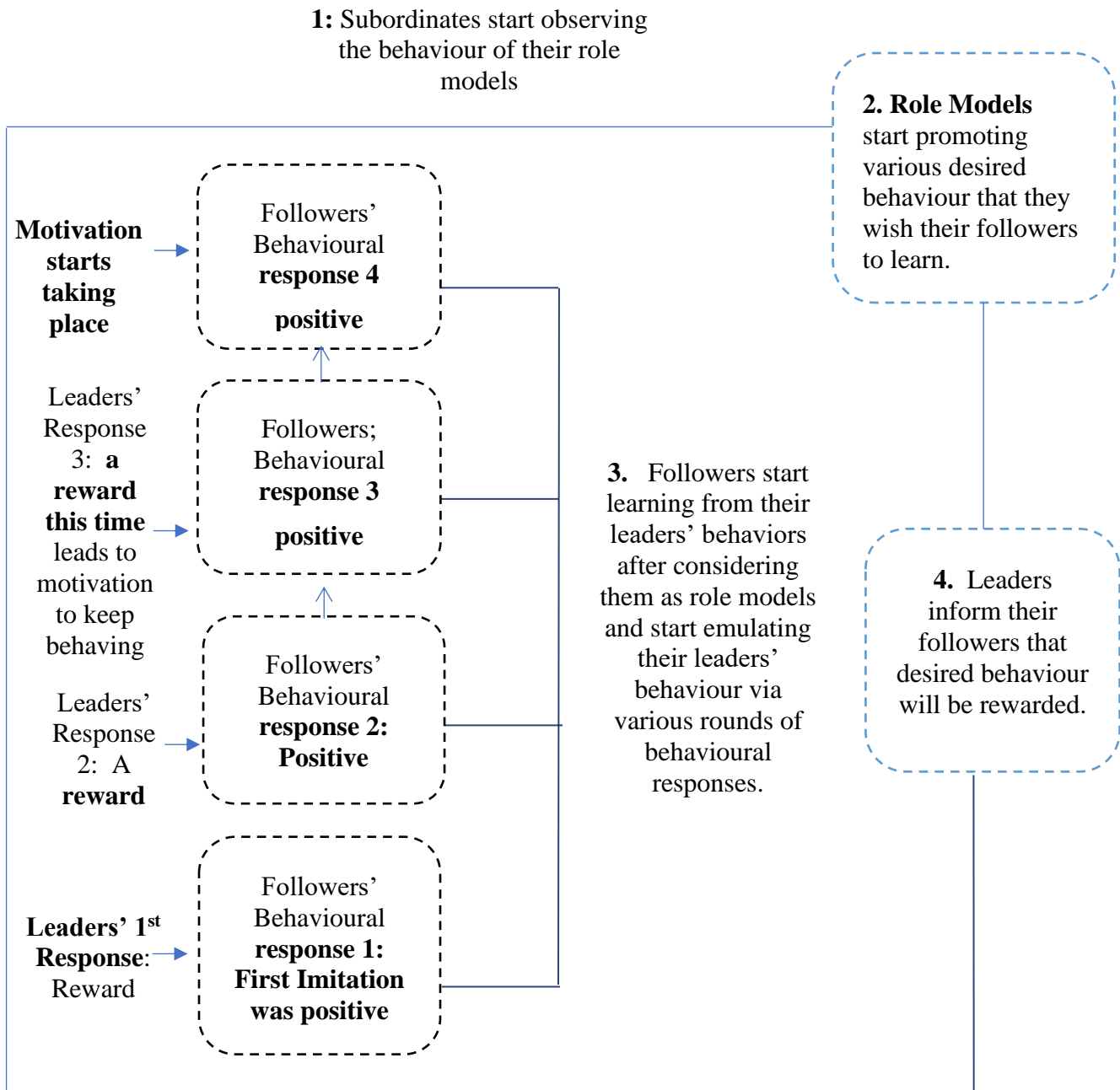
The fourth component of Brown and colleagues' definition is concerned with the prominence of *decision-making*. Decision-making refers to ethical leaders' responsibility for the consequences of their decisions (Howell & Avolio 1992; Bass & Avolio 2000; Brown et al. 2005). Brown et al. (2005) also believe that it reflects their tendency to make fair and moral choices that can be observed and imitated by others (Howell & Avolio 1992; Bass & Avolio 2000; Brown et al. 2005).

Social Learning as a Working Mechanism towards Ethical leadership

Brown et al. (2005) found that ethical leaders represent role models for their followers. This role modelling facilitates providing ethical guidance through a behavioural regulation process. The social learning theory explains the cognitive reshaping process that occurs during the learning process. They looked at the influence of ethical leaders on their subordinates from a social learning perspective. In fact, observation of role model's behaviour and its consequences is the main mechanism of social learning (Bandura, 1977, 1978).

Bandura also found that role models' decisions tend to be observed as well as their consequences. Furthermore, an imitation process would take place if these consequences are favourable. Reinforcement is a major pillar of the process in which positive behaviours must be rewarded by role models. Individuals should be aware that their positive behavioural responses will be rewarded. The behavioural reshaping process is illustrated in Figure 3 shortly, which aims to demonstrate the cognitive mechanisms through which ethical leadership operates.

Figure 1: Cognitive Mechanisms of Ethical Leadership



Adapted from Bandura (1977, 1978) and Brown & Triveño (2006)

Figure 1 is intended to summarize the cognitive process of the behavioural regulation of followers' behaviour. According to Bandura (1977, 1978), humans' behaviour is acquired and regulated through a cognitive process that substantially relies on role modelling and social

learning. This cognitive process is crucial to behavioural regulation in terms of acquisition and retention of new behaviours. There is an ongoing learning process in Figure 1 that is based on social learning and role modelling. Ethical leaders act as role models, with their behaviour being learnt and emulated by their followers. The learning process is based on various factors such as the observation and imitation of leaders' behaviour. Leaders' behaviour acts as a stimulus to their follower's behavioural responses through this cognitive learning process.

Various psychological mechanisms motivate individuals to change their negative behaviour and maintain the momentum of the positive ones. Bandura (1977) found that individuals should be aware that positive behavioural responses would be monitored and rewarded. These are two crucial actions whose absence would lead to the permanence of undesired behaviour. It could be inferred from Figure 1 that subordinates of ethical leaders are first made aware that any positive behaviour would be rewarded. Reward acknowledgement leads to a stronger belief that the positive behavioural consequences will be rewarded. The reward system motivates subordinates to further observe, learn, imitate, and generate more future positive responses.

Bandura (1977) found that rewarding positive behaviours leads to motivation, which could be simply defined as the activation and persistence of behaviour (Bandura, 1977). There are various sources of motivation according to Bandura (1977, 1978). For example, motivation in Figure 1 occurs after various rewards for positive behaviours and a solid belief that positive behaviour will be rewarded. The representation of the positive repercussions of positive behaviour through acknowledgement also leads to motivation (Bandura, 1977). Self-rewarding reactions are also another cognitive source of motivation that depends on attaining a specific performance level that should lead to motivation (Bandura, 1977). This motivation occurs due to self-induced resistance and persistence to attaining the self-prescribed behaviour, according to Bandura.

The behavioural change process relies significantly on cognitive representation of contingencies (Grings, 1973; M. E. Dawson & Furedy, 1976; Dawson & Buchanan 2005). Stimulation of desired behaviour through modelling would not be effective without an unconscious recognition of the correlation between behaviour and its consequences (Grings, 1973; Dawson & Furerdy, 1976). Hence, reinforcement is an important pillar of this cognitive process as it regulates this unconscious perception of the correlation between behaviours and their consequences. Reinforcement is an essential component of this cognitive learning process. This is due to the impact of leaders' feedback on the regulation of their subordinates' behavioural responses. Reinforcement can be defined as the unconscious regulation of followers' (responders) by the immediate consequences of their behaviour (Bandura, 1977). These behavioural consequences represent the feedback that is managed by leaders. Observational learning is another source of the importance of feedback as it leads to a gradual construction of the desired appropriate behaviour (Bandura, 1977, 1978). Bandura (1977) believes that this gradual construction occurs through the self-observation of the consequences of ones' own actions. The schedule of reinforcement is also crucial to the behavioural change process. Reinforcement schedules that take place over long intervals of time enable people to process, synthesize and learn from the consequences of their behaviour and to gradually produce and acquire the desired new behaviour (Kaufman et al., 1966; Bandura, 1977; Baron & Kenny, 1986).

2.3 Behavioural Approach to Ethical Leadership

De Hoogh and Den Hartog (2008) studied ethical leadership by focusing on the behaviours of ethical leaders. De Hoogh & Den Hartog (2008) and Kalshoven et al., (2011, 2013) identified seven behavioral dimensions of EL: *fairness, power sharing, role clarification, ethical guidance, people orientation, concern for sustainability, and integrity*. First of all, ethical leaders are

expected to *be fair* in their decisions. This fairness requires ethical leaders to be transparent and to take balanced and moral decisions, to be honest, responsible and to treat people equally (Kalshoven et al., 2011; Steinmann, Nubbold, & Maier, 2016). Powersharing refers to involving employees in decision-making and taking their ideas into consideration (Brown et al., 2005; De Hoogh & Den Hartog, 2008). Ethical leaders also *clarify roles*, by making performance goals, expectations and responsibilities clear (De Hoogh & Den Hartog, 2008, Kalshoven et al., 2011).

These leaders also show *ethical guidance*, as they communicate about ethics, explain ethical issues and promote ethical conduct (Kalshoven et al., 2011, 2013). They are also *people-oriented*, by showing concern, care for people, and taking an interest in their welfare (Kalshoven et al., 2013). The *concern for people* dimension can arguably be considered the most prominent pillar of ethical leadership as it represents leader's care, support and respect for their subordinates (Treviño, 2003). Ethical leaders also live with *integrity*, which refers to keeping their promises, acting consistently and reflecting high word-deed alignment (Kalshoven et al., 2011).

Ethical leaders are sensitive to environmental and sustainability issues, which they demonstrate by caring about the impact of their actions on society (Kalshoven et al., 2011, 2013). Concern for the environment is the sixth dimension of ethical leadership, which also refers to the altruistic nature of ethical leaders. To illustrate, ethical leaders are not expected to care only about their subordinates but also to have concern for the environment in which their organizations operate (Kalshoven et al., 2011). Indeed, this is in line with the sustainability literature, which suggests that sustainable leaders act beyond their self-interests (Ferdig, 2007). Finally, the last dimension of EL according to Kalshoven et al., (2011), is integrity. Integrity reflects the tendency of ethical leaders to keep their promises and be trustworthy (Kalshoven, et al., 2011). The dimensions of

ethical leadership proposed by Kalshoven et al. (2011) fits closely with Brown and Treviño's (2005, 2006) view of ethical leadership

The next section will provide an in-depth examination of the term *commitment to change*. For this to happen, the reader shall first understand the general nature of *commitment*, regardless of its target. This is essential because commitment is a psychological force and mindset that has the same essence regardless of its target (Meyer & Herscovitch, 2002). This means that commitment to change will have the same essence as any other form of commitment (e.g. to the organization, the team or supervisor or even the family). Commitment has three components which were discussed in Meyer and Allen's (2001) Three Components Model of commitment. Meyer and Herscovitch (2002) developed an extension to this model with an application on commitment to change. Meyer and Herscovitch (2002) found that employees' commitment to change triggers a behavioural support for change. Commitment to change is the main trigger of behavioural support for change, which consists of three main components that affect behavioural support for change.

2.4 An overview of the Three Components Model of Commitment (TCM)

Towards Understanding the Essence of Commitment

Commitment could be simply defined as '*a force [mindset] that binds an individual to a course of action of relevance to one or more targets*' (Meyer & Herscovitch, 2002, p. 475). According to Meyer and Allen's Three Components model (2001), this force is multi-dimensional as it has various attached mindsets that affect its form. It can either be based on an affection and desire (*affective commitment*), or an obligation (*normative commitment*), or on the perceived cost incurred if an individual does not engage with a specific course of action (continuous commitment).

An individual would unlikely have just one type of commitment because commitment is a multi-dimensional construct (Meyer & Allen, 2001; Meyer & Herscovitch, 2002). Individuals tend to have a force of commitment composed of a combination of three mindsets of commitment. Hence, a commitment profiles' perspective should be adapted while analysing employees' behaviour which views commitment as a multi-dimensional construct as every individual tends to have a different commitment profile based on the level of each form of commitment (Meyer & Herscovitch, 2002; Meyer et al., 2013).

There is another research stream that considers commitment as a uni-dimensional construct (e.g., Porter & Steers, 1982; Wiener, 1982; Blau, 1985; Brown, 1996). This research stream, however, was already refuted by Meyer and Allen (1991), Meyer and Herscovitch (2001, 2002) who found that the construct of commitment has three components (affective commitment, continuance commitment and normative commitment). Moreover, it does not take account of the sub-components of commitment. Consequently, this research stream does not even recognize affective commitment, which has been studied by Borman as a sub-component of commitment. Furthermore, Meyer and Herscovitch (2002), who developed the construct of commitment to change viewed the construct from a multi-dimensional perspective while studying its impact on behavioural support for change.

There are also two other components of commitment to change that interact with affective commitment to change in affecting people's behaviour (Meyer & Herscovitch, 2002). The other two sub-components (mindsets) reflect an obligation to commit to the ongoing change (Normative Commitment) or committing to change due to the high costs incurred if change fails (continuance commitment). Individuals tend to have a mixture of the three mindsets and are more likely not to

have only affective commitment but rather, a commitment profile that is composed of a mixture of the three forms of commitment (Meyer & Herscovitch, 2002).

The three mindsets of commitment are distinctive in many ways. Firstly, Meyer and Herscovitch (2001) found that the three forms of commitment differ in terms of the mindset that binds individuals to a specific course of action (e.g., committing to change or continuance of membership in the organization). Meyer and Allen (1984, 1990, 1991) reported that their confirmatory factor analysis showed a better fit of commitment to change to a three- factor model. Nonetheless, these three components of the construct of commitment are clearly distinct. Hence, a decision was taken to study the whole construct of commitment to change based on all the justification that were just demonstrated.

2.5 The extension of the Three Components Model: An Exploration of the Essence of Commitment to Change and Its Behavioural Repercussions

Meyer and Herscovitch (2002) extended the Three Components Model of commitment in various ways. They first applied their understanding of general commitment to commitment to change. In addition, they formulated the construct of behavioural support for change, which is composed of various behaviours, as will be discussed shortly. They found that behavioural support for change is an outcome of employees' commitment to change. They also found that each individual component of commitment to change (affective, normative and continuance) could trigger a different form of behavioural support for change.

Meyer and Herscovitch (2002) suggested that studying the behavioural outcomes of the single components of commitment to change leads to a more accurate understanding of employees'

behavioural support for change. Every individual who is committed to change tends to have a different commitment profile consisting of a mixture of the three components of commitment to change with different levels (Meyer & Herscovitch, 2002). For example, an individual could have a commitment profile that has high affective commitment to change (ACC), high normative commitment to change (NCC) and low continuance commitment to change (CCC). Such individuals are expected to achieve a high level of behavioural support for change because their profile is mainly based on affection and obligation. Although each commitment profile is expected to achieve a different level of behavioural support for change, all profiles must at least achieve a basic level of behavioural support for change.

The next section extracts the components of behavioural support for change and explains them in Figure 2 after illustrating and defining the main components of behavioural support for change. The impact of the individual components of commitment to change on behavioural support for change will then be discussed. A presumed re-conceptualization of the extension of the three components model will then be presented. The aim of this re-conceptualization is to explore the presumed conceptual impact of the construct of ethical leadership on commitment to change and behavioural support for change.

