Unravelling the relationship between organisational inertia, change resistance and (un)learning

Master Thesis

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Abstract

Most prior research has stressed factors on an organisational level, such as rapid changes in an organisation's environment, as primary drivers behind organisational inertia. However, the current study argues that individual's resistance to change is also a critical factor which fosters organisational inertia. Ultimately, the goal of this study was to construct a theoretical research model through an extensive theoretical framework which connects change resistance attitudes to organisational inertia and the (un)learning sources to change resistance attitudes. Furthermore, the goal was to find first empirical evidence for the research model. The individual change resistance attitudes were extracted from a comprehensive literature review conducted by Choi (2011), which entail readiness-, openness-, commitment- and cynicism to change. Commitment to change was extended with Herscovitch & Meyer's (2002) three component model, which consists of affective-, continuance- and normative commitment. Subsequently, remedies for change resistance attitudes were extracted from multiple studies, such as a synthetisation of widely-acknowledged learning theories (Dochy, Gijbels, Segers, & Van den Bossche, 2012) which were unlearning, dialogue, experimentation and interaction with the external environment. Multiple hypotheses were formulated and answered through a questionnaire in one middle-sized organisation in the Netherlands. The questionnaire was filled in by 121 participants and contained 56 items which were extracted from previous empirical research. Multiple regression analyses resulted in partially confirmation of all hypotheses. Taken together, the research model was able to explain some significant relations between organisational inertia, change resistance attitudes and (un)learning sources, but not all, implicating the complex nature of organisational inertia and more broadly episodic organisational change. Several theoretical and practical implications, limitations and suggestions for further research are suggested. For instance, further research could fundamentally reconstruct the concepts of, and interaction between unlearning and inertia.

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Introduction

This paper aims to bridge the gap between organisational (un)learning and change theories by combining prominent variables in these studies on an individual and organisational level, such as inertia, individual change resistance and organisational (un)learning. Since Lewin (1947), episodic organisational change and learning in organisations have been unprecedented topics among both scholars on the one hand and practitioners on the other. Episodic organisational change theories go as far back as the 1940s, when Lewin (1947) first introduced the concept of freezing, unfreezing and refreezing as a process to manage change in organisations. Since then, scientific understanding of changing and learning in organisations and its antecedents has substantially changed as organisational studies evolved. For instance, some scholars found that Lewin's model mostly focuses on changing groups in organisations and not so much on changing an organisation as a whole (Bartunek & Woodman, 2015) and that the model oversimplifies change, not taking natural by-products from the change into account (Cummings, Bridgman, & Brown, 2016). The general consensus among scholars became that learning as a by-product occurs during episodic organisational change and vice versa, with e.g. Altman and Illes (1998) calling learning the 'language of change'. Nevertheless, despite the evolvement of the understanding about episodic organisational change and learning, most organisations still struggle with implementing episodic organisational change in practice with an overall success rate of below 30 percent (e.g. Al-Haddad & Kotnour, 2015).

The main reason for this struggle is that episodic organisational change typically arises during periods of crisis, in which internal practices are beginning to misalign with demands from the external environment (Tsang & Zahra, 2008; Weick & Quinn, 1999). It is often argued that this misalignment between the internal practices and external environment is caused by top management, which rationalizes current organisational failures, holds on to past successes and misinterpret external events (Nystrom & Starbuck, 2004). Additionally, it could be that