2.6 Delving into the Behavioural Outcomes of Commitment to Change: Employees' Behavioural Support for Change

Behavioural support for change is composed of various levels of support for change (Meyer and Herscovitch, 2002). *Discretionary behaviours* are the first behavioural category in behavioural support for change. A discretionary behaviour is a voluntary behaviour that occurs due to a person's discretion. It also has an enthusiastic and passionate nature that persuades people to make

sacrifices and make an extra effort. Discretionary behaviours represent the top level of behavioural support for change, which could either occur in the form of *cooperation* or *championing* behaviours. *Focal behaviours*, on the other hand, represent the basic level of support for change. Focal behaviours can either occur in the form of *compliance* or *mere compliance* behaviours. Compliance is the demonstration of the minimum level of support for any change initiative (Meyer & Herscovitch, 2002). This results from going along with the demands of change. Figure 2 demonstrates the components of the construct of behavioural support for change as follows:

Figure 2: An Exploration of the Construct of Behavioural Support for Change

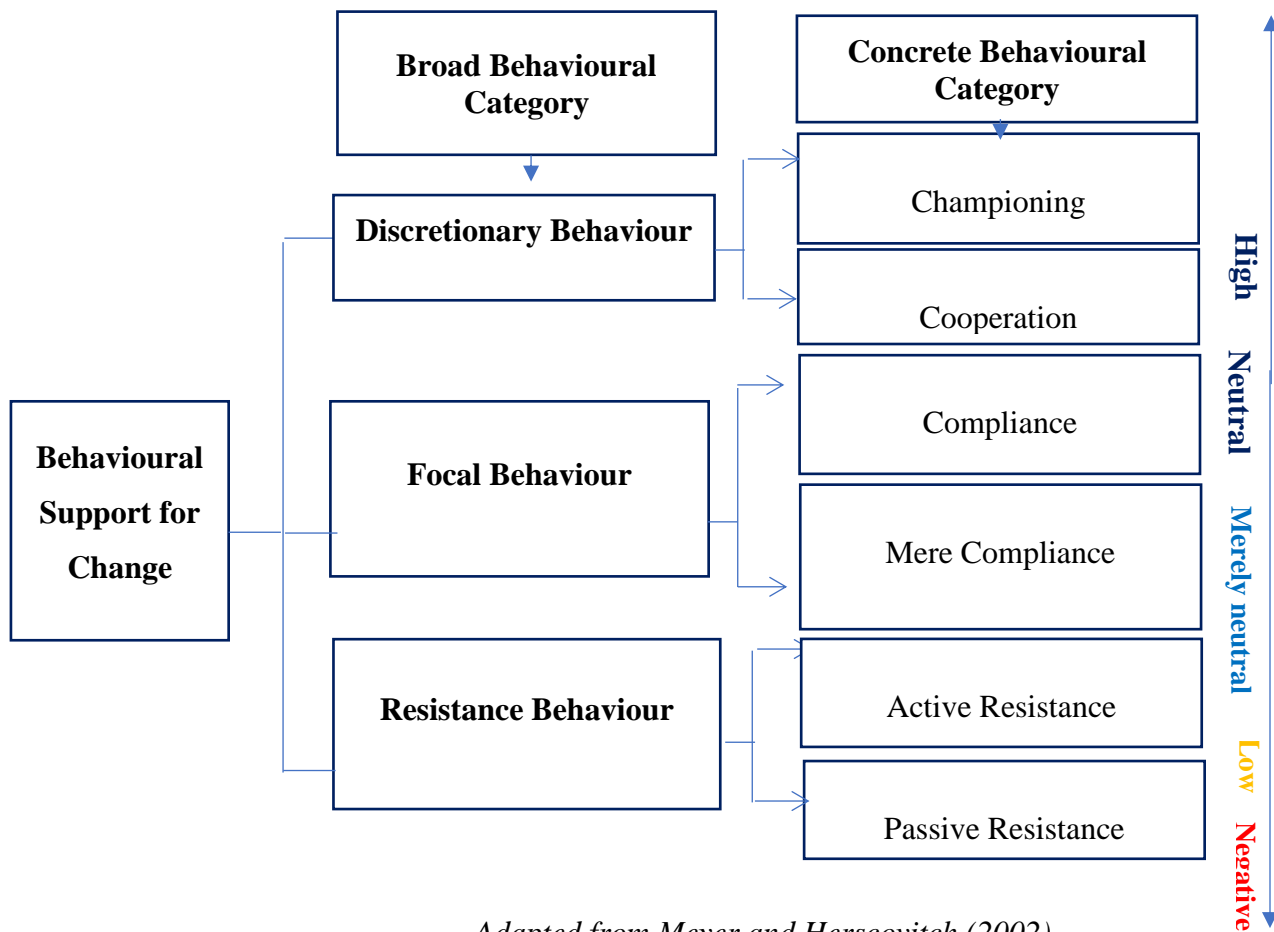


Figure 2 summarizes the components of the construct of behavioural support for change. It is adapted from the extension of the three components model where Meyer and Herscovitch (2002) presented various levels of behavioural support for change which are triggered by employees' commitment to change.

Discretionary behaviours represent the top level of behavioural support for change which any leader should aim to achieve as it ignites employees' championing desires. Discretionary behaviours may occur in the form of cooperation behaviours or championing (see Figure 2). Cooperation behaviours refer to "behaviours that involve going along with the spirit of the change and require modest sacrifices" (Meyer & Herscovitch, 2002, p. 476), while championing behaviours refer to any behaviour that demands personal sacrifices (Meyer & Herscovitch, 2002). They are also behaviours that promote, dignify and foment the value of change. This process of value boosting might target other organizational members or other outsiders. Championing is the top form of discretionary behaviours, whereas cooperation is the behaviour that leads to championing. Championing represents behaviours that demand personal sacrifice or are intended to promote the value of change in other employees or individuals outside the organization.

Focal behaviours represent the basic level of support for change (see Figure 2). Focal behaviours can either occur in the form of compliance or mere compliance behaviours. Compliance is the demonstration of the minimum level of support for any change initiative (Meyer & Herscovitch, 2002). This happens as a result of going along with the demands of change. Involuntary unenthusiastic compliance with the requirements of change exemplifies the nature of compliance behaviour. This form of compliance is diffident and indisposed in its nature, as individuals tend to engage in it without pleasure. Individuals who display this type of behaviour tend to blindly do what is required without doing any extra effort. Similarly, mere compliance

behaviour is a reluctant behaviour that aims to show less than the minimum level of support for change (Meyer & Herscovitch, 2002).

Resistance represents the third behavioural category in behavioural support for change. It clearly represents any form of resistance behaviours towards the ongoing change. It is composed of two forms of resistance behaviours. The first is active resistance, which refers to the demonstration of obstruction to a change by engaging in overt behaviour aimed at ensuring its failure (Meyer & Herscovitch, 2002).

Furthermore, passive resistance refers to the demonstration of covert or subtle behaviours aimed at holding back the success of change (Meyer & Herscovitch, 2002). Although both behaviours might first seem relatively similar, there is a major distinction between them. In fact, the announcement of opposition through engagement in an apparently overt behaviour acts as a catalyst for the detection of employees' resistance to change. The detection of resistance occurs due to the overt nature of active resistance. In contrast, passive resistance occurs in a covert manner. Hence, its detection and treatment are problematic, and it can lead to the failure of change. Figure 2 also shows that the construct of behavioural support for change is composed of various levels. The behavioural support for change continuum on the right-hand side of Figure 2 is intended to serve as a measurement scale for behavioural support for change. For instance, mere compliance represents a form of focal behaviour as it represents the minimum level of behavioural support for change. Meyer and Herscovitch (2002) found that any form of commitment to change would at least stimulate a compliance to change. Discretionary behaviours, however, are triggered by affective commitment, whereas focal behaviours are stimulated either by normative or affective commitment and compliance and mere compliance are mainly triggered by continuance commitment.

2.7 The Behavioural Repercussions of Ethical Leadership and its Expected Influence on Behavioural Support for Change

Ethical leadership is assumed to have a direct positive influence on behavioural support for change for various reasons. It has been positively related to organizational citizenship behaviour (Mayer et al., 2009; Kacmar et al., 2011; Avey et al., 2011; Resick, 2013). It also has a positive impact on discretionary behaviour, which represents the extra voluntary work effort which is close to the nature of the top level of behavioural support for change (Zhang et al., 2013; Resick et al., 2013; Eisenbeises & Van Knippenberg, 2015). In addition, ethical leadership relates positively to employees' voice behaviour which is a positive organizational behaviour that occurs when employees actively express their opinions and actively participate in the decision-making process (Walumba & Schaubroeck 2009; Chan, 2014; Bedi et al., 2015).

Change was not incorporated into these studies. Nonetheless, they all tested the impact of ethical leadership on various positive workplace behaviours. Ethical leaders are expected to have a greater impact on their followers' attitudes and behaviours during times of change for various reasons. Leaders' ethics matter during times of change for two reasons. First, it is reasonable to argue that the uncertainty and pressure associated with change might result in leaders giving up their moral values. Second, the fairness and justice of leaders during times of change trigger more trust because fair leaders tend to involve their subordinates in change (Morgan and Zeffane 2003; Li, 2005).

Leaders should also shape the perception of their followers on change and its necessity. Being an ethical leader may result in subordinates being readier to accept the impact of change on their personal lives and their organizations. Unethical leaders may threaten employees' acceptance of

news related to change that they are unwilling to receive (e.g., layoffs and restructuring). Unethical leaders may trigger negative psychological and behavioural reactions to change because they will not be perceived as credible role models by their subordinates. Ethical leaders involve their subordinates in the decision-making process because they are people-oriented (Brown & Triveño, 2006; Kalshoven, 2011, 2013). Participation and involvement during organizational change allows employees to feel empowered and to express their opinion (Fedor et al., 2006). It also enhances employees' sense of control during times of change (Morgan and Zeffane, 2003). The previous theoretical discussion on the behavioural repercussions of ethical leadership and the nature of ethical leadership enables us to formulate the first research hypothesis as follows:

H1: Ethical leadership is positively related to behavioural support for change (i.e. the more ethical the leader is, the more their subordinates support change).

H1 is mainly supported by the social learning mechanisms of ethical leadership which should presumably motivate subordinates to react positively to organizational changes through an effective reinforcement process. This hypothetical positive effect could also be more applicable in the context of highly uncertain changes taking place in turbulent macro environments, as subordinates would tend to follow moral and credible leaders during times of uncertainty (Li, 2005). Kalshoven et al., (2011) characteristics of ethical leaders are also expected to act as catalysts to the formulation of the positive impact of ethical leaders on their subordinates psychological and behavioural reactions to change. Fairness, for instance, power sharing, role clarification, ethical guidance, people orientation, concern for sustainability, and integrity are examples of ethical behaviours that should generate more trust during uncertain times and could have a great positive influence on the efficiency of the social learning process. There are more solid results from a few

studies that have tested the impact of ethical leaders on their followers' psychological and behavioural responses to change which are summarised in figure three next page.

Figure 3: Towards a Reconceptualization Process of the Extension of Three Components Model

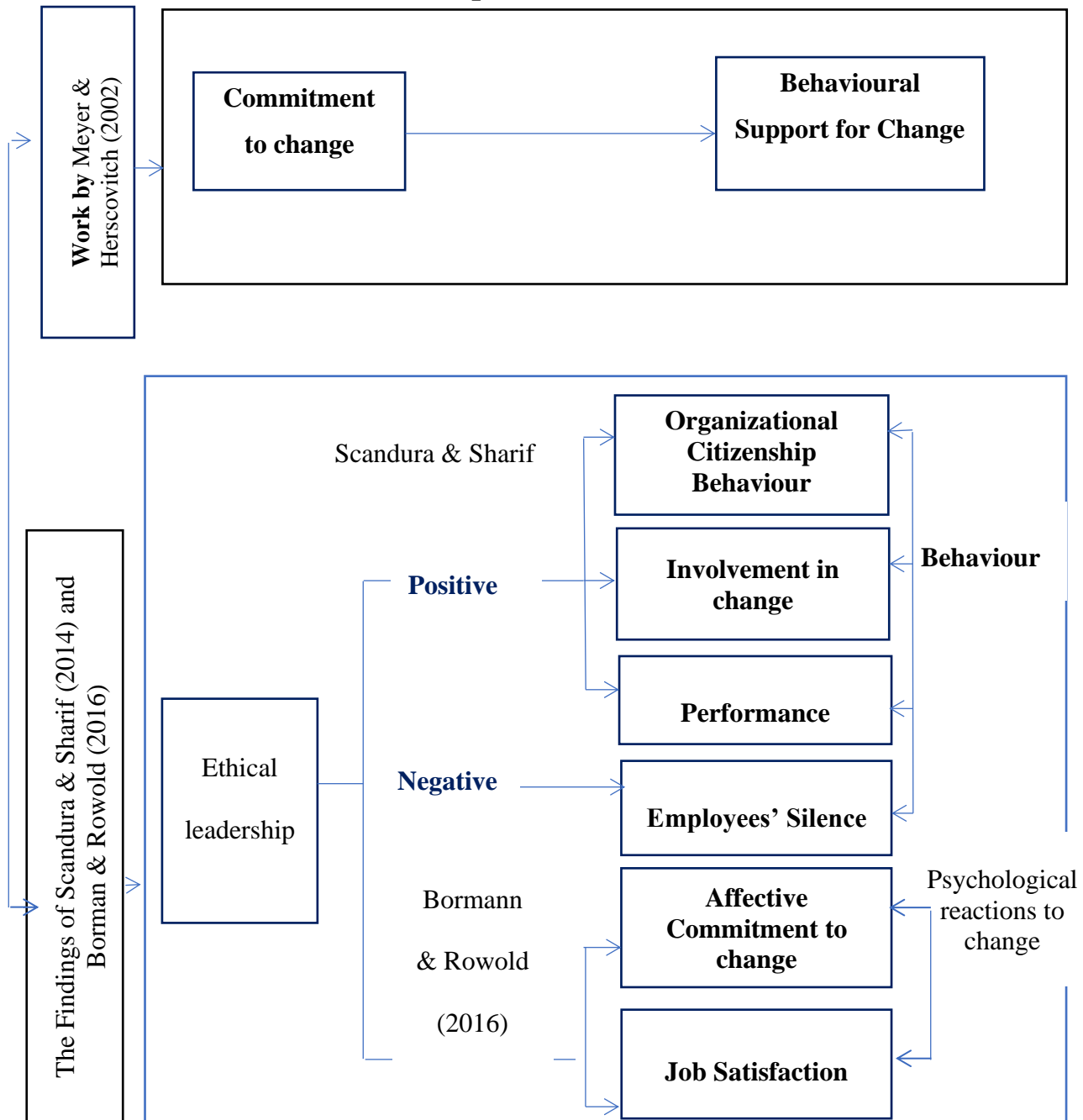


Figure 3 summarizes the presumed re-conceptualization of the work by Meyer and Herscovitch (2002), by incorporating ethical leadership into their extension of the three components model (ETCM). Figure 3 also shows there is a positive relation between ethical leadership and affective commitment to change, which is a positive psychological reaction to change (Roman & Rowold,

2016). This means that the presumed positive relation between EL and the three forms of commitment to change is possible. Moreover, Figure 3 also shows that EL is positively related to various positive change responses such as OCB and involvement in change (Scandura & Sharif, 2014). EL is also negatively related to employees' silence during organizational change (Roman & Rowold, 2016). Silence is a negative behaviour that leads to a lack of involvement in on-going change. Indeed, these findings suggest that the presumed positive impact of ethical leadership on subordinates' behavioural support for change is possible either directly or indirectly via the intervening effect of commitment to change. This discussion leads us to the second, third and fourth hypotheses of this study as follows:

H2: Ethical leadership has a positive influence on subordinates' commitment to change.

This study also builds on Meyer and Herscovitch (2002) extension of the three components model which was demonstrated in this chapter as it presents a positive a positive relationship between commitment to change and behavioural support to change which is considered as the mean psychological reaction to change triggers behavioural support for change (Meyer & Herscovitch, 2002). This study, therefore, presumes that the relationship between ethical leadership and behavioural support for change could be mediated by subordinate's commitment to change which is the major psychological trigger to subordinate's behavioural support for change (Meyer & Herscovitch, 2002). This study, consequently, presents a mediation effect which is divided into indirect relationships which would fulfil the mediation requirements of Baron and Kenny (1986) if accepted. The third and the fourth hypotheses are presented below as follows:

H3: Subordinates' commitment to change is positively related to their behavioural support for change.

H4: The positive effect of EL on subordinates' behavioural support for change is mediated by their commitment to change.

2.8 Delving Into the psychological perception of "Uncertainty"

Uncertainty is a psychological state that tends to be triggered by change (Bordia et al, 2004 and Kotter, 2008). It could be simply defined as *"the inability of individuals to make accurate predictions regarding any matter"* (Milliken, 1987). There are many triggers to this psychological state. For instance, it could occur due to lack of information (Berger & Calabrese, 1975). Further, ambiguity and contradictory information are two major stimulants of uncertainty (Putnam & Sorenson, 1982). These triggers lead to a sense of doubt about the future (DiFonzo & Bordia, 1998). This sense of doubt is a major specification of uncertainty according to DiFonzo & Bordia (1998). It may also be described as the operating mechanism of uncertainty that psychologically affects individuals negatively.

Uncertainty is a major cause of change resistance (Kotter, 2008). Effective uncertainty management might, consequently, be the first step towards gaining employees' support for change. There are various stimulants to uncertainty. The form and types of uncertainty are functions of its triggers. The causes of uncertainty during organizational change are summarized in Figure 4 next page, according to Buono and Bowditch (1989); Jackson et al. (1987) and Bordia et al., (2004).

Figure 4: Uncertainty Typologies

Types of Uncertainty	Level	Stimuli of These Feelings of Uncertainty
Strategic Uncertainty	Organizational Level	-Reasons for change, direction of the organization, environmental trigger such as policies
Structural Uncertainty	Group Level	Change in working structure and reporting lines. Organizational restructuring
Job Uncertainty	Individual Level	Uncertainty about job role, promotion opportunities and job securities

Figure 4 aims to illustrate the typologies of uncertainty perceptions according to Bordia et al., (2004). Strategic uncertainty is the first type. Strategic uncertainty refers to the inability to make precise predictions concerning organizational-level issues. Bordia et al., (2004) argued that such issues might include the reasons for change, future direction of the organization and the nature of the future business environment of the organization. The absence of a clear vision about organizational future direction is a major trigger of uncertainty (Milliken, 1990; Desveux, 1994; Kotter, 1996, 2008; Sias & Wyers, 2001). Kotter (1996) has linked the absence of a clear strategic direction to the inattentiveness of leadership. This refers to the uncertainties arising from the change in the internal mechanisms and structures of different working organizational units. Organizational restructuring is a major trigger of this form of uncertainty as it always involves a change in reporting lines, working processes and team-based restructures (Buono & Bowditch, 1989). Job-related uncertainty refers to the uncertainty regarding changes in role specifications, promotion and rewards, job security and any other sources of job-related uncertainties. Indeed, job related uncertainties have been widely discussed in the literature (Bastien,1987; Schweiger &

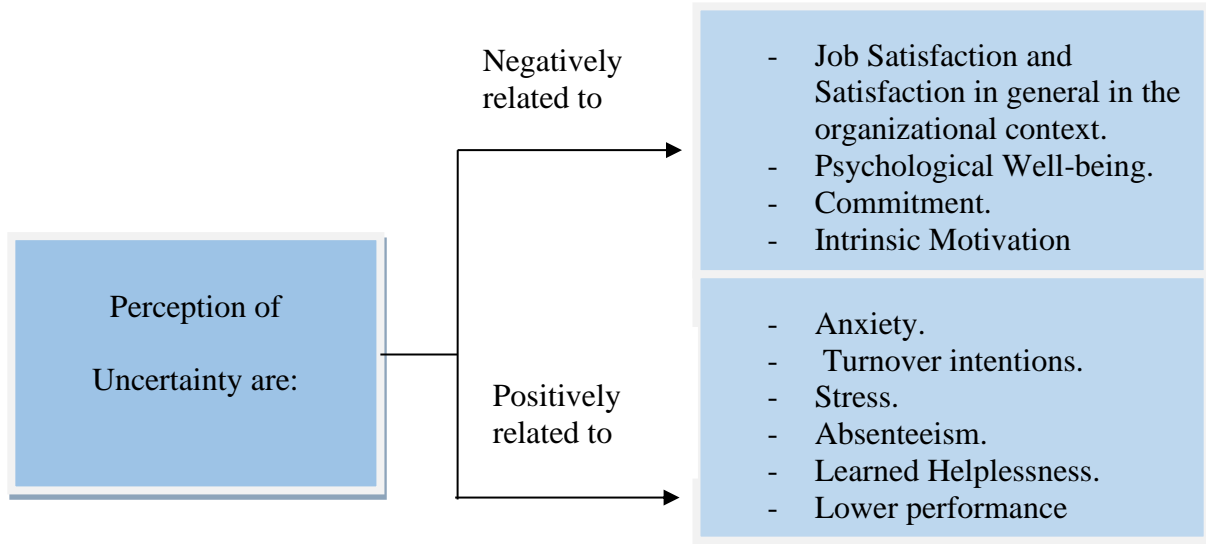
Denisi, 1991; Di- Nelson et al., 1995; Fonzo & Bordia, 1998; Maurier & Northcott, 2000; Ito & Brotheridge, 2001; Bordia et al., 2004).

The three forms of uncertainty are interdependent just like most organizational operations and processes (Jackson et al., 1987). Figure 4 illustrates this interdependence through the arrows connecting the different forms of uncertainties. Jackson et al., (1987) portrayed the interdependence between strategic, structural and job-related aspects of organizations as a nested subsystem where its sub-components might lead to each other. The arrows in Figure 4 are in two directions; they do not refer to a causal relation but, rather, aim to express the nested nature of the three forms of uncertainties. Yet, this does not mean there is no causal effect between these three forms of uncertainties. This causal effect, however, has a bottom-up nature. Consequently, strategic uncertainties might lead to structural uncertainties and job-related uncertainties. Similarly, structural uncertainties may lead to job-related uncertainties. Nevertheless, job-related uncertainties cannot lead to strategic uncertainties.

2.9 The Negative Repercussions of Uncertainty

Uncertainty has a significant negative effect on psychological well-being and on positive workplace attitudes. The consequences of change-related uncertainties are summarized in Figure 5 as shown next page.

Figure 5: Negative Consequences of Uncertainty



Adapted from: (Ashford, 1988; Greenhalgh & Sutton, 1991; Schweiger & Denisi, 1991; Jackson et al., 1995; Hui & Lee, 2000)

Figure 5 aims to summarize the negative repercussions of uncertainty according to mainstream literature. Uncertainty has a negative influence on individuals' psychological well-being, while having a positive link with stress (Ashford, 1988; Pollard, 2001; Schweiger & Denisi, 1991). It also has a positive association with turnover intentions (Greenhalgh & Sutton, 1991; Johnson, Bernhagen, Miller, & Allen, 1996). In addition, it is positively related to absenteeism and lack of intrinsic motivation (Hui & Lee, 2000), learned helplessness (Martinko & Gardner, 1982), and lower performance (Bazerman, 1982; Orpen, 1994; Jimmieson & Terry, 1999). Moreover, it is negatively correlated with job satisfaction (Ashford, Lee, & Bobko, 1989; Nelson, Cooper, & Jackson, 1995).

It also has a negative impact on organizational commitment (Ashford et al., 1989; Hui & Lee, 2000) and trust in the organization (Schweiger & Denisi, 1991). Commitment is a psychological

force that tends to have the same nature regardless of the target of commitment (Meyer & Herscovitch, 2002). This means that uncertainty could also be negatively related to commitment to change, which would be like organizational commitment in terms of nature.

The negative repercussions of uncertainty are mediated by the absence of control that tends to be attached to uncertainty (Lazarus & Folkman, 1984; Bordia et al., 2001; DiFonzo & Bordia, 2002). Control refers to people's belief that they can affect change in the environment and affect its direction (Greenberger & Strasser, 1986). Indeed, people tend to suffer from lack of control during any change. Nevertheless, this lack of control is expected to be higher when employees have no control over their internal and external environments because external environments have an influence on internal operating environments (Dawson, 2003). Hence, the level of employees' uncertainty would be higher in organizations witnessing highly uncertain changes.

The negative repercussions of uncertainty are mediated by the absence of control that tends to be attached to uncertainty (Lazarus & Folkman, 1984; Bordia et al., 2001; DiFonzo & Bordia, 2002). Control refers to people's belief that they can affect change in the environment and affect its direction (Greenberger & Strasser, 1986). Indeed, people tend to suffer from lack of control during any change. Nevertheless, this lack of control is expected to be higher when employees have no control over their internal and external environments because external environments have an influence on internal operating environments (Dawson, 2003). Hence, the level of employees' uncertainty would be higher in organizations witnessing highly uncertain changes.

The lack of knowledge about current or future events represented by uncertainty undermines our ability to control such events (Bordia et al., 2001). These feelings of paralysis and helplessness lead to critical negative consequences (see Figure 2). The negative repercussion of uncertainty summarized in Figure 5 may lead to a resistance to change. Nevertheless, uncertainty could still

be linked to various positive outcomes in the presence of ethical leaders because they are role models who can affect their follower's cognition via social learning (Bandura, 1977; Brown & Triveño, 2006). Ethical leaders can motivate their subordinates to see uncertainty as an opportunity rather than a threat, using their behavioural reshaping skills to re-shape the behaviour of their subordinates during times of uncertainty. Consequently, ethical leaders are role models who can use their behavioural reshaping skills not just to promote ethically desired behaviour but, rather, any desired behaviour (Bandura, 1977; 1978).

Ethical leaders could change their followers' perceptions about uncertainty in various ways. They must first act as role models who perceive uncertainty as an opportunity to learn new skills. From a social learning perspective, their followers would emulate their behaviour after words (Bandura, 1977). Clear behavioural standards during times of uncertainty could be established in cooperation with subordinates. Ethical leaders are people-oriented and are expected to set standards that fit with their followers' abilities during uncertain changes (Kalshoven et al., 2011, 2013). Followers are expected to be informed in advance about the positive outcomes of their positive behaviour to ensure a high level of motivation and persistence (Bandura, 1977, 1978). Followers could also be taught to set clear performance standards to themselves to be able to feel the self-induced pleasure of achieving their own targets (Bandura, 1977).

This cognitive reshaping process is possible, as people tend to follow leaders who show integrity during uncertain times (Li, 2005). Uncertainty could be an opportunity in the aftermath of this presumed successful cognitive reformation. Uncertainty may, accordingly, trigger employees' support for change psychologically (via commitment to change) and behaviourally through the occurrence of a behavioural support for change. This discussion shall lead us to the presentation of the fifth research hypothesis as follows:

H5: Subordinates' level of perceived uncertainty (LPU) positively moderates the positive relationship between ethical leadership (EL) and subordinates' behavioural support for change (behavioural support for change).

Research hypotheses will be visually presented in a theoretical model shortly. Figure six will summarize the direct relationships between variables. Whilst, figure seven mainly aims to summarize the main indirect effects of the theoretical model.

Figure 6: Theoretical Model

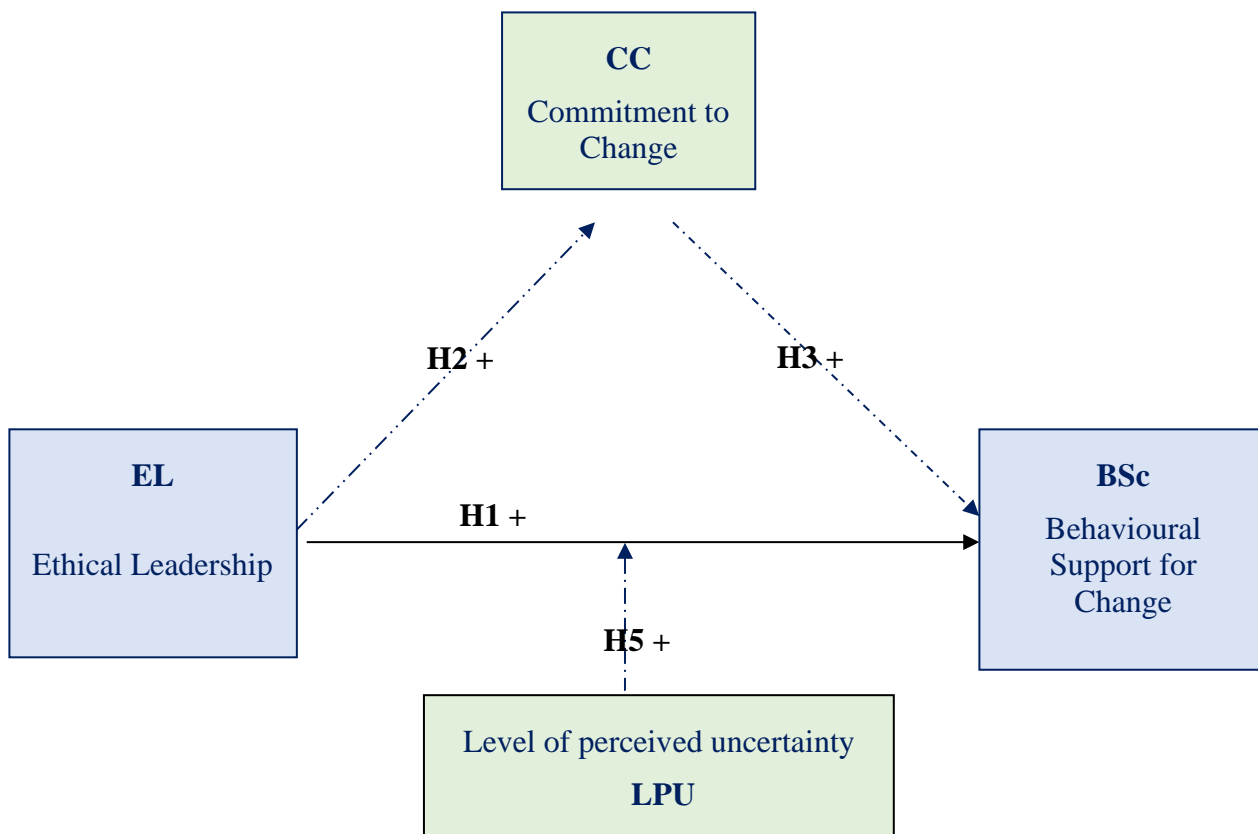


Figure 7: Indirect Effects Model

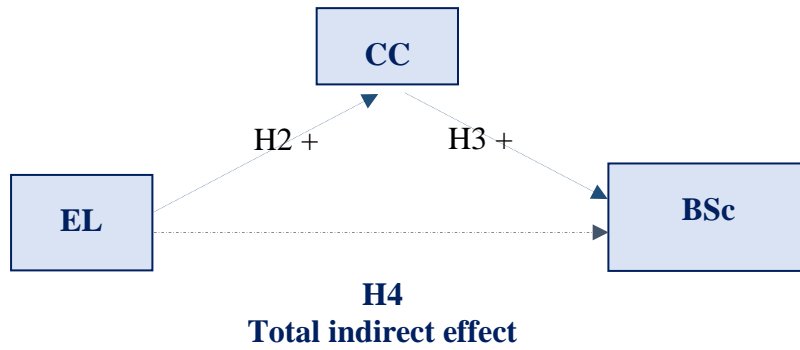


Figure six and seven aimed to summarize the research hypothesized of this PhD study. Direct relationships were presented in figure six, whereas, the indirect ones were illustrated in figure seven. The summation of H2 and H3 in figure seven represents the total presumed mediation effect. Chapter four will present the observed model of this study, which will present the results of the hypotheses testing.

Chapter 3: Research Methodology

3.1 Introduction

This chapter discusses the main research design, approach and strategy of this study. The context of the research is presented as well as the sampling technique and data collection procedures. Various procedures are highlighted in the data collection section, which were useful in reducing the occurrence of a common method bias as well as other biases. Furthermore, more details on the measures that were used are also mentioned in the measures section. Finally, the sample size is calculated in this chapter and the sampling criteria are also briefly illustrated.

3.2 Research Design

A survey research with a *multi-source cross sectional-dyadic design* was used for this study. Thus, the study has a multi-dimensional design as it adapts three forms of design that are compiled and combined with each other. Firstly, survey research was used for sampling data from respondents that are representative of a population and uses a closed-ended instrument or open-ended items (Williams, 2007). Survey research is used to:

“answer questions that have been raised, to solve problems that have been posed or observed, to assess needs and set goals, to determine whether or not specific objectives have been met, to establish baselines against which future comparisons can be made, to analyse trends across time, and generally, to describe what exists, in what amount, and in what context.” (Isaac & Michael, 1997, p. 136)

A survey is a data collection tool for carrying out survey research (Pinsonneault and Kraemer, 1993). Importantly, this research was conducted using a dyadic design. Dyadic research is where the participants of the study are paired together in the form of dyads or bonds and where the research observations refer to two or more individuals bonded together within a social and/or an organizational context (Kenny, 1990). Non-independence is the main characteristic of dyadic designs since the responses of people who are bonded together must be matched because both parties tend to be assessing each other (Kenny, 1990). This implies that leaders and their subordinates assess each other, which reduces the risk of self-rating measurement tools when this design is adapted (Podsakoff, 2003). The dyadic nature of data facilitated the adoption of a multi-source design, which was also combined with survey design based on the recommendations of Podsakoff (1996, 2003) and Meyer and Herscovitch (2002). The dyadic design was essential to respond to the research questions as it enables researchers to match the responses of two parties together. It is, consequently, crucial to studying the impact of ethical leadership on the other research variables.

3.3 Research Approach

A research approach can either be deductive or inductive. Deductive theory represents the commonest view of the nature of the relationship between theory and research (Bryman, 2004). Using a deductive approach implies that the researcher's hypotheses are based on what is known from theory about that research area; the research hypothesis should subsequently be subjected to an empirical examination. The deductive approach reflects positivists' view of science and knowledge (Bryman, 2004). Positivists suggest that social sciences should follow the deductive approach, which was successfully used for natural sciences (Gill and Johnson, 2002; Crotty, 2003). However, an inductive approach was introduced to reflect interpretivists' criticisms of positivists.

This study is mainly based on deductive theories, where deduction was useful in testing the applicability of existing theory to the case of Egypt, which represents the empirical context of this study.¹This study tends to use mainly deductive thinking. The research idea was generated by reviewing available theory about ethical leadership. This was extended to include the impact of ethical leaders on their organizations and their ability to influence their subordinates' commitment to change as well as other positive psychological and behavioural change reactions. This was useful in building a set of hypotheses that will be tested to investigate their applicability to the case of Egypt.

3.4 Research Strategy

The research strategy is a general plan of how the researcher will go about answering the research question(s) and achieving the research objectives (Saunders et al, 2000). Saunders et al., (2000) explains that a research strategy is concerned with the overall approach the researcher adopts. It reflects the fact that the researcher has thought carefully about the justification of employing a research strategy. Two research strategies are discussed in the literature: qualitative and quantitative. *Quantitative* and *qualitative* research methods investigate and explore the different claims to knowledge and both methods are designed to address a specific type of research question.

While the quantitative method provides an objective measure of reality, the qualitative method allows the researcher to explore and better understand the complexity of a phenomenon (Williams, 2007). This study relied mainly on quantitative strategy. Nonetheless, a qualitative strategy was

¹ Induction was also used during the exploratory pilot studies in all the organizations and during the interpretation of the quantitative data and various issues that were particularly related to the Egyptian environment and culture.

also used to support the quantitative data. Quantitative research creates meaning through objectivity revealed in the collected data. The data collected for this study was mainly numerical. The questionnaires used for data collection included closed-ended questions which produce numerical data. The aim of using questionnaires with these types of questions was to minimize the influence of the researcher in the data collection phases and to collect objective data.