management knowledge never reaches lower hierarchical parts of the organisation, resulting in a lack of lower-level knowledge and an inability to change along with the environment (Stopford, 2003). However, as most scholars attribute factors that obstruct episodic organisational change during crises to an organisational level, the role of individuals during these crises is often overlooked within episodic organisational change literature. For example, Feldman and Pentland (2003) consider organisational routines as sources for organisational change, while Altman and Illes (1998) scrutinize leadership members as drivers of change, because they initiate transformational learning. This is remarkable, as individuals within organisations actually have to implement episodic changes and thus significantly influence the process of episodic organisational change (Choi, 2011; George & Jones, 2001). The influence of individuals during episodic organisational change comes from the fact that they could display certain attitudes in favour or working against intended changes, which could be described as change resistance (Choi, 2011; Maurer, 1996). Institutionalizing change inevitably triggers change resistance as organisational members naturally rush to defend their position, because their security is being threatened. As a result, changes within the organisation might not be implemented as the members who need to implement them resist those changes (Maurer, 1996). When organisational members resist change and defend their position within the organisation For example, individuals and leaders alike could lack the right competencies and skills to cope with the changes in their work role (Battilana, Gilmartin, Sengul, Pache, & Alexander, 2010; Heilmann, 2007), thus viewing change as a threat. Therefore, it is necessary to account for the role of individuals and their attitudes during organisational change crises as they actually implement the changes in practice (George & Jones, 2001). As learning could be considered a natural by-product of change in general (Altman & Iles, 1998), the current study draws on the facilitation of learning to foster positive change attitudes. In other studies, it is often found that the facilitation of learning is intertwined with, and actually fosters favourable conditions for

change (Battilana & Dorado, 2010; Heilmann, 2007; Svetlik, Stavrou-Costea, Vakola, Soderquist, & Prastacos, 2007). Hence, learning cannot be overlooked in relation to individual change resistance attitudes, so the current study utilizes learning theories to cope with these attitudes, in turn reducing organisational change crises.

While learning in organisations is widely studied, another construct that could enforce these learning efforts is unlearning (Tsang & Zahra, 2008). Suitable for the goals of the current study, unlearning could simultaneously be utilized with organisational learning efforts to discard existing routines (Feldman & Pentland, 2003), individual skills (Battilana et al., 2010) and attitudes (Choi, 2011; George & Jones, 2001) which in turn fits the concept individual change attitudes. Firstly studied by Nystrom and Starbuck in 1984 (Nystrom & Starbuck, 2004), throughout the years the concept of unlearning old, ineffective attitudes and skills has rarely been empirically studied (Tsang & Zahra, 2008), although the concept could be valuable to add on change resistance literature. Through unlearning, the pivotal role of individuals in causing organisational crises could be positively influenced. Ultimately, when individuals do not unlearn their old behaviours, inefficient and old attitudes are not made obsolete and thus do reduce the effectiveness of change implementation (Akgün, Byrne, Lynn, & Keskin, 2007; Godkin, 2010; Mezias, Grinyer, & Guth, 2001). Hence, the role of unlearning during organisational change crisis could significantly deepen scientific understanding of change within organisations. This could pave the way for deeper empirical research on the role of (un)learning on change resistance attitudes, which is currently lacking. This is alarming, as most scholars that did study unlearning in the context of organisational change found the concept to be critical in fostering successful organisational change through individuals (e.g. Akgün et al., 2007; Godkin, 2010). Consequently, unlearning is a concept that cannot be neglected anymore in change literature and is in desperate need of some attention.

Concluding, a model which connects individual change resistance, (un)learning and learning could deepen scientific understanding on coping with organisational change crises. To realize this, a firm theoretical model needs to be designed to help organisations overcome individual change resistance via (un)learning efforts in the context of organisational crises. However, designing such a conceptual model is a complex matter. Not only are different perspectives such as educational and business administration present, even complexity theories used in natural sciences (Burnes, 2005) are utilized for an attempt to clarify episodic organisational change and learning, indicating its complicated nature. Another reason for the complexity is that most of episodic organisational change and organisational learning theories aim their model either on an individual or organisational level only, with studies like those of Mumford (1991) and Rhodes (1996) being rare efforts to connect both levels, as well as connecting episodic organisational change and learning in organisations. While episodic organisational change and learning contain different and overlapping variables, this is also the case on individual and organisational level. This interaction between organisational crises, individual change resistance and (un)learning causes complexity, which is not yet captured in a single accessible model.