Additionally, two pilot studies with a limited number of participants were conducted to test the scales via collecting preliminary data (Teijlingen & Hundley, 2001). These tests served to qualitatively explore the nature of the ongoing changes in the chosen organizations during the selection process. Because an Arabic version of the instrument was used, it was initially distributed to a small sample to capture potential ambiguous and confusing questions in the Arabic translation, delete and/or modify items or sentences if necessary. We also measured the time that was necessary to complete the survey. Improvement of consistency could also happen through a careful revision, re-wording and/or re-scaling process of any questions that were not answered as expected. Several focus groups were in parallel formulated to discuss with participants their perceptions about questions. Their feedback was crucial to the simplification of the Arabic translation, simplification of the Likert scales and in terms of the questionnaire design the whole questionnaire.

3.5 Sampling and Data Collection

The study was conducted in the Egyptian healthcare sector, which is currently being reformed by the Egyptian Ministry of Health. Selected hospitals were all from the non-profit health sector and they are all operated by NGOs. The data was collected from medical units witnessing a big

scale of change that was triggered by different micro and macro forces. Meetings conducted with several managers in different healthcare organizations indicated that the most common type of organizational change taking place was process re-engineering aimed at improving the quality of operations and, accordingly, the quality of service. The following sections discuss details of the sample and methods of data collection. A purposive "informant" sampling technique was used to formulate the final research sample (Allen, 1971). The following steps were taken in accordance with Allen's (1971) informant sampling criteria.

3.6 Setting criteria for the selection of informants

The main aim of this study is to assess the positive effect of ethical leaders in the medical sector on their subordinates' behavioural support for changes that are perceived as highly uncertain from a macro and micro perspective. This study argues that ethical leadership can overcome the side effects of change uncertainty, which hinders the success of change efforts. Uncertainty is expected to have a major role in inhibiting commitment to change and behavioural support for change. The presence of ethical leadership is the main condition for the generation of these positive outcomes from the subordinates' change uncertainty. **Various criteria were taken into consideration as follows:**

a) Research Context

The decision to conduct the study in Egypt was taken for two reasons. Firstly, there is a gap in terms of ethical leadership studies in the Middle East region, which is one of the most crucial business environments worldwide (Resick, 2013). Secondly, Egypt was witnessing an extremely high level of macro-environmental uncertainty due the recent political uprisings in the country. Macro-environmental changes have a prominent effect on microenvironments

(Dawson, 2003, 2003). Hence, a focus was placed on Egypt to test the impact of the expected high uncertainty levels of employees on their psychological and behavioural responses to change in the presence of ethical leadership.

b) Criteria of Informants' Selection

Attention was given to critical medical specialties that are naturally characterized by job uncertainty. The main target was to choose participants who are daily required to deal with severe medical cases and highly uncertain working conditions. Informants with the following specialties were selected after conducting various interviews with hospital managers during the exploratory pilot study in the medical centres: heart surgeons, cancer surgeons from all specialties, ICU specialists in heart surgeries and cancer centres and emergency room specialists. The interviews with hospital managers revealed that technical workers and administrators are crucial to the performance of any medical team. Thus, the decision was taken to include medical team secretaries and technical specialists. Nurses also were included in the sample.

c) Selection of Sector

The health sector in Egypt was selected to apply the empirical study. This sector was chosen because it fits with the previously decided criteria. Various exploratory pilot studies were conducted in diverse organizations from different sectors with managers and a small sample of employees to explore the nature of the organization and to identify the types of organizational change taking place (if any).

The main criterion was to choose a sector experiencing a large-scaled organizational change announced by the government. Other criteria included the possibilities of data access in the sector and gaining approval from top management to survey their staff. Furthermore, the aim

was to choose a sector that could be characterized by a relatively high rate of various forms of perceived uncertainty, tough working conditions and an unstable working environment. In addition, the intention was also to choose a sector where its staff could be suffering from an evident rate of perceived uncertainty due to the turbulence of their external operating environment.

A decision was taken to apply the empirical study in the non-profit health sector in Egypt for various reasons. First, a national health reform project has recently been initiated in Egypt. This reform represents a clear example of an ongoing large-scale organizational change being conducted by the Egyptian Ministry of Health (MOH). This health reform project is currently being conducted all over the Egyptian health organization to improve the quality of medical service and reduce the waiting lists for surgeries. Furthermore, a new national health insurance system has been approved by the Egyptian parliament, requiring a total health reform prior to the introduction of the new health insurance services.

A decision was taken to focus specifically on the non-profit health sector for various reasons. Firstly, this sector is based totally on charity funding collected from Egyptians to offer a free service to citizens that are not covered by health insurance. This sector, consequently, is witnessing greater financial instability, which could be a trigger for more perceived uncertainty. All the hospitals belonging to the sector are involved in continuous expansion to increase their capacity gradually through donations. This means that there is a better chance that this change could be the source of a higher level of perceived ongoing changes by medics. Medical centres specialized in treatment of critical medical cases were selected, to fit with the criteria of sample selection that were previously set. Hospitals specializing in cancer surgeries and transplantation surgeries were, consequently, selected after having conducted various interviews with doctors

in the Ministry of Health in order to learn about the nature of all medical specialities that could be much more associated with a higher rate of uncertainty.

A successful case study in this organization is the MYHF (Magdi Yacoub Heart Foundation), which has been chosen by the government as a role model to be followed as closely as possible during the reform. This organization also has a world ranking and its founder is considered an ethical role model worldwide. These were good reasons to choose the sector where the MYHF is operating and where a relatively expected higher rate of perceived ethical leadership is expected to be found. Finally, it could be reasonable to argue that the percentage of perceived ethical leadership in the sector could be considerably higher due to their ethical organizational values, missions and visions.

d) Research Setting

Various semi-structured interviews were conducted with various NGO operated health organisations in Egypt to identify the forms of the ongoing changes and their nature. Priority was given to non-profit health organisations that specialise in severe medical specialities which could be a major trigger to higher level perceived job uncertainty. The second criteria was to choose health organisations which suffer from funding problems, which was the main reason why the non-profit health sector was chosen (see- more information about the selection of this sector in the sector selection section earlier in this chapter). Another major criterion was to choose non-profit health centres that have intensive care units which its staff is a major target of this study (see the participants section in this chapter). Furthermore, all these centres have been financially affected by the political turbulence in Egypt and they are following the steps of the Magdy Yacoub Hearth Foundation in Egypt, which is a world ranked cardiac centre in

Egypt. Choosing similar organisation in the same sector could be helpful to transmitting the take home lessons of from Magdy Yacoub Heart Foundation to other organisations specially that this heart foundation is mainly operates via ethical leadership is main managerial operating tool. On the other hand, these centres have also granted an easy data access which is a major challenge at any social science research and this was one more reason for choosing them.

Medical centres which fit with the criteria were selected. Access was given to the following centres:

- Sir Magdi Yacoub's Heart Foundation in Upper Egypt;
- Children's Cancer Hospital 57357;
- El Fayoum City Cancer Centre;
- Ghoneim's Renal Cancer Centre in the Delta Central Region of Egypt;
- Helwan's Cancer Hospital in Cairo;
- El Arish Hospital in Sinai Peninsula;

The health sector in Egypt consists of public hospitals that are operated by the Egyptian ministry of health, private ones that mainly aim to achieve profit and the non-profit NGO sector which is totally managed by Egyptian NGOS. All the selected organizations of this study share common values, mission and objectives where they aim to provide a respectful health service to every single Egyptian for free. They all endorse collectivism and the belongingness to Egypt to convince Egyptians to participate in the development of the country by donating to them.

3.7 Sample size

The main counting unit of the sample was the number of leaders. The sample size was counted via easy sample software, version 1.0.2. The following steps were taken as shown in **Figure 8** as follows:

Figure 8: Sample Size Calculation Process Via Easy-Sample

Field	Value
Population Size	10000
Expected Error Rate	4 %
Desired Precision Range (+-)	2 %
Desired Confidence Level	98.0 %
Required Sample Size	493.863

Figure 8 is intended to summarize the following:

1. **The population size** of the medical staff of the medical NGO Sector in Egypt is over 10,000, based on the interviews that were conducted with hospital managers who are also employed by the Egyptian ministry of health.
2. **Expected Error Rate:** This is an estimate of the percentage of items that do not meet the attribute test or tests defined. It must be an integer or decimal number greater than 0 and less than 100. The error rate has to decrease to the minimum possible level to guarantee a higher level of accuracy.

3. **Desired Precision Range (+-):** The acceptable percentage variance (plus or minus) in the Desired Confidence Level. A Desired Precision Range of 2% for a sample with a 95% confidence level means that the sample will reflect the characteristics of the entire population with a certainty of between 93% and 97%. It must be an integer or decimal number greater than 0 and less than 100. A very high precision level was taken into consideration during the calculation process, as shown in the figure.
4. **Desired Confidence Level:** This is the degree of certainty that the sample's characteristics will reflect the characteristics of the entire population; a measure of accuracy. A very high confidence level was also chosen during the calculation process as shown in the figure.
5. **Required Sample Size:** This refers to the number of leaders to be selected during the field study, which is 494, as shown in figure 8. Following the design proposed by Kalshoven et al., (2013), up to three subordinates per leader in the same organizational level were chosen; a minimum number of 500 subordinates is required. The software uses the Attribute Sample Formula, which is illustrated below: $S = Z^2 * N * E (1 - E) / [(A^2 * N) + (Z^2 * E (1 - E))]$ where **S** = required sample size; **Z** = Factor for the desired confidence level; **N** = Population size; **E** = Expected error rate, and **A** = Precision range. The main target was to have at least 500 leaders with at least one subordinate below each one (which would give a total sample size of at least 1,000 respondents).
6. **Sample characteristics:** The final sample size was 500 leaders with one to three subordinates below each leader represented in a total number of 600 employees. A

total of 58% of leaders were males and 42% were females. Of these leaders, 56.8% had an MD (medical doctorate) while 43.2% had an MD and RCOG (British Royal College Membership). In addition, 63.6% of them were heads of department, while 36.4% were heads of units. Of the subordinates, 56% were males and 44% were females. Moreover, 30.9% of subordinates were resident doctors, 19.2% senior doctors, 20.5% consultants. Nurses accounted for 19.6% and technical and administrative assistants represented only 9.8% of the sample.

3.8 Data Collection and procedures

Firstly, two questionnaire versions were used for leaders and subordinates (Podsakoff, 2003; Kalshoven & Boon, 2011, 2012). This procedure was a major outcome of having adapted a multi-source design (Podsakoff, 2003, 2012). Secondly, individual level dyadic data was collected from various medical teams in the same hierarchical level. Thirdly, data was collected over three different points in time (Podsakoff, 2003; Walumba, 2009) separated by approximately two weeks. The independent, mediating, and dependent variables were each measured separately over three points in time in accordance, with Podsakoff's (2003, 2012) guidelines to manage the risk of common method variance. The common method variance could occur due to interrelation of two variables or due to using self-reported measures (Podsakoff, 2003).

Hospital managers were asked to *randomly* select up to three participants in each department/unit. The names of selected participants were shared with heads of departments (or units) to ensure that they were aware of their change-related behaviour. Respondents were told that putting their name on the survey was voluntarily. They were guaranteed data was going to be

used for academic purposes only and that their name was going to facilitate the matching process of their questionnaires with their leader ones.

Focus groups were created during the pilot study with a sample of participants, to ascertain their feedback about the first version of both questionnaires. The translation of various items was unclear to various participants because they thought that their background information should remain confidential. The sequence of questions was amended based on participants' comments during the focus group. Furthermore, background questions were put at the end of the questionnaire based also on participants' advice, which was for cultural reasons. Various other procedures were also introduced in the second and third pilot studies, which have led to having relatively fewer missing answers in comparison with the first study. These procedures were later adapted in the final design of this study.

Various other procedures were undertaken in accordance with Podsakoff (1996, 2003, 2012) to manage the risk of common method variance. Confidentiality, for instance, was guaranteed in instructions and in the supporting letter from the management. This procedure encourages respondents to respond sincerely and it treats the drawback of self-measures used to measure indirect effects (Meyer & Herscovitch, 2002). Moreover, an accurate and a simplified explanation was made orally and in the consent letter. The impossibility of their responses being shared with their leaders was also stressed. This procedure aimed to act as a preventive remedy to the low-self-efficacy method bias (Podsakoff, 2012). This bias tends to occur when participant's responses do not reflect their real feelings due to a lack of self-confidence (Podsakoff, 2012).

Furthermore, the importance of accuracy and conscientiousness was stressed. This was essential to motivate respondents to carefully weigh alternatives prior to responding (Podsakoff, 2012).

Additionally, neither the researcher nor leaders were present during the survey to address the risk of any possible *social desirability bias* (Bowling, 2005). Management also stressed that participation was voluntary, orally and in their supporting letter. This acted as a remedy to the *forced participation bias*, which might have triggered a desire to rebel if participants had felt forced (Brehm, 1996). Moreover, data was collected at two points in time separated by approximately four weeks. This was useful to manage the risks of the social desirability bias and common method bias.

3.9 Questionnaire Design

Questionnaires were subjected to various rounds of amendments during the pilot studies until they reached their final form. All scales had already been translated to Arabic for respondents from Egypt using the back-translation method proposed by Breslin (1980). This was essential for the sake of achieving an accurate understanding of items by respondents whose mother tongue is Arabic. The items of the dependent variable (behavioural support for change) were also transformed from self-measurement to supervisors' rating scales. This addressed the design weakness reported by Meyer and Herscovitch (2002). It is also in line with the transformation suggested by Kalshoven et al. (2013) regarding employees' courtesy and helping behaviour scale, while measuring the impact of ethical leadership on it. The seven-point Likert scales were transformed to five points. This transformation was conducted for two reasons. Firstly, focus groups were formulated during the pilot study to test the validity of the questionnaire, where the majority of respondents were unable to differentiate between strongly and very strongly agree-disagree. Respondents stated that the difference between both was not accurately explained by the Arabic Language. Furthermore, various participants reported that the Egyptian culture is not that precise to be able to differentiate between strongly agree and very strongly agree. Secondly,

experts' feedback was requested from various Egyptian professors to validate the Arabic version of the data collection instrument where all professors recommended to transform the seven Likert's points scale to five points as it fits more with the Egyptian context. Background information questions were moved to the end of the subordinates' questionnaire instead of the beginning. This modification was undertaken in response to the first and the second pilot study for cultural reasons.

3.10 Measurements

A measurement model is illustrated in Figure 9 below to clarify the overall design of the study as follows:

Figure 9: Measurement Model

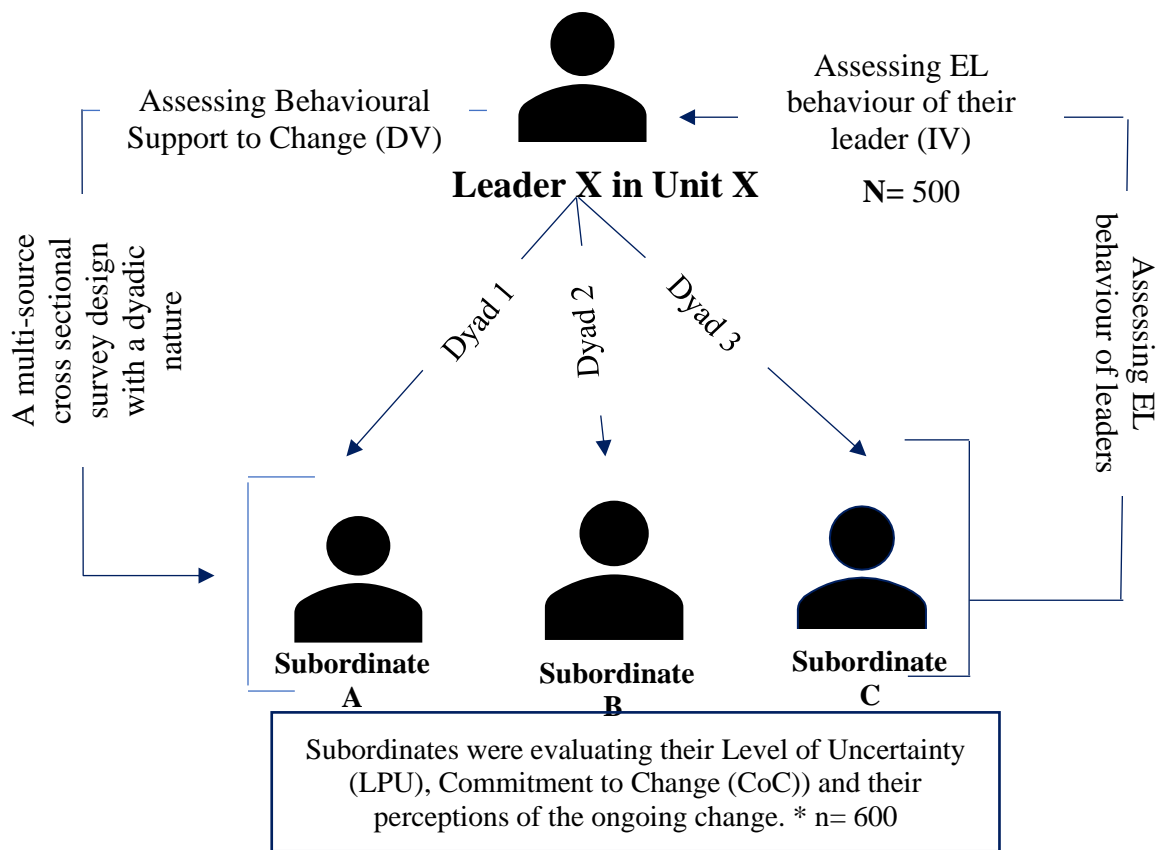


Figure nine aims to clarify double ratter system recommended by Podsakoff (2003).

a) **Ethical leadership (EL)**

Two scales were used to measure EL behaviour. The first scale is that designed by Brown et al. (2005), and the second, the one proposed by Kalshoven et al. (2011). The two scales are as follows:

- **The Ethical Leadership Scale (ELS)** developed by Brown et al. (2005). The scale is a 10 items scale without any sub-dimensions ($\alpha = 8.71$). Sample items include: my leader "*Listens to what employees have to say*" and "*Disciplines employees who violate ethical standards*".
- **Ethical Leadership at Work Questionnaire (ELW)** developed by Kalshoven et al., (2011). The questionnaire uses 38 items to assess ethical leadership ($\alpha = 8.23$). The ELW overall scale includes several ethical leader behaviours: fairness, integrity, ethical guidance, people orientation, power sharing, role clarification, and concern for sustainability.