Hence, despite many existing separate frameworks and theories regarding episodic organisational change and learning in organisations (Al-Haddad & Kotnour, 2015), a connection between these variables has yet to be established. It is why Austin and Bartunek (2003) critically called for a link between theories of individual change and organisational change and advocated that multilevel theorizing, in the case of this study the interaction between organisational crises and individual change resistance, could expand current understandings of organisational change and learning substantially.

Summarizing, the current study’s contribution consists of theoretical and empirical components. A research model is constructed and first empirical evidence is found for this

model, which ought to clarify the relationship between inertia, change resistance and (un)learning in organisations. Both scholars and practitioners could greatly benefit from such a model. First, the current study generates a deeper scientific understanding into the role of individuals, a group that is often neglected during organisational change crises (e.g. George & Jones, 2001). Subsequently, the role of (un)learning efforts is examined and whether these concepts yield added-value in reducing change resistance attitudes in the context of organisational crises. Over time, academic literature has stressed the importance of unlearning (Akgün et al., 2007; Godkin, 2010; Nystrom & Starbuck, 2004; Tsang & Zahra, 2008) and learning (Battilana et al., 2010; Heilmann, 2007; Levitt & March, 1988; Svetlik et al., 2007) on change resistance attitudes and the current study combines those factors. Second, practitioners could utilize these insights to cope with individual change resistance attitudes when their organisation faces change crises. As every organisation sooner or later faces a change crisis (Barnett & Pontikes, 2008), the research model developed in the current study could yield additional opportunities for practitioners to implement changes in their organisation. For instance, practitioners that are responsible for implementing episodic changes could use the specific learning sources examined in this study to reduce change resistance attitudes in favour of implementing intended changes.

Theoretical framework

In this section, the different concepts are described and linked from the context of episodic organisational crises. First, organisational change crises are described in the context of episodic organisational change. Second, the role of individuals during these change crises is outlined, followed by the clarification of individual change resistance attitudes. This has resulted in a linkage between individual change resistance attitudes and organisational change crises. Third, unlearning is illustrated and linked to the individual change resistance attitudes. Lastly, three learning sources were described which are dialogue, experimentation and

interaction with the external environment derived from existing, well-known learning theories. Both unlearning and learning sources were linked to the individual change resistance attitudes, resulting in a research model.

Conceptualising crises during episodic organisational change

The basis of the research model is organisational change crisis, which is intertwined with episodic organisational change. To respond to the ever-changing needs of external stakeholders, organisations need to be decisive in aligning their practices and individuals to respond to these needs (Al-Haddad & Kotnour, 2015; Moran & Brightman, 2000). In particular, two main change processes are present within academic literature, namely episodic change and continuous change. The continuous change approach is an evolving, incremental form of change in organisations, while episodic organisational change is discontinuous, intermittent and consists of change episodes (Weick & Quinn, 1999). The current study focuses on episodic organisational change, as more efforts are necessary to make this kind of change a success as opposed to implementing small, subsequent changes that continuous change incorporates according to Pettigrew, Woodman and Cameron (2001). Furthermore, as continuous change is a cumulative sum of small adjustments across units in any given organisation, such as changing the structure of an office or changing a process over a long period of time, the measurement of the concept is difficult, costly and time-consuming (Pettigrew et al., 2001). Hence, episodic organisational change is a more feasible measurement option within the framework of the current study. Besides resource-based reasons, this kind of organisational change is inherent to organisational crises (Kelly & Amburgey, 1991; Weick & Quinn, 1999) which is the focus of the current study. To better understand the whole episodic change process, one must understand organisational change crisis first as stated by Akgün et al. (2007).