Using two scales for assessing EL behaviour is justified by the prominence of the construct to the study. Nevertheless, the Brown et al. (2005) scale is highly cited. It does not measure the actual ethical leadership behaviour but examines subordinates' perceptions of their leaders' ethical behaviour. In addition, Brown et al.'s (2005) questionnaire is very broad and is not divided into sub-dimensions. On the other hand, the ELW is more precise and considers specific aspects of the ethical leader's behaviour.

b) **Behavioural support for change**

Behavioural support for change was measured using the scale developed by Meyer and Herscovitch (2002). This scale is composed of twenty-one items ($\alpha = 9.37$), but was transformed

to a supervisor rating scale, as previously mentioned. Sample items include subordinate x "works towards change consistently" and "Remains optimistic about the change, even in the face of adversity".

c) **Commitment to Change (CoC)**

Mayer and Herscovitch's (2002) scale was used, which has 18 items ($\alpha = 7.88$). The scale is a self-measurement scale since individuals are the only ones capable of assessing their own psychological attitudes and mindsets. Sample items include "I believe in the value of this change" and "This change is a good strategy for this organization". This scale measure three main components of CoC: affective commitment (AC), normative commitment (NC), and continuance commitment (CC).

d) **Perceived Uncertainty (LPU)**

The level of perceived uncertainty was measured using the scale developed by Bordia et al. (2004). The scale measures strategic, structural and job uncertainties. It has 12 items; four additional items were developed for this study that represent the external environmental uncertainty and were validated. The total scale was thus composed of 16 items ($\alpha = 8.26$). Sample items include, *to what extent do you feel uncertain about, "The direction in which the organization is heading?" and "The external environment in which the organization will have to exist?"*

e) **Confirming Change and Measuring Its Perceived Impact and Characteristics**

Organizational change was confirmed and assessed through examining respondent's perception of the ongoing organizational change. This is in line with Scandura and Sharif (2014), who decided to ask only the subordinates about change to save the leaders' time and to get more responses.

Subordinates were asked to identify the type of changes taking place in their organizations (if any). Moreover, they were asked to identify the most important form of organizational change taking place in their organization or department. They were also asked to respond to a number of questions to examine the significance of these changes and their impact on the organizational and individual levels. More details on items are available in the data collection instrument in the appendices.

3.11 Control Variables

Various variables were controlled for such as the impact of change and the significance of change (Meyer & Herscovitch, 2002). Furthermore, my model also controlled for leader's individualized consideration, which represents the ethical dimension of transformational leadership that correlates with ethical leadership (Brown & Triveño, 2006).

Chapter 4: Research Findings

4.1 Introduction

The main research findings are presented in this chapter. This chapter conducts the quantitative analysis process in various stages where the first stage commences with an illustration of the main descriptive statistics of the study. This will take place through a demonstration of the main correlations between the main research variables as well as the means and standard deviations. This chapter presents the quantitative analysis process in various stages, where the quality of measurement models is assessed briefly in the second stage and the results are discussed in the third stage. The theoretical model will be revisited in the section on testing the hypotheses in order to compare between the theoretical research model and the one observed. All research hypotheses were accepted except one hypothesis. For instance, this chapter will show that heads ethical heads of medical units had a positive effect on their subordinate's behavioural support to change². This relationship is positively mediated by subordinate's commitment to change and their change uncertainty.

4.2 Descriptive Statistics

The means and standard deviations of all scales are illustrated in Table 1 below. Two forms of uncertainty are included in the table. The level of perceived uncertainty is the first form and the external environmental uncertainty is the second form. External environmental uncertainty is a

² I would like to pay tribute to late prof. Abbasi, the former dean of the statistics institute in Cairo University who provided a great support in teaching me how to conduct the analysis and interpret its results on my own. I would like also to thank him for his supervision during the interpretation and writing process of this chapter and the next one.

sub-dimension of the overall uncertainty scale, which was created and validated by this study. The highest means in Table 1 are related to subordinate's behavioural support for change and to the perceived uncertainty triggered by the external environmental uncertainty.

Table 1: Descriptive Statistics and Correlations

	Mean	SD	Min	Max	1	2	3	4	5	6	7	8
1. Gender	1.42	.493	1	2	1							
2. Education	4.28	1.485	3	6	.322**	1						
3. Ethical leadership	3.381	.4816	2.04	4.60	.223**	.649**	1					
5. Commitment to change	3.500	.5192	2.03	4.83	.097**	.309**	.548**	1				
5. Uncertainty level	3.573	.570	1.94	5.00	.067**	.330**	.528**	.659**	1			
6. Behavioural support for change	4.096	.5962	1.68	4.82	.066*	.622**	.454**	.599**	.645**	1		
7. Perceived macro environmental turbulence	4.071	.713	1.25	5.00	.052	.089**	.325**	.286**	.558**	.365**	1	
8. Characteristics of the ongoing change	3.770	.807	1.25	5.00	.315**	.432**	.422**	.401**	.534**	.211**	.278**	1

* P < .05, ** P < .01, *** P < .001

Table 1 summarizes the main correlations between all scales and presents all means and standard deviations. Moreover, there is a positive association between the four main research variables (see Table 3). The next section reports on the quality of the measures used in this study. This is a major part of the analysis technique used to test the research hypotheses.

Chapter 5: Discussion

5.1 Introduction

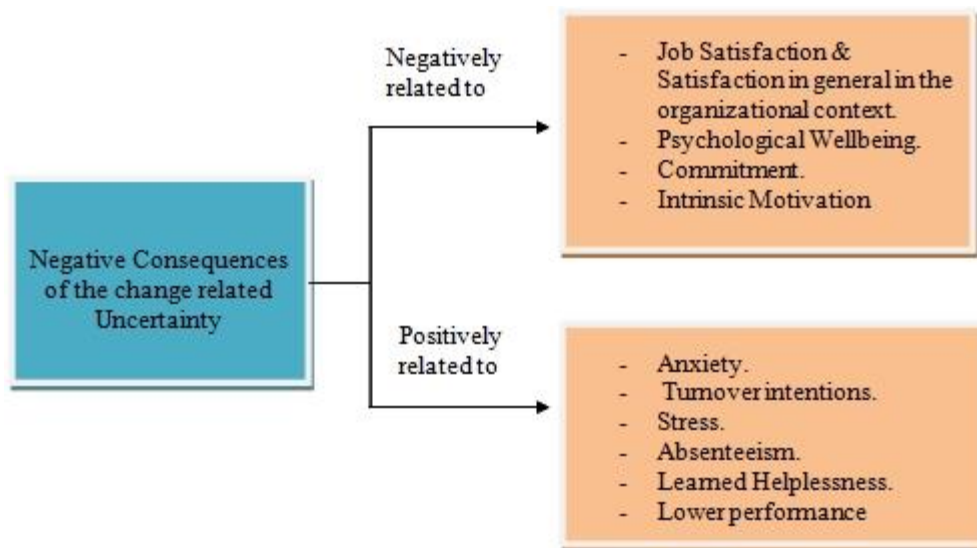
This chapter presents the interpretation of the empirical results (i.e. final research model). Furthermore, a connection will be established between the observed findings and the relevant literature. The interpretation progresses in various stages. The observed structured model will be decomposed, and each relationship will be explained in a separate stage. Therefore, research implications, limitation and recommendations for future research will be presented at the end of this chapter.

The empirical results show that ethical leadership positively affects subordinate's behavioural support to change. It also shows that this positive impact is positively mediated by subordinate's commitment to change which is positively affected by ethical leadership. Uncertainty also has a positive intervening effect in the positive relationship between ethical leadership and behavioural support for change. This finding challenges the conventional literature of uncertainty and change management as it reveals a positive side to change uncertainty which could be activated by ethical leaders during times of turbulence. There are various other reasons for the importance of this findings which will be discussed during the discussion process of research findings during this chapter.

The literature of uncertainty was previously explored in chapter two. The conventional uncertainty and change literature framed uncertainty as a major trigger of various negative psychological and behavioural consequences that hinder the successful implementation of organizational change. The negative consequences of uncertainty perceptions will be depicted

again in Figure 13 to remind the reader of the viewpoint of the mainstream uncertainty literature presented in Chapter 2 prior to commencing the discussion process.

Figure 13: A Reminder of the Negative Drawbacks of Uncertainty



Adapted from: Lazarus and Folkman (1984); Ashford (1988); Schweiger and Denisi (1991); Johnson et al. (1996); Hui and Lee (2000); DiFonzo and Bordia (2002); Bordia (2004);

Figure 13 serves to remind the reader of the negative consequences of uncertainty from a traditional academic perspective. The discussion on the positive mediation effect of the subordinates' levels of uncertainty on the positive relationship between ethical leadership and behavioural support for change has various implications. Firstly, it challenges the commonly held view regarding the negative drawbacks of uncertainty perception. These negative outcomes could clearly lead to a resistance to change (Dawson, 2003; Dawson, 2005; Kotter, 2008).

5.2 The First Stage of the Interpretation: Delving into the Relationship between Ethical Leadership and Behavioural Support for Change

Ethical leadership appears to have a direct effect on subordinates' behavioural support for change. This PhD study is potentially the first one to reveal a positive relationship between ethical leadership and behavioural support for change for highly uncertain organizational changes. This finding is relatively consistent with the following studies that were previously discussed in the literature review and are summarized in Figure 14 as follows:

Figure 14: Studies that Relatively Fit with the First Outcome of Model S1



Figure 14 represents a sample of various ethical leadership studies reporting a positive impact of ethical leadership on employees' positive work behaviours. Ethical leadership, for instance, was positively linked to organizational citizenship behaviour, helping and courtesy behaviours, voice behaviour and work discretionary behaviour (see Figure 14). These studies are relatively consistent with the direct relationship between ethical leadership and behavioural support for change in Model S1. Furthermore, these studies evidence the positive influence of ethical leadership on

positive organizational behaviours. The positive relationship between ethical leadership and the positive organizational behaviours in Figure 14 is a relatively good indicator and support for the first hypothesis

Despite the relative consistency between the first outcome of Model S1 and the supporting evidence of Hypothesis 1, these works did not study the behavioural repercussions of ethical leadership in the context of an ongoing organizational change. In other words, the studies in Figure 14 did not incorporate change into the study of ethical leadership (Scandura & Sharif, 2014). This gap is attributable to the previously scant attention paid to the study of ethics during organizational change (Durand & Calori, 2006). This lack of attention was evident until the recent combination of leadership with ethics and organizational change by Burnes and By (2012).

The positive relationship between ethical leadership and behavioural support for change is a confirmation of Scandura and Sharif's (2014) argument regarding the importance of ethical leadership during times of change. It also reveals that ethical leadership does not only have a positive relationship with positive organizational behaviours during change, such as organizational citizenship behaviour and involvement in change (Scandura & Sharif, 2014), but also with behavioural support for change.

The first finding of Model S1 is also consistent with Rowold and Bormann (2016) in terms of the positive behavioural repercussions of ethical leadership during organizational change. For instance, the study by Rowold and Bormann (2016) reported a negative relation between ethical leadership and employees' silence during organizational change. This is another form of the positive behavioural effects of ethical leadership during change represented by the negative

relationship with a negative behavioural reaction to change (silence), which represents a passive participation and involvement in change (Bormann & Rowold, 2016).

Despite the consistency between the first finding of this PhD study and the studies previously summarized in Figure 14, it is only a partial fit, however, due to change not being included in prior studies (see Figure 14). There is a consistency, consequently, in terms of the nature of the relationships investigated as these studies and this PhD study both investigate the positive behavioural outcomes of ethical leadership. There is no full consistency, however, for various reasons. Firstly, the relationship between ethical leadership and behavioural support for change has, as yet, not been investigated despite the growing importance of ethical leadership during times of change (Scandura & Sharif, 2014; Borman & Rowold, 2016) and despite the reported positive association between ethical leadership and the positive behavioural outcomes summarized in Figure 14.

The positive relationship between ethical leadership and behavioural support for change adds to the novelty of this study in various ways. Firstly, the research population in this study is different as the present PhD study was conducted in the Middle East, which is one of the most crucial business environments currently under research in the field of ethical leadership (Resick, 2013). Furthermore, the application of the field study in that region also replicates the results of the extension of the three components model of behavioural support for change, which was under-investigated in societies other than the U.S.A, North America and Canada (Meyer & Herscovitch, 2002). Moreover, the change context is different from that of Scandura and Sharif (2014) and Rowold and Borman (2016) who previously tested other behavioural outcomes of ethical leadership during change. Furthermore, this result re-formulates and re-contextualizes our understanding of the extension of the three components model of Meyer and Herscovitch (2002),

due to light being shed on the positive impact of ethical leadership on behavioural support for change. This re-contextualization contributes to building a connection between the field of leadership, ethics and the work of Meyer and Herscovitch (2002, 2001).

5.3 The Second Stage of Interpretation: The Mediating Effect of Subordinates' Uncertainty

The second sub-stage aims to explore the mediating effect of the levels of perceived uncertainty (LPU). A reminder of the structure of the model is provided in this stage and the next stage for the sake of facilitating the visualization of the model:

Figure 15: The Observed Mediating Role of Uncertainty

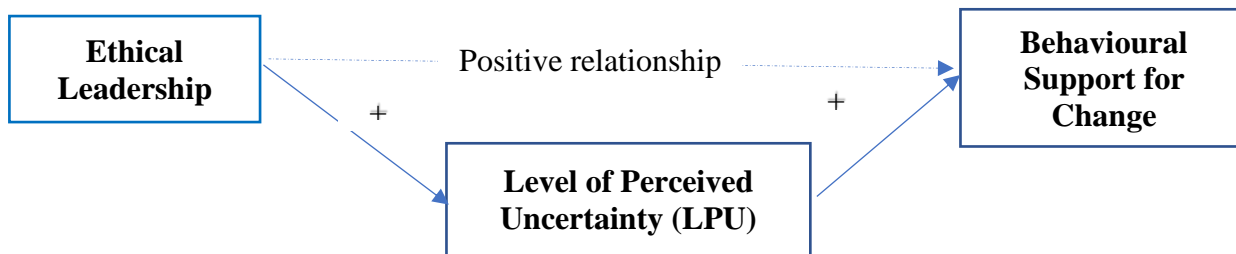


Figure 15 shows that subordinates' levels of perceived uncertainty (LPU) mediate the relationship between ethical leadership and behavioural support for change. This finding is not in line with to the fifth research hypothesis of the theoretical model in Chapter 1. The level of perceived uncertainty was hypothesized to positively moderate the relationship between ethical leadership and behavioural support for change. A moderator refers to a variable that is capable of either changing the direction or enhancing the strength of a specific relationship (Baron & Kenny, 1986). This hypothesised moderation effect was, therefore, based on the need of subordinates to be led by fair leaders with integrity during uncertain times (Li, 2005). Despite the previously reported link between uncertainty and resistance to change (Kotter, 2008), it was expected that

subordinates would react differently and support change when led by an ethical leader. Nonetheless, this relationship has occurred in the form of mediation rather than moderation.

The mediated effect of uncertainty is an evidence that the levels of perceived change uncertainty were the major trigger of subordinates' behavioural support for change. This mediation, however, could not change the direction of the positive relationship between ethical leadership and behavioural support for change, nor could it enhance the power of the strength of this relationship, despite the expected positive effect of the level of uncertainty being assumed to act as a catalyst for the generation of behavioural support for change. Nevertheless, the literature of uncertainty stresses on its negative consequences and its positive relationship with resistance to change (Dawson, 2003; Kotter, 2008).

The positive mediating effect of change uncertainty fulfils the mediation criteria of Baron and Kenny (1986) for various reasons. Firstly, there is a positive relation between ethical leadership and change uncertainty. Secondly, there is a positive relationship between subordinates' uncertainty and their behavioural support for change. This positive mediating effect means that the fifth hypothesis regarding the hypothesized positive moderation effect is rejected. This unexpected finding might ironically give greater importance to the effect of uncertainty because the moderation could have changed the direction of the relationship or even the sign of the relationship (Baron & Kenny, 1986), which is not the case with mediation.