Episodic organisational change is often described as intentional and infrequent, typically invoked when management tries to correct misalignment between the external environment and

current practices (Jack Walker, Armenakis, & Bernerth, 2007; Tsang & Zahra, 2008; Weick & Quinn, 1999), such as technological developments, changes in key positions (Trader-Leigh, 2002) or shifts in markets which render a product radically obsolete (Walinga, 2008). Consequently, episodic organisational change is almost always triggered, but also inhibited, by crises in organisations due to the aforementioned misalignment (Kelly & Amburgey, 1991; Weick & Quinn, 1999).

Organisational inertia

A misalignment between the internal practices of an organisation and the needs of the external environment could be attributed to organisational inertia, in short inertia. Inertia refers to the inability of an organisation to keep up with the rapidly changing environment (Weick & Quinn, 1999). In other words, organisations struggle to implement significant changes, thus they cannot keep up with the external environment resulting in inertia. Accordingly, the current study conceptualizes inertia as the organisational change crisis that inhibits significant changes, which cause organisations to misalign with their respective external environment.

A variety of factors can be sources for inertia, such as a slow action response of the organisations' leadership team or when the management team does not pick up environmental changes and cues at all (Godkin, 2010). Often times, the way managers make sense of, and act on, their environment are based on tacit assumptions and knowledge. As these tacit assumptions and knowledge are hard to recognize and even harder to implement and transfer in practice (Stopford, 2003), tacit understandings could result in inertia as knowledge of top management regarding the environment is not transferred and implemented into the rest of the organisation (Nystrom & Starbuck, 2004). While this management knowledge is necessary to incorporate relevant changes, it is often left unspoken by the management (Stopford, 2003). Consequently, significant portions of environmental knowledge are left unexpressed throughout the organisation as most management knowledge is tacitly held, which could result in further inertia

as the organisation cannot act on previously unknown external pressures (Godkin, 2010; Huang, Lai, Lin, & Chen, 2013). On the other hand, organisations that do align with the external environment tend to overcome their competitors, as competition drives a process of contextualization. However, these successful organisations cannot avoid inertia; when moving into new markets, the exploration of new practices has been limited by the successful exploitation of current practices in the old context (Barnett & Pontikes, 2008). Hence, sooner or later, the majority of organisations have to cope with inertia as organisations naturally fight change, despite their successfulness in a particular context (e.g. Godkin, 2010; Weick & Quinn, 1999; Barnett & Pontikes, 2008).

In short, the root source of most inertia is often rigidity in an organisation, paired with artificial solutions which delay needed changes. The delay of changes then causes both inertia and rigidity of beliefs to intensify, which further limits the organisation to respond to the external environment (Tsang & Zahra, 2008). However, as inertia prevails due to these rigid beliefs, individuals in the organisation tend to restore the performance of said organisation to a satisfactory degree, as performance of the organisation often falls initially (Barnett & Pontikes, 2008; Winter, 2000). When these rigid beliefs are broken, inertia may be addressed as the most needed changes, or outcomes of these changes, could be implemented into everyday practices within an organisation, such as new work routines (Feldman & Pentland, 2003). Admittedly, it is often unclear to what degree the necessary changes have been implemented sufficiently. For instance, when an organisation implements a new technology, an ‘endpoint’ must be defined; a point at which the change, in this instance the new technology, is sufficiently adopted. To measure these outcomes and incorporation of intended changes, the satisficing principle as proposed by Winter (2000) is adopted in this paper. First used in measuring results in capability learning, the satisficing principle entails the moment when overt learning efforts are stopped, because satisfactory achievements have been realised (Foss, Heimeriks, Winter, & Zollo,

2012). When the satisficing principle is applicable in an organisation during significant changes, inertia is counteracted, for the reason that the changes have been adopted to a sufficient degree that cause the organisation to align with the respective context. In a study conducted by Trullen, Bos-Nehles and Valverde (2020), it was proposed that implementation processes are dynamic, which begin with adoption of new practices and end by incorporating changes into routines of the organisation. Both Foss (2012) and Trullen et al. (2020) thus give insights into when changes are sufficiently integrated within an organisation to the extent that inertia is counteracted.

In conclusion, inertia is inherent to episodic organisational change. Organisations that attempt to implement significant changes are almost always confronted with inertia, with a variety of contributing factors. As inertia could be the cause of problems that occur during episodic organisational change, the current study focuses on revealing how organisations can cope with inertia by examining critical factors from existing literature. However, successfully coping with inertia is harder than it seems, with organisational factors having a prominent role with most scholars. This causes another source for inertia to be largely neglected: individual members within the organisation.

Individual change resistance as a source of inertia

The study proceeds to examine the role of individuals during inertia. As organisational factors for inertia are prevalent within academic literature, the pivotal role of individual employees during inertia is frequently neglected by researchers (George & Jones, 2001; Wolf, 2013). For instance, Huber, Sutcliffe, Miller and Glick (1993) argue that inertia emerge from five major sources, which are the environment, top management, strategy, structure and organisational performance. Furthermore, Trader-Leigh (2002) focused on organisational level factors, such as the destabilization effect change efforts have on the continuity of the organisation, resulting in change resistance. Furthermore, there are a variety of other scholars

(e.g. Kelly & Amburgey, 1991; Schaefer, 1998) whom view inertia as a phenomenon caused by factors on an organisational level. As a consequence of this viewpoint, inertia is often regarded as a phenomenon that occurs because of misalignment between factors on an organisational level. However, individuals themselves could similarly prove as factors of inertia as is theorized in this study and little other scholars, such as Huang et al. (2013) and Wolf (2013).

The reason why an individual level viewpoint is necessary to investigate is that the ability for an organisation to change stems from its individuals as they are the creators of the organisation as a whole (George & Jones, 2001; Wolf, 2013). In other words, individuals have to actually carry out the implemented changes. However, as individuals naturally fight changes (Vakola & Nikolaou, 2005), the implementation of necessary changes could be problematic as individuals tend to cling to old beliefs, attitudes and organisational routines (Becker, 2008). Consequently, the resistance of individuals within an organisation is often called the number one reason why change initiatives fail (Vakola & Nikolaou, 2005). In this matter, individual change resistance could be an obstructing factor fostering inertia, as individuals could oppose significant changes in their work routines (Huang et al., 2013), consequently reinforcing the status quo and inhibiting the search for new ways of working (Akgün et al., 2007). Conversely, it is precisely the willingness of individuals in an organisation to abandon past practices to overcome inertia (Becker, 2010).

The phenomenon of individual change resistance entails an individuals' attitudes which slow down or entirely terminate an intended organisational change (Lines, 2004). The cause of change resistance could often be attributed to individual issues, such as job insecurity (Chawla & Kelloway, 2004; Schumacher, Schreurs, Van Emmerik, & De Witte, 2016) and stress (Smollan, 2015; Vakola & Nikolaou, 2005). Furthermore, individuals could experience general uncertainty about the future and feelings of failure towards new tasks (Wanberg & Banas,

2000). These feelings could be the root of opposing the necessary changes. This then causes an inability of the whole organisation to change, resulting in inertia (George & Jones, 2001; Pardo del Val & Martínez Fuentes, 2003). Subsequently, individuals could also lack new competences and skills that are necessary to implement the proposed changes. For instance, management could lack competences to successfully involve lower-level individuals in times of change (Battilana et al., 2010), which in turn could foster individual change resistance. Hence, giving attention to individuals' attitudes could prove beneficial for invoking intended changes and prevent inertia. For instance, when issues regarding change involving individuals are discussed and explored, change projects that everyone identifies as significant arise, as more creative energy is released and trust is built (Weisbord & Janoff, 2010).