The positive relationship between ethical leadership and change uncertainty might have been a result of the perceived external environmental uncertainty. This form of uncertainty is a construct that has been developed and validated by this study. The fact that subordinates are led by ethical leaders might be a major trigger to perceiving external environmental uncertainty (and the other forms of uncertainty) as an opportunity, which, in turn, is the main catalyst for ongoing

organizational changes. Ethical leaders have the ability change their subordinate's perception and re-shape their cognition (see figure one in chapter two), due to their ability to lead a social learning process that deeply involves their subordinates. This social learning occurs in the aftermaths of perceiving ethical leaders as role models whose behaviour deserves to be imitated (Bandura, 1977). It could, consequently, be argued that ethical leaders were able to illuminate the positive side of uncertainty via an effective social learning process that stresses on the rule of reinforcements (see figure one in chapter two). It could also be reasonable to argue that ethical leaders were able to treat their subordinate's negative perceptions of uncertainty. Not only did they cure these negative perceptions but they were also able to help them cognitively perceive uncertainty as an opportunity rather than a threat. This finding refutes the conventional view of uncertainty in the mainstream literature of change uncertainty. It could also mean that ethical leadership could be a cure to the negative consequences of change uncertainty such as anxiety, stress and learned helplessness which, in turn, could cause change resistance (see figure five in chapter two).

Indeed, ethics emerges as a controversial topic during times of turbulence and uncertainty. The Egyptian macro- environment witnessed a high level of political turbulence that must have affected its organizations based on Dawson's (2003) concept of the politics of change. The Egyptian macro business environment is currently witnessing an economic turbulence in the aftermaths of such political turbulences which adds to its turbulence according to Dawson's (2003) concept of the context of change. These sources of turbulences could have a great impact on the non-profit health sector in Egypt which operates via donations and which was chosen for the empirical study of this PhD research.

Medics might have been extremely inspired by their ethical leaders in their medical work, triggering, in turn, a shock due to the gap of morality and integrity in their working units and the external operating environment. They might have been shocked by this hypothetical gap while dealing with the stakeholders of their organizations. Such stakeholders include lawmakers, unions, fundraisers and suppliers. There might have been a perceptual gap in terms of the absence of ethical leaders in their external environment. External environments have a strong impact on organizational change (Dawson, 2003), which might have been a major trigger of their uncertainty. Ethical leaders need to have had the ability to subsequently transform this uncertainty into discretionary work behaviour. They should also have had the ability to relieve this uncertainty by helping their followers to free themselves of the negative repercussions of uncertainty.

Furthermore, it empirically supports Scandura and Sharif's (2014) view on the prominence of ethical leadership during organizational change and during times of uncertainty. This support, however, is from a general perspective. To illustrate, Scandura and colleagues examined the impact of ethical leadership on employees' organizational citizenship behaviour and involvement in change (Scandura & Sharif, 2014). These behaviours also represent positive behavioural change reactions triggered by ethical leadership. The fit, therefore, lies in the scope of the study and the positive behavioural consequences on ethical leadership during change. This finding also embraces the perspective proposed by Li et al., (2005) as regards the tendency of employees to follow leaders who show integrity during uncertain times. This, consequently, means that the higher the level of employees' change uncertainty, the higher is their level of behavioural support for change only when they are led by an ethical leader.

The positive mediating effect of uncertainty has various implications. Firstly, medics working in medical centres witnessing uncertain changes triggered by external environments and suffering

from a high level of job uncertainty may support change in the presence of ethical leaders. This means that the higher the level of their uncertainty (regardless of its form), the higher is their level of behavioural support for the ongoing organizational change/s. It could also be inferred that these changes were not only relevant for doctors, but also by nurses, administrative and technical team members. The effects were observed in both males and females without significant differences by gender.

5.4 The third sub-stage: The Mediating Effect of Commitment to Change

This stage focuses on the second positive mediating effect of subordinates' commitment to change, illustrated in Figure 16 as follows:

Figure 16: An Illustration of the Mediating Effect of Commitment to Change

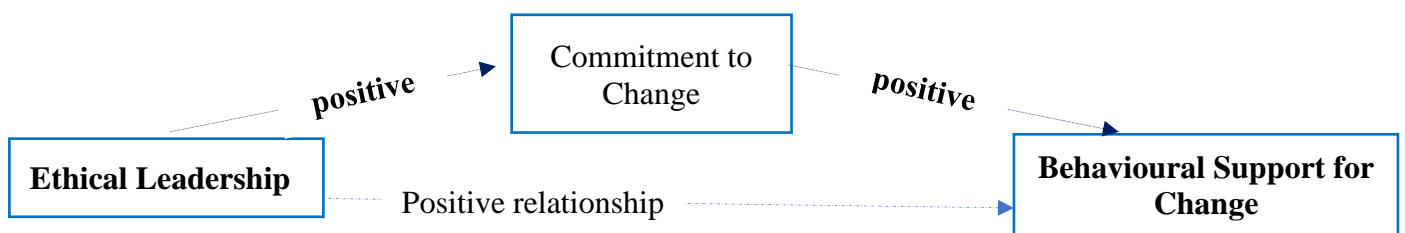


Figure 16 is intended to show that ethical leaders have a positive impact on their subordinates' commitment to change. This finding is partially in line with Bormann and Rowold (2016), who reported a positive relationship between ethical leadership and affective commitment to change. Their study, however, did not focus on the three components of commitment to change (affective, normative and continuance commitment). Rather, they focused only on one single component of the construct. The positive mediating rule of commitment to change on the relationship between ethical leadership and behavioural support for change has two implications. Firstly, it shows that the interaction between the three components of the construct of commitment to change positively mediates the positive influence of ethical leadership on behavioural support for change. Secondly,

it supports Meyer and Herscovitch's (2002) finding regarding the occurrence of the final behavioural outcome of commitment to change due to a unique interaction between its three distinct components.

Commitment to change, on the other hand, has a positive impact on subordinates' behavioural support for change. This result also coincides partially with Bormann and Rowold (2016). This partial consistency is represented by the negative relationship between affective commitment and employees' silence during organizational change, which represents a negative change-related behaviour that could be reduced by ethical leadership (Bormann & Rowold, 2016). This finding is also in line with Meyer and Herscovitch (2002), who linked the generation of behavioural support for change to commitment to change. The positive relationship between commitment to change, ethical leadership and behavioural support for change supports the second and third research hypotheses. The acceptance of these two hypotheses fulfils the mediation requirement of Baron and Kenny (1986). This positive mediation effect confirms the fourth hypothesis of this study and is also in line with the extension of the three components model of Meyer and Herscovitch (2002). This model found that commitment to change is positively associated with a behavioural support for change. This study builds on Meyer and colleagues' work via a re-conceptualization and re-contextualization of their model, having shed light on the positive impact of ethical leadership in change uncertainty on behavioural support for change in the health sector, which is in line with their study, albeit in a different context.

This mediation effect also fits with the positive psychological and behavioural consequences of ethical leadership according to Brown and Triveño (2006). Nonetheless, this fit is only partial due to the existing gap regarding the psychological and behavioural repercussions of ethical leadership during organizational change. Moreover, agreement is not complete as Brown and Triveño (2006) reported a positive effect of ethical leadership on organizational commitment but

not commitment to change. Their reported positive effect of ethical leadership on organizational commitment was a significant source of support for the formulation of the second, third and fourth hypotheses.

5.5 Conclusion

This study opens the door for ethical leadership scholars to rethink and reconsider its nature and outcomes in the context of highly turbulent and highly uncertain organizational changes for various reasons. Firstly, the positive influence of ethical leaders on their followers' commitment to change and behavioural support for change shows that its function and use go beyond Brown and colleagues' definition of ethical leadership. Brown and Triveño (2005) framed ethical leadership as a style that mainly aims to promote ethical behaviour only and that also has various behavioural and psychological outcomes. The findings of the present study, however, show that this leadership style could be adapted for the sake of effective change management as well. Furthermore, it could be used for the generation of various positive behavioural outcomes in times of turbulence and crisis.

The impact of medical ethical leaders on their subordinates' uncertainty perceptions supports the argument of the reconsideration of ethical leadership. In fact, ethical leaders were able to affect their followers' uncertainty positively and efficiently. Their ability to affect the cognitive psychological perceptions of their subordinates shows that ethical leadership could be used to treat various negative psychological and behavioural reactions to change that could affect organizational functioning. These psychological reactions could include stress and anxiety in the workplace triggered either by uncertainty or any other element. Ethical leaders might be able to reveal the positive side of these negative psychological states and transform them into an

opportunity rather than a threat. Furthermore, the morality, consideration, integrity and fairness of ethical leaders could be a catalyst for this transformation process as their followers could feel safe in their presence and trust them more than others.

This does not mean that leaders should pretend to be ethical for the sake of an effective organizational functioning. Rather, it implies that leaders should be aware of the benefits of such a style which could be a solution to various other psychological and behavioural problems that go beyond the ethical behaviour of their followers. This will raise awareness of the positive side of various other problematic psychological states, in addition, to uncertainty, which could give birth to a new stream of literature on organizational psychology. This new stream could focus on the utilization of the positive side of such psychological states which are negatively perceived in literature, such as uncertainty, but in the presence of ethical leaders.

This study also sheds light on the prominence of ethics and ethical leadership during times of change and turbulence. This is important because identity could be affected in such times and employees' commitment could also be affected. This may be increasingly likely in the context of this PhD study in the Egyptian system, where a high level of uncertainty occurred due to the turbulence of the external operating environment. The turbulence in the context of my study was legal, political, economic and security related. This form of turbulence is currently expanding all over the Middle East business environment and the findings of this study offer insights to scholars and managers about the management of change in the health sector in such environments.

The impact of external environmental turbulence on medical staff's uncertainty is in line with the literature on organizational change. The findings of my study shed light on the importance of ethics and ethical leadership in the effective management of change in health organizations

witnessing change in any turbulent or dynamic external environments. The turbulence of external environments is expanding in various places across the world. For instance, it was evident in Ukraine, which has witnessed a political uprising and a high level of political turbulence. Protests and terrorism have affected France for some time and Europe has started to experience various forms of political uncertainty. It could, consequently, be inferred that health organizations witnessing any form of change should always consider the impact of the external macro-environment on their staff's psychological well-being and behaviour.

5.6 Scholarly and Professional Implications

The findings of this study are expected to help hospital managers and leaders in setting the appropriate strategies for dealing with employees' negative behaviours and attitudes (e.g. resistance) during organizational change. Specifically, the significance of this study is derived from both its academic and practical relevance. This study responds in different ways to the under-investigation of the consequences of ethical leadership during times of change (Scandura & Sharif, 2014).

This study also sheds light on the importance of the implementation of ethical leadership. This implementation should start with the recruitment and selection process of medical staff serving in turbulent contexts. It should be applicable to medics serving in conflict/post-conflict zones as well as those who work in any context of humanitarian crisis. A relatively large proportion of this PhD study came from hospitals in areas that were affected by the terrorism crisis that arose in Egypt. Thus, it should give a relative support to the implications of these findings that could be utilized in other similar contexts.

This study also implies that ethical leadership could become crucial to a successful formulation of effective change management strategies especially in the health sector. Furthermore, it also implies that ethics is key to the behavioural support of highly uncertain organizational changes taking place in turbulent and uncertain external operating environments specially in health organizations. The implementation of ethical leadership could also be enacted through effective training and leadership development programs. The importance of ethics and ethical leadership should, consequently, be taken into consideration during the process of training needs analysis in the health sector in such contexts. It should also receive special attention in training plans and strategies that should aim to train leaders how to be ethical leaders, across all organizational levels. Behavioural support for change can indeed be stronger if perceived uncertainty is high and ethical leaders help employees translate such negative psychological perception into positive change behaviour.

The promotion and selection of leaders across all organizational levels should not only be based on seniority and technical competencies but also on the ethical leadership competencies of candidates. This implies that candidates who lack the potential to be ethical leaders (e.g. lack of altruistic personality traits) should ideally not be promoted to leading medical positions. Their promotion could not only negatively affect organizational functioning but also the quality of medical service. The promotion of unethical leaders in Enron, for example, led to a scandalous unethical case which is still being used as an example in business ethics. This could also be the case in medics whose behaviour could mean life or death for their patients. The selection of medical students and recruitment of doctors should, consequently, take ethical leadership potential into consideration. This could lead to a lower rate of illegal incidents of gender, child and sexual

abuse in the health sector. It could also reduce the number of illegal organs removed from corpses during autopsy without written consent from families.

Performance appraisal of medical staff should also take ethics into account. Doctors should be expected to show concern for their patients because they are concerned about people in general. Medics who fail to give the appropriate psychological concern and support to a patient should be penalized by their leaders and the HR department. This, consequently, means that a reward and punishment system should take these aspects into consideration. A 360-degree performance appraisal system could be an effective evaluation system in the health sector. This system involves leaders rating their subordinates and vice versa. Application of this system could enhance the level of organizational transparency, could contribute to the formulation of an ethical climate and could enhance the quality of medical operations.

5.7 Research Limitations and Future Research

This study was unable to adapt a longitudinal design due to limitations of time. The common drawbacks of cross-sectional design were reduced via a collection of data over various points of time. Future research, however, needs to test these relationships using a longitudinal design. It is reasonable to associate behavioural support for change with the success of change. There is no proof from my findings, however, of the positive impact of behavioural support for change on the success of change. Testing this relationship requires an implementation of a longitudinal design, which was beyond the scope of this study. The same limitation was reported by Meyer and Herscovitch (2002) in their study. The classification of participants' commitment to change profiles might also have been interesting. Future research should focus on studying the behavioural repercussions of medics' commitment to change in the presence of ethical leaders. It should also

study the relationship between behavioural support for change and the success of organizational change using a longitudinal research design.

This study has also focused on the aggregated effect of all research variables. It would have been more interesting to focus on the interaction between the single components of all research variables. This was, however, beyond the scope of this PhD study but, it could be conducted in future publications that would be extracted out of this thesis. Finally, the lack of conducting a group analysis is another major limitation of this study. This would be crucial for future research to understand the impact of medical speciality on the relationship between research variables. It would also be useful to studying the difference in results between different participating health organization.

Despite these limitations, all in all this study paves the way for a new research line concerned with the examination of the impact of EL on employees' behavioural support for change. It responds to the gap reported by Scandura and Sharif (2014) regarding the examination of the positive psychological and behavioural outcomes of ethical leadership during times of change. By studying organizational change in a context that is characterized by a high rate of perceived uncertainty, it is also underscored that external environmental factors have an impact on change complexity and are accordingly expected to influence employees' behaviours and attitudes towards change. In doing so, this approach paves the way for future scholars to examine the positive impact of EL on employees' responses to change in such highly uncertain contexts. In particular, it responds to the under-investigation of the outcomes of ethical leadership in the Middle East Region, which is one of the most crucial global business environments (Resick, 2013). It is widely recognised that employees' resistance to change is a major cause behind the failure of most change programmes (Lewin, 1948, 1952; Dawson, 2003; Kotter, 2008). Thus, studying the

influence of ethical leadership on employees' support for change provides organizations, managers, and leaders with guidelines for dealing with their employees during change so that employees' resistance is avoided and/or dealt with.

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Appendices

Statistical Analysis

Confirmatory factor analysis (CFA) of Ethical Leadership Scale

The next section shows the results of the CFA that has been a major pillar of the six measurement models of this study. The major components of the EL construct are illustrated in figure one below. **The paths coefficients will be illustrated in table one as follows:**

Figure 17: Ethical Leadership's Measurement Model

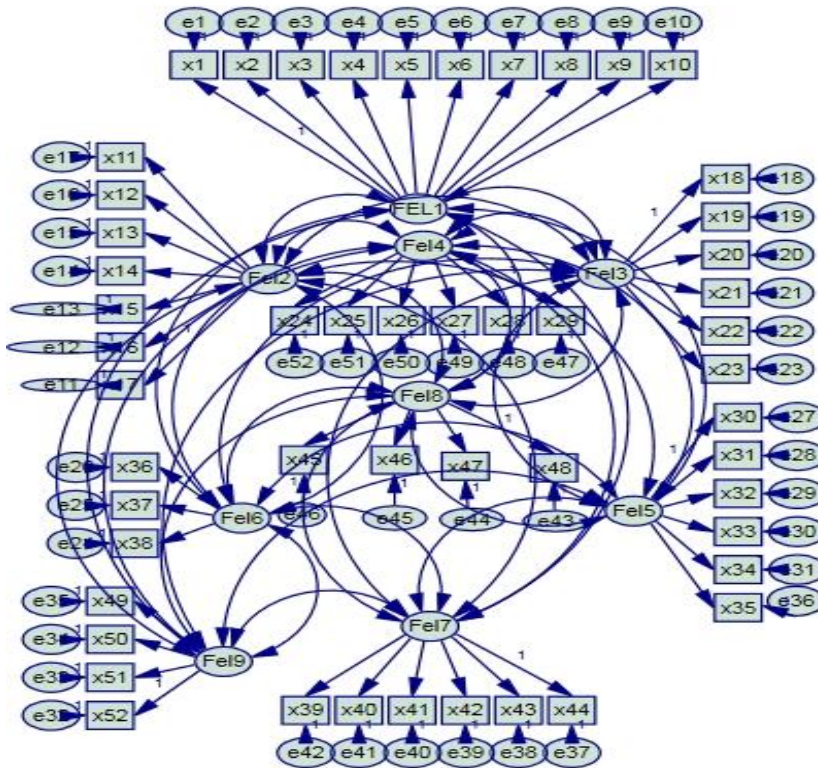


Figure 17 aims to illustrate the items of the EL scale in their relative sub-dimensions. The standardized regressions weights of all paths are summarized in table one below. Table four summarizes all the paths below as shown in the next page.