As a result, in order to cope with inertia, organisations should take the role of individuals and their resistance to change into account. Hence, individual change resistance is closely linked to inertia (Huang et al., 2013; Pardo del Val & Martínez Fuentes, 2003; Schaefer, 1998) and therefore an important concept to utilize in the current study as they could collectively slow down or terminate changes. In the next paragraph, these specific individual change resistance attitudes are illustrated.

Change resistance attitudes

In regards to these individual change resistance, Choi (2011) has identified four constructs from the existing individual change literature, namely readiness-, commitment-, openness- and cynicism to change. These attitudes mainly rely on an individual's beliefs in the intended changes; therefore, these constructs are highly important as rigid beliefs could be considered as a source of inertia (Akgün et al., 2007; Huang et al., 2013).

First, readiness to change refers to the perceived management support for change, personal benefits, needs for change and individual capacity to realize successful change (Choi, 2011). According to Rafferty, Jimmieson and Armenakis (2013) individual change readiness

consists of two components, namely cognitive and affective change readiness. Cognitive change readiness refers to whether an individual beliefs that change is necessary, that he or she has the capacity to successfully undertake change and that the change has benefits for the his/her role (Rafferty et al., 2013). For instance, when an individual experiences job insecurity, they are generally not change ready which could result in change resistance (Schumacher et al., 2016). Furthermore, affective change readiness relates to the positive and negative affective emotional responses to a changing environment, e.g. feelings of optimism and confidence towards the coming change. In relation to this, critical factors may influence the change readiness of individuals, with one of the most significant factors being the general vision towards the change, relating to change capacity and support. Organisations could foster change readiness on an individual level by influencing the general orientation towards change (Caldwell et al., 2008).

Second, commitment to change refers to the beliefs in the overall benefits of the change, recognition of its financial costs and whether the individual feels obliged to provide support for the change (Choi, 2011). This definition is derived from the three-component model of individual commitment towards change by Herscovitch and Meyer (2002), which describe three kinds of commitment: affective (individuals believe the change has inherent benefits), continuance (individuals are conscious about the (financial) costs of change) and normative commitment (individuals feel obliged to provide the necessary support to successfully implement the change). In the matter of commitment to change, Chih (2012) found that individual commitment to the organisation has the most effect on both other attitudes towards change as the likelihood to implement changes successfully. Factors that influence the commitment of individuals towards change include the fit of the change with the strategic vision of the organisation and the degree of job autonomy an individual has.

Third, openness to change refers to the degree in which individuals look forward to the change and whether it is related positively to their job (Choi, 2011). During times of change, openness to change of individuals is essential to maximize outcomes of the intended change, in turn de-risking the likelihood of failed change interventions. To increase the openness to change in an organisation, often clear communication needs to be fostered and participation in change among individuals needs to be enhanced (Chawla & Kelloway, 2004). Furthermore, Wanberg and Banas (2000) argue that openness to change is generally critical in fostering cooperation and communication among individuals and decrease hostility towards change. Hence, openness to change is a pivotal factor to include in the current study, as an high openness to change could reduce change resistance attitudes (Choi, 2011; Wanberg & Banas, 2000).

Lastly, cynicism to change describes whether individuals are pessimistic about future change initiatives and about the management' skills and competences to realize successful change (Choi, 2011). Wanous, Reichers and Austin (2000) conceptualized cynicism towards change as two dimension, which are pessimism towards change itself and dispositional attributes, which relate to those responsible to implement changes. However, pessimism is of particular interest at it closely relates to generalizable individual attitudes. Conversely, dispositional attributes lack the 'focal specificity' to be practically useful in change management studies, as this could equally relate to any stakeholders besides management, such as union representatives (Albrecht, 2002). Therefore, the current study will mainly focus on the pessimism side of cynicism to change. This concept is of particular interest, as cynicism towards change seems to be a significant moderator in successfully implementing changes. The more (unsuccessful) changes are invoked on individuals, the more likely they are to display cynicism towards the aforementioned change (Brown, Kulik, Cregan, & Metz, 2017). However, in line with the aforementioned constructs, employee involvement has a critical role in preventing change cynicism. The sharing and communication of information while involving individuals