Table 7: Path Coefficients of Figure 17

Paths		Estimate	S.E.	S.W	C.R.	P	
EL1 = 1st El scale: Brown & Trevino's Scale of EL							
x1	<---	FEL1	1.000		.550	000	
x2	<---	FEL1	1.656	.177	.565	9.375	000
x3	<---	FEL1	2.988	.394	.649	7.587	
x4	<---	FEL1	2.007	.275	.624	7.298	000
x5	<---	FEL1	3.621	.465	.792	7.792	000
x6	<---	FEL1	3.451	.444	.746	7.779	000
x7	<---	FEL1	2.880	.363	.643	7.929	
x8	<---	FEL1	3.176	.407	.760	7.797	000
x9	<---	FEL1	2.904	.399	.641	7.284	000
x10	<---	FEL1	3.541	.470	.761	7.528	
EL2 = The first dimension of the 2nd scale people orientation							
x17	<---	Fel2	1.189	.060	.561	19.957	000
x16	<---	Fel2	1.494	.084	.640	17.811	000
x15	<---	Fel2	1.311	.078	.702	16.701	
x14	<---	Fel2	1.313	.077	.607	16.979	

Paths			Estimate	S.E.	S.W	C.R.	P
x13	<---	Fel2	1.152	.061	.609	18.755	000
x12	<---	Fel2	1.342	.073	.619	18.394	000
x11	<---	Fel2	1.000		.765		000
EL3: Fairness							
x18	<---	Fel3	2.606	.244	.595	10.686	000
x19	<---	Fel3	3.619	.357	.660	10.145	000
x20	<---	Fel3	3.665	.362	.851	10.125	000
x21	<---	Fel3	1.299	.174	.849	7.446	000
x22	<---	Fel3	.671	.128	.606	5.248	000
x23	<---	Fel3	1.000		.568		000
El 4: Power sharing							
x29	<---	Fel4	.573	.032	.572	17.893	000
x28	<---	Fel4	.552	.033	.948	16.653	000
x27	<---	Fel4	.402	.036	.824	11.098	000
x26	<---	Fel4	1.000		.524		000
EL5: Role Clarification							
x30	<---	Fel5	1.022	.037	.686	27.381	000
x31	<---	Fel5	1.046	.048	.741	21.911	000
x32	<---	Fel5	.995	.055	.705	17.969	000
x33	<---	Fel5	.901	.051	.567	17.512	000
x34	<---	Fel5	.822	.044	.646	18.653	000

Paths			Estimate	S.E.	S.W	C.R.	P
x35	<---	Fel5	1.000		.593		000
EL6: Concern for Environment							
x38	<---	fel6	.405	.050	.681	8.086	000
x37	<---	fel6	1.523	.095	.529	16.064	
x36	<---	fel6	1.000	.177	.914	9.375	
EL 7: Ethical Integrity							
x44	<---	Fel7	.881	.036	.698	24.775	000
x43	<---	Fel7	1.123	.043	.621	26.158	
x42	<---	Fel7	.992	.040	.788	24.841	
x41	<---	Fel7	.985	.048	.754	20.409	
x40	<---	Fel7	.790	.061	.601	12.990	
x39	<---	Fel7	1.000		.559		
Ethical Clarity							
x48	<---	fel8	12.251	5.698	.699	2.150	000
x47	<---	fel8	10.100	4.700	.818	2.149	
x46	<---	fel8	11.092	5.218	.736	2.126	
x45	<---	fel8	1.000		.749		
EL9: Individualized Consideration							
x52	<---	Fel9	.757	.080	.512	9.433	000
x51	<---	Fel9	1.434	.147	.782	9.754	
x50	<---	Fel9	.602	.070	.568	8.664	

Paths			Estimate	S.E.	S.W	C.R.	P
x49	<---	Fe19	1.000		.698		00

Table 7 aims to show that all paths were highly significant at $p < 0.001$ and with a confidence interval of 99%. The Most two critical columns in table five are the S.W column which refers to the standardized weights and the P-Value column.

Figure 18: Measurement Model of Behavioural Support for Change

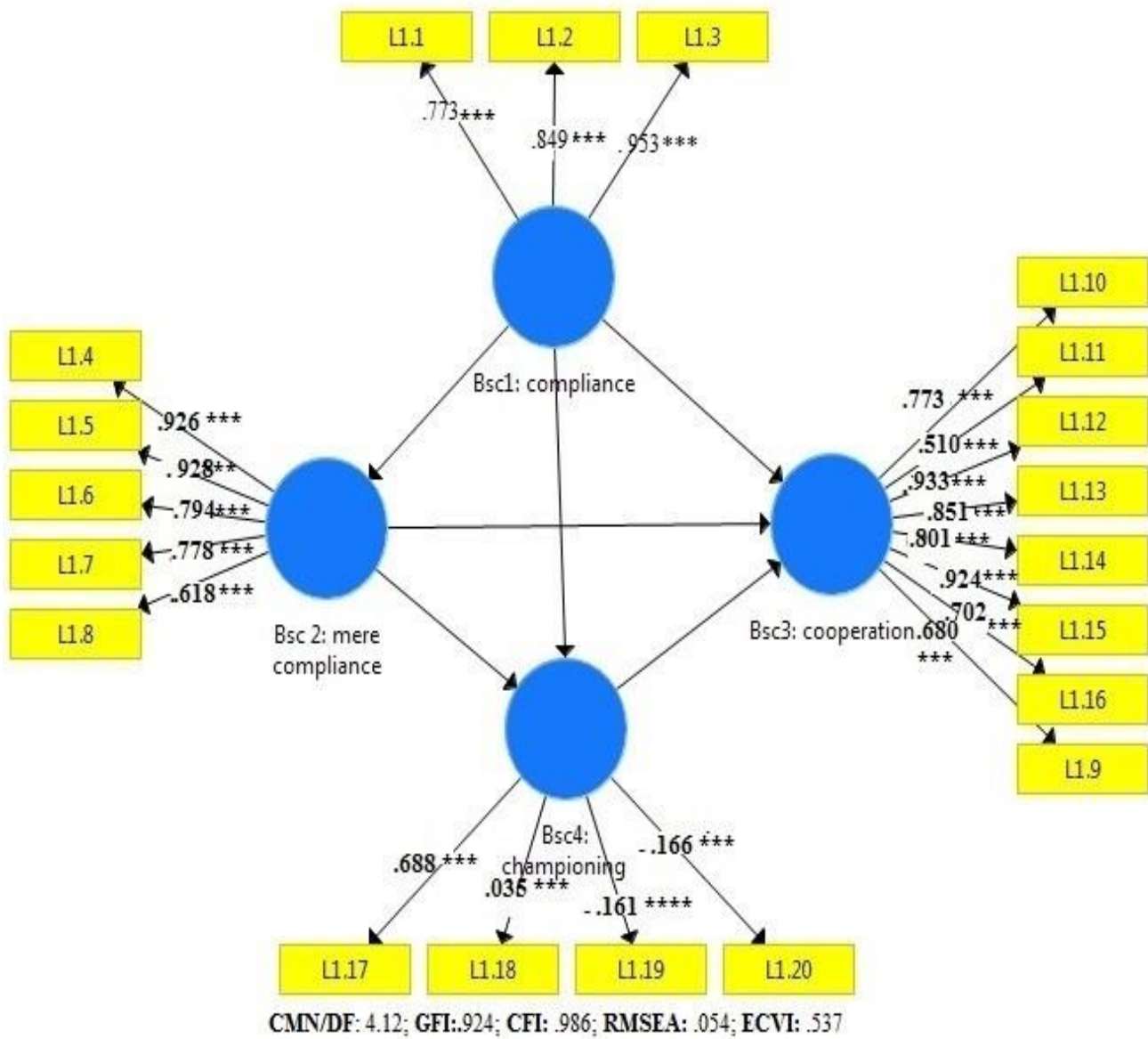


Figure 19: Measurement Model of Commitment to Change

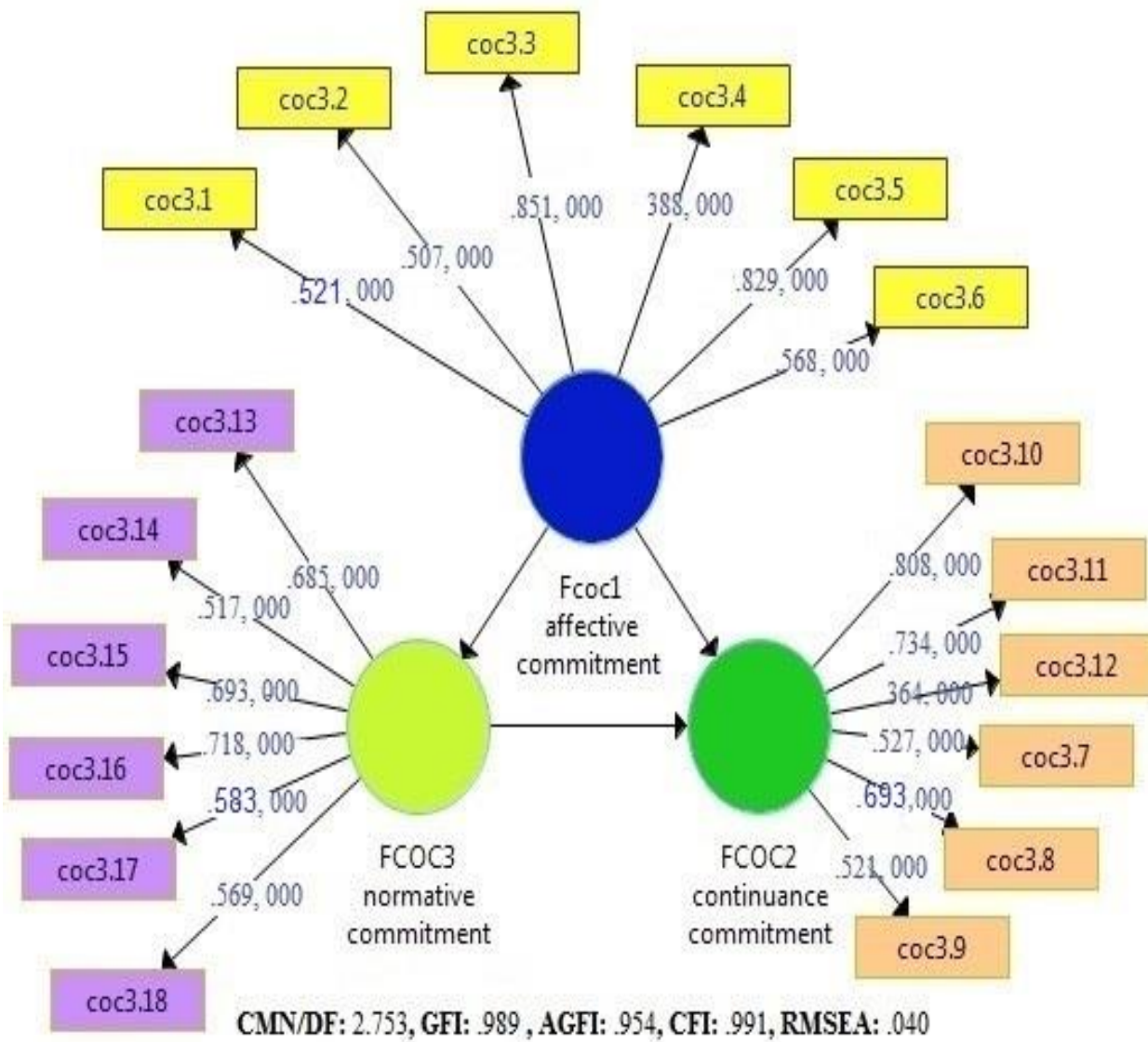
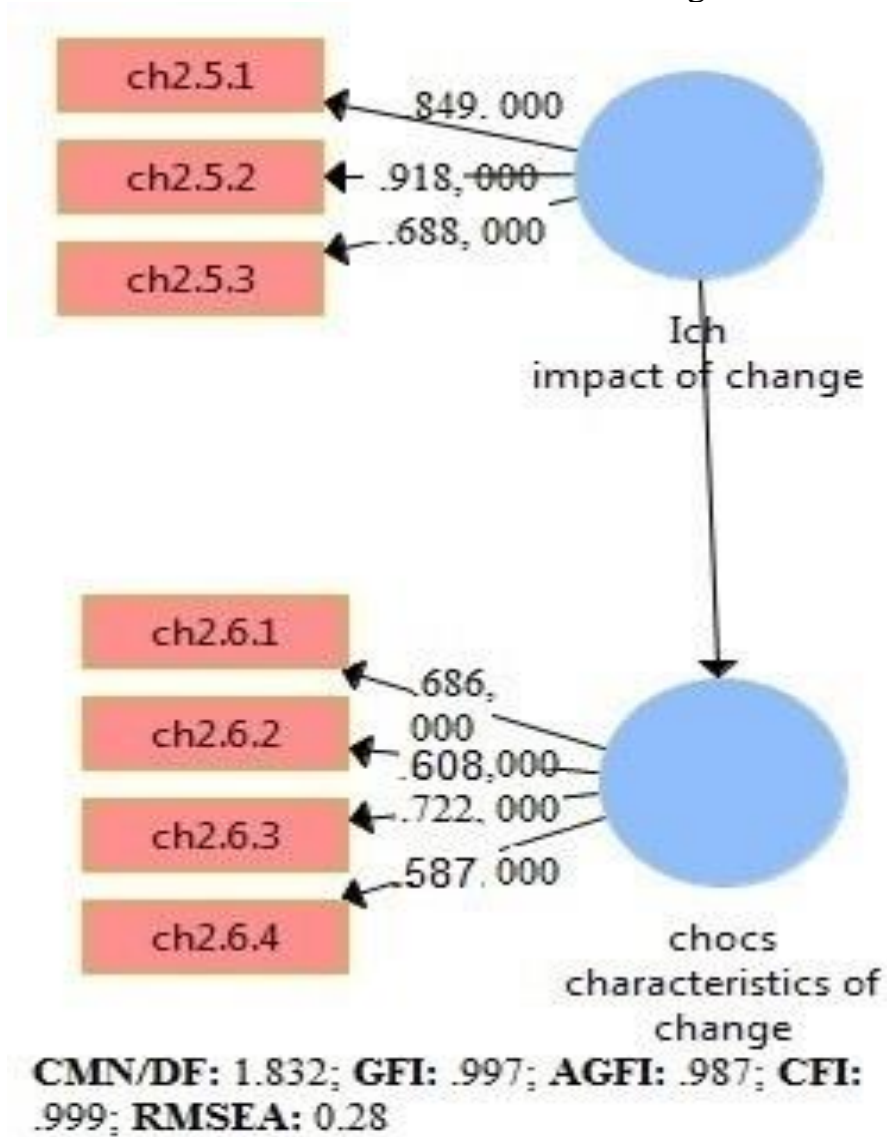


Figure 20: Measurement Model of the Composite Variable of the Perceived Change



Correspondences that Contributed to the Formulation of Design

John Meyer <meyer@uwo.ca>

Mon 19/01/2015 00:49

Metwally, Mohammed Elmetwally

Mere Compliance Scale.doc

20 KB

Dear Mohamed Metwally,

You are welcome to use our behavioral support measures in your research. I have attached a copy of the measures. I hope all goes well with the research.

Best regards,
John Meyer



Dr. John Meyer
Department of Psychology
Rm 8411, Social Science Centre
Western University
London, Ontario, Canada
N6A 5C2

Phone: (519) 661-3679
Fax: (519) 661-3961
Email: meyer@uwo.ca

John Meyer <meyer@uwo.ca>

Tue 12/12/2017 01:43

Metwally, Mohammed Elmetwally

Hello,

Thank you for the update on your situation. I have been In Australia for the last three months and have just returned home and am settling in again. Things are indeed very busy so I'm not sure I will be able to make a decision about your visit before the new year. However, if you would like to send me a summary of your plans, I will try to review it as soon as possible.

Best regards,
John Meyer



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For my latest work on commitment, see [Handbook of Employee Commitment](#)

John Meyer <meyer@uwo.ca>

Fri 14/07/2017 01:01

Metwally, Mohammed Elmetwally

Dear Mohammed,

Congratulations on your accomplishments! I apologize for the delay – things have been very busy. I inserted short answers to your questions below. I hope this helps.

Best regards,
John Meyer

Dr. John Meyer
Department of Psychology
Rm 8411, Social Science Centre
Western University
London, Ontario, Canada
N6A 5C2



Phone: (519) 661-3679
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For my latest work on commitment, see [Handbook of Employee Commitment](#)

Dear Prof. Meyer,

I hope this Email finds you well. I am currently formulating the final design of my field study as I am going to collect data soon. I have some questions related to your work and I would be really glad if you may give me some brief explanations:

1. In study of the paper of the extension of the three components model: You have controlled for (change significance) (one item that assessed respondents' perceptions on the significance of change on their organizations).
2. You have also controlled for the (change impact) by the three items that were 7 points Likert scale as well. These three items have assessed the impact of change on their performance, organizational climate and their non-work life.
3. Can you send to me these items please? The change impact item was: How significant a change would you consider this to be for your organization? 1 = extremely minor 7 = extremely major The impact items used the stem: To what extent will this change affect ... We three items were: performance on your job; the climate in your organization; your non-work life. 1 = large negative effect 4 = neither negative or positive effect 7 = large positive effect.
4. The reason why you have controlled for these items was the fact that all respondents were from the health sector and from different hospitals. I am also going to collect data from the Egyptian health sector and from different hospitals. Did you mean that their medical background wouldn't enable them to determine the impact of change on their organizations and so on? I am still a bit confused about that point.

We controlled for these variables because our respondents were exposed to a variety of different changes that might have differed in significance and impact and therefore affected commitment.

We wanted to control for these effects statistically. If everyone was experiencing the same change, this would not be necessary.

5. Concerning the mere compliance scale which you have previously sent to me: Is a major component of the Behavioural Support to Change Scale or it is optional to include it? In fact, the compliance scale had a reliability of .49 and you suggested that more attention should be given to the analysis of this scale due to its lower alpha. I have no information on the mere compliance scale and that's why I am a bit cautious, what do you advise?

We developed the mere compliance scale later for another study. The reason we did this is because the original compliance scale correlated positively with all three components, but we were expecting it to correlate only with CC. We later realized that there is nothing wrong with complying. It is only when employees restrict their performance to those things, they have to do that there is a problem. We found that the measure of mere compliance correlated positively with CC but negatively with AC as we initially expected.

6. You have suggested to have a multi-source design to compensate the fact that the scales have a self-measurement nature. I am sure you might not recall but my study focuses on the effect of ethical leadership on employees' behavioral support to change. It is hard to ask leaders about the BSC of all their subordinates. I also assume that commitment to change mediates such relationship based on your model and on a new study in 2016 that found a mediating effect to Affective commitment to change on the relationship between ethical leadership and another positive work behaviour. It will be hard, therefore, to ask leaders on the commitment of employees and their behaviour as well. Do you think it would

be a good idea to have access to HR record and performance appraisals of medical doctors?

Also, I am thinking to complement the results by qualitative interviews with leaders what do you think?

This has to be evaluated on a case-by-case basis. Any time you use self-report measures for all variables in a study, critics will argue that the relations between these variables will be influenced by common method bias. However, it is often impossible to measure variables without self-report. In these cases, it is sometimes useful to separate the measures in time to avoid consistency effects. If there are any variables that can be measured objectively (e.g., HR records) or using a different source, it might be a good idea (assuming you have confidence in the quality of the measures)

Finally, allow me to thank you in advance for your collaboration and your support. I understand that you are busy. I would be glad, however, if you may give some brief comments on these points at any time of your convenience. On the other hand, allow me to update you with some great news on my work:

1. I have finished a paper on the effect of ethical leadership on employees' readiness to change and presented it in the conference of The European Association of Work and Organizational Psychology in Dublin last May.
2. I have obtained a won a fellowship from Tokyo Foundation through their Sylff fellowship program (Sasakwa Royichi Young Leaders Fellowship). The fellowship is worth 15000 \$. I am also eligible now to apply for more fund for my research visits, organizing conferences, post doctor as I have become part of their community.

This was a great achievement as I have had very tough conditions in my PhD, but I am now turning the situation upside down.

Looking forwards hearing from you;

Sincerely,

Mohamed Metwally

John Peter Meyer <meyer@uwo.ca>

Wed 25/10/2017 12:29

Metwally, Mohammed Elmetwally

Dear Mohamed,

Thanks for sharing the summary of you preliminary research. I'll try to take look at this when I have some time. In the meantime, it should be fine to use a 5-point scales and translation is fine. It would be a good idea to do a back-translation to make sure that the item content remains the same.

Best regards,

John Meyer

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Rm 8411, Social Science Centre

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Western 

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PABLO RUIZ PALOMINO <*Pablo.Ruiz@uclm.es*>

Mon, 8

Aug 2016,

17:15

to me

Hi Mohamed:

I am responding to your questing below in sequence:

1. Why didn't you use the scale of Brown et al, (2005) in the supervisory level ethical leadership and in the top level. Because employees were the respondents/informants, so they are not possible to know the moral person of Top Managers as they do not interact with them at all

2. Do you think that top managers only have posses' characteristics of moral managers? I know that your argument is based on previous literature. But, don't you think that it can be an area of future research to assume that they are moral managers and moral persons? Yes of course, they have characteristics of moral persons...but this dimension should be assessed by close supervisors who interact frequently with them, I think. I think it is known they are both moral person and manager...so I do not see it a very important area of future research.

It is interesting to do research about it but I guess that managers in general are known to have both moral person and moral manager dimensions. Concerning your third question, of course I can have a look to your research proposal....

yours, Pablo

Data Collection Instrument

Subordinates Form

To be filled by the research team:

Name of Participant:

Job Title:

Department:

Unit (if applicable):

Code of Group:

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Dear Doctor

You are invited to participate in a research survey on the impact of ethical leaders on their follower's behaviour and psychological wellbeing during organizational change. Your participation will help us understand the current changes taking place in your organization that might be affecting you. It will also help us grasp the impact of your leaders on your perception on these changes. Your participation is voluntary, and you will not be penalized if you choose not to participate. Your participation, however, is critical to this research and may ultimately help improve leadership and wellbeing of employees in your organization and many others. Your leaders will be asked some questions about the behaviour of all their subordinates. Consequently, we had to ask you about your name to match your responses with your leaders. You are guaranteed a complete confidentiality. Your Responses will not be shared with your leaders and top management by any mean. It will be aggregated and analysed for the purpose of academic research by university researchers outside of your organization and outside of Egypt.

By completing the enclosed survey, you acknowledge that you have given your informed and free consent to be a participant in this study. Thank you!

1. Evaluating your perception on how ethical your leader is

For each of the following statements, select the level of agreement that best describes your perception of the leadership style of the head of your department/unit. (1= strongly disagree, 2=disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	Level of Agreement				
	1	2	3	4	5
<u>My leader.....:</u>					
1. Listens to what employees have to say.					
2. Disciplines employees who violate ethical standards.					
3. Conducts his/her personal life in an ethical manner.					
4. Has the best interests of employees in mind.					
5. Makes fair and balanced decisions.					
6. Can be trusted.					
7. Discusses business ethics or values with employees.					
8. Sets an example of how to do things the right way in terms of ethics.					
9. Defines success not just by results but also by the way they are obtained.					
10. When making decisions, asks “what is the right thing to do?”					
11. Interested in how I feel and how I am doing.					

12. Takes time for personal contact.					
13. Pays attention to my personal needs.					
14. Takes time to talk about work-related emotions.					
15. Is genuinely concerned about my personal development.					
16. Sympathizes with me when I have problems.					
17. Cares about his/her followers.					
18. Holds me accountable for problems over which I have no control. *					
19. Holds me responsible for work that I have no control over. *					
20. Holds me responsible for the things that are not my fault.					
21. Pursues his/her own success at the expense of others*					
22. Is focused mainly on reaching his/her own goals. *					
23. Manipulates subordinates.					
24. Allows subordinates to influence critical decisions.					
25. Does not allow others to participate in decision making*					
26. Seeks advice from subordinates concerning organizational strategy.					
27. Will reconsider decisions on the basis of recommendations by those who report to him/her.					
28. Delegates challenging responsibilities to subordinates.					
29. Permits me to play a key role in setting my own performance goals.					

30. Indicates what the performance expectations of each group members are.					
31. Explains what is expected of each group member.					
32. Explains what is expected of me and my colleagues.					
33. Clarifies priorities.					
34. Clarifies who is responsible for what.					
35. Would like to work in an environmentally friendly manner.					
36. Shows concern for sustainability issues.					
37. Stimulates recycling of items and medical materials in our unit.					
38. Clearly explains integrity related codes of conducts.					
39. Explains what is expected from employees in terms of behaving with integrity.					
40. Clarifies integrity guidelines.					
41. Is not concerned with the issue of integrity.*					
42. Ensures that employees follow codes of integrity.					
43. Stimulates the discussion of integrity issues among employees.					
44. Compliments employees who behave according to integrity guidelines.					
45. Keeps his/her promises.					
46. Can be trusted to do the things he/she says.					
47. Can be relied on to honour his/her commitments.					

48. Always keeps his/her words.					
49. Individualizes his/her attention.					
50. Focuses on my strengths.					
51. Teachers and coaches.					
52. Differentiates among us.					

2.1. Do you think your organization is currently witnessing any form of change(s)?

If yes then please choose all that applies:

- Relocation
- Technology related change
- Merger
- (*): reversed statements
- People oriented change
- Change in the external operating environment that affects our internal operating environment
- Process oriented change
- Other (please specify below)
- Organizational restructuring
- Medical process re-engineering
- Organizational Restructuring
- Downsizing

.....

.....

.....

.....

.....

.....

.....
.....
.....

2.2 Please rank the changes that you have chosen from largest (having the most Impact on you personally) to the smallest (having the least impact on you personally). Please include any other change that you might have added. Please choose up to three changes (i.e.: Please move to the next question in case you chosen just one form of change):

1.

2.

3.

Please focus on the change that had the biggest impact on you while answering all the next questions:

2.3 Considering that change, is it still occurring?

2.4. How significant would you consider this change to be for your organization? Please choose a number from 1 to 5 (1 = extremely minor, 2 = minor, 3 = neutral, 4 = major, 5 = extremely major):

2.5 Impact of the Change:

For each of the following statements, select a number from 1 to 5 to describe the impact of the ongoing change on your organization, your job performance and your personal life (1 = large negative effect, 2 = negative effect, 3 = neutral, 4 = positive effect, 5 = large positive effect).

Items of Assessment	Level of Agreement				
	1	2	3	4	5
<u>What is the impact of this change on.....?</u>					
1. Your job performance?					
3. The climate in your organization?					
4. Your non-work life?					

2.6 Scope of Change

For each of the following statements, select the level of agreement that better describes the change characteristics and triggers (1= strongly disagree, 2=disagree, 3= neutral, 4= agree, 5= strongly agree).

	Level of Agreement				
	1	2	3	4	5
1. This change can be perceived as a big scale change.					
2. This change has a radical scope.					
3. This change is crucial to the survival of the organization.					
4. This change was a reaction to a sudden change in our external environment.					

3. Evaluating your psychological responses to the ongoing change(s)

For each of the following statements, select your level of agreement that best describe what you feel about the change that you have previously chosen. (1= strongly disagree, 2=disagree, 3= neutral, 4= Agree, 5= strongly Agree)

Statements	Level of Agreement				
	1	2	3	4	5
1. I believe in the value of this change.					
2. This change is a good strategy for this organization.					
3. I think that management is making a mistake by introducing this change.					
4. This change serves an important purpose.					
5. Things would be better without this change					
6. This change is not necessary					
7. I think that management is making a mistake by introducing this					
8. I have no choice but to go along with this change.					
9. I feel pressure to go along with this change					
10. It would be too costly for me to resist this change.					
11. It would be risky to speak out against this change.					
12. Resisting this change is not a viable option for me.					
13. I feel a sense of duty to work toward this change.					
14. I do not think it would be right of me to oppose this change.					
15. I would not feel badly about opposing this change.					
16. It would be irresponsible of me to resist this change.					
17. I would feel guilty about opposing this change.					
18. I do not feel any obligation to support this change					

4. Measuring your level of perceived change uncertainty

For each of the following statements, select a number from 1 to 5 that describes the extent to which you feel uncertain about different aspects of the ongoing change. (1= extremely uncertain, 2 = uncertain, 3 = neutral, 4 = certain, 5 = extremely certain)

Statements	Level of Agreement				
	1	2	3	4	5
<u>To what extent do you feel uncertain about.....:</u>					
2. The external environment in which the organization will have to exist?					
3. The overall objective/mission of the organization?					
4. The ability of the organization to meet future patients` needs?					
5. The existing reporting structures (i.e. the chain of command) in the organization?					
6. The role/function of different work units within the organization?					
7. How your work unit contributes to the overall mission of the hospital?					
8. Whether work units in the hospital will be re-organized in the future?					
9. The future of your position in the hospital/university?					
10. What you need to do to advance within the hospital?					
11. Whether you will have to learn new medical skills?					
12. The extent to which your job/role tasks will change?					
13. The extent to which the economic crisis in Egypt would become worse?					
14. The extent to which my work would be affect by economic turbulence in Egypt?					
15. The work pressure and the uncertainty about my working hours due to the overall turbulence in our external environment?					
16. The extent to which our organization would not survive due to the economic crisis?					

5. Personal data

5.1. Gender:

5.2. Highest Degree obtained:

5.3. Years of practice:

5.4. Years of experience in that organization:

Leader's Form

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Dear Doctor

Head of the department/ the unit of:

You are invited to participate in a research study about organizational change in the Egyptian health sector. This research is conducted by an Egyptian researcher from The University of Deusto in Spain. You are being asked to participate in this important research because we are trying to gain a better understanding on the impact ethical leadership on employees' reactions to organizational change in the non- governmental Egyptian Health Sector.

You are guaranteed a complete anonymity as all results will be kept strictly confidential. Your participation is voluntary, and you will not be penalized if you choose not to participate. If you agree to participate, you will be asked to kindly give us some information about any form of change in your organization that might be affecting you on the personal and operational level in your medical unit. Moreover, you will be asked a series of questions regarding the behaviour of your subordinates. You are free to choose any three subordinates, please pick the three you are most familiar with their support or resistance to any ongoing changes.

By completing the enclosed survey, you acknowledge that you have given your informed and free consent to be a participant in this study. Thank you!

2. Evaluating Subordinate's Behavioural Reactions to Change

For each of the following statements, please select the level of agreement that best describes your perception of subordinates' behavioral responses to the ongoing change. (1= strongly disagree, 2=disagree, 3= neutral, 4= agree, 5= strongly agree).

Statements	<u>Subordinate A</u>					<u>Subordinate B</u>					<u>Subordinate C</u>				
	Name:					Name:					Name:				
	Position:					Position:					Position:				
<u>My subordinate:</u>	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
1. Complies with my organization's directives regarding the change.															
2. Accepts role changes.															
3. Adjusts the way he/she does the job as required by this change.															
4. Complies with the directions regarding the change only to the extent that is absolutely essential for his survival.															
5. Only works on change-related activities that are directly relevant to his/her job.															
6. Only does what is specifically required when it comes to the change.															
7. Only does what is absolutely necessary when it comes to this change.															

8. Complies only with those directives regarding the change that is absolutely essential for his/her survival.															
9. Works toward the change consistently.															
10. Remains optimistic about the change, even in the face of adversity.															
11. Avoids former practices, even if they seem easier.															
12. Engages in change-related behaviours that seem difficult in the short-term but are likely to have long-term benefits.															
13. Seeks help concerning the change when needed.															
14. Doesn't complain about the change.															
15. Tries to keep myself informed about the change.															
16. Is tolerant of temporary disruptions and/or ambiguities in my job.															
17. Encourages the participation of others in the change.															
18. Speaks positively about the change to co-workers.															
19. Speaks positively about the change to outsiders.															
20. Tries to find ways to overcome change-related difficulties.															
21. Perseveres with the change to reach goals.															

3. The Behavioural Continuum

There are many different levels of support to change. For instance, negative resistance refers to the resistance of change efforts in a hidden way. Active resistance is a bit better as individuals tend to resist change efforts but a covert way. Whereas, *mere compliance behaviours*, represents the demonstration of the very least minimum efforts to support change. *Compliance behaviours*, represents the actual basic level of support where subordinates exert the minimum effort to compile with the change directions. A higher level of support can occur through *cooperation behaviours*. This behaviour represents going along with the spirit of change and being prepared to make modest sacrifices. *Championing behaviours* represent the higher level of support. These behaviours represent the **demonstration of extreme enthusiasm for a change** by going above and beyond what is formally required to ensure the success of the change project, **and promoting change to others**. It may include encouraging the participation of others in the change, working extra hours during transition periods, and consistently persevering with the change to ensure its success. There is a spectrum that you will find in the page that represents a range of **behavioral reactions** that your subordinates might exhibit in response to an organizational change. Please place a slash through the portion of the continuum which you feel best represents *their reaction to the change* that you described. *You may place the slash anywhere on the continuum*, including portions of the continuum that are *between* two categories. You will find three spectrums below in order to rate the behaviour of the same three subordinates that you have chosen previously.

Subordinate A

Name:

--	--	--	--	--	--

Active Resistance

Passive Resistance

Mere Compliance

Compliance

Cooperation

Championing

Subordinate C

Name:

--	--	--	--	--	--

Active Resistance

Passive Resistance

Mere Compliance

Compliance

Cooperation

Championing

Subordinate C

Name:

--	--	--	--	--	--

Active Resistance

Passive Resistance

Mere Compliance

Compliance

Cooperation

Championing

4. Personal data

4.1. Gender:	4.2. Highest Degree obtained:
4.3. Department:	4.4. Current Job Title:
4.4. Years of practice:	4.5. Years of Experience in the present hospital:
4.6. Medical Unit (If applicable):	