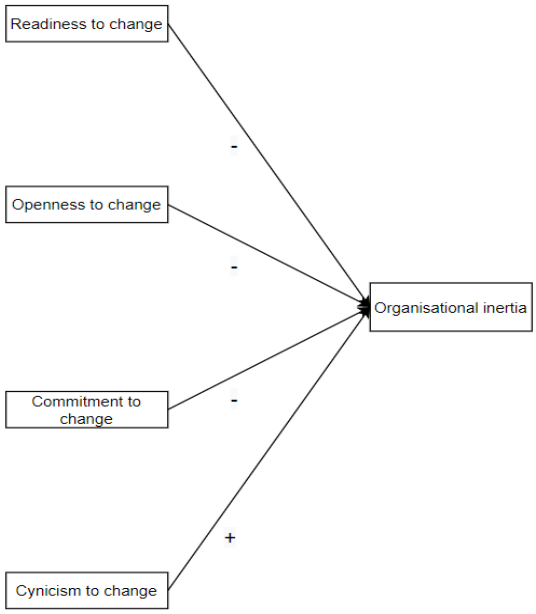
in the decision-making process can decrease the likelihood of change cynicism. Nevertheless, while individuals display cynicism towards the change, change resistance is more likely, in turn enhancing inertia from an individual level (Stanley, Meyer, & Topolnytsky, 2005).

Ignoring these individual resistance attitudes towards the intended change could result in inertia, as individuals' support is necessary for the implementation of intended significant changes (Fernandez & Rainey, 2017) as shown in the research model in Figure 1. To successfully avoid inertia, addressing these individual change attitudes could be crucial. Therefore, the following hypothesis was formulated:

H1: Readiness-, openness- and commitment to change are negatively related to organisational inertia. Cynicism to change is positively related to organisational inertia.

Figure 1

Stage one of the research model



Organisational unlearning

Now individual change resistance attitudes have been linked to inertia in the research model, the role of organisational unlearning is examined in relation to these attitudes. In effective coping with change resistance attitudes, old, inefficient habits, processes and mindsets

need to be eliminated which can be realized through unlearning (Akgün et al., 2007). Unlearning is defined as follows: 'the process of reducing or eliminating pre-existing knowledge or habits' (p. 60) (Akgun, Lynn, & Reilly, 2002). In fact, individuals in organisations that do not unlearn inefficient attitudes, could significantly reduce the effectiveness of the intended change as widely accepted beliefs and processes are still intact (Akgün et al., 2007; Godkin, 2010; Mezias et al., 2001). Hence, for an organisation to successfully cope with change resistance, individuals need to unlearn their old behaviour, as dysfunctional mental models and old knowledge are still present (Godkin, 2010). Thus, unlearning could aid organisations in making individual's perception regarding intended changes more positive, as dysfunctional mental models are removed.

These mental models and knowledge are stored in the organisational memory in the form of first- and second order knowledge. First-order knowledge refers to the explicit knowledge that is present within an organisation, such as how to use its technological systems or how its products are produced. Subsequently, second-order knowledge refers to the beliefs and values within an organisation, which include organisational culture and how individuals ought to interact with each other (Godkin, 2010; Turc & Baumard, 2007). Becker (2010) found that failed previous organisational changes are embedded in the organisational memory, which cause individuals to resist against change as their collective memory deems the new change not worth the effort. Consequently, changes are prevented due to resistant individuals within the organisation (Becker, 2010). Accordingly, unlearning provides a tool for practitioners to eliminate precisely those rigid beliefs in the organisational memory which cause individual change resistance (Wijnhoven, 2001). Through unlearning, already present knowledge structures are removed and new knowledge could be accepted by the members in an organisation (Navarro & Moya, 2005). Hence, the current study conceptualizes unlearning as a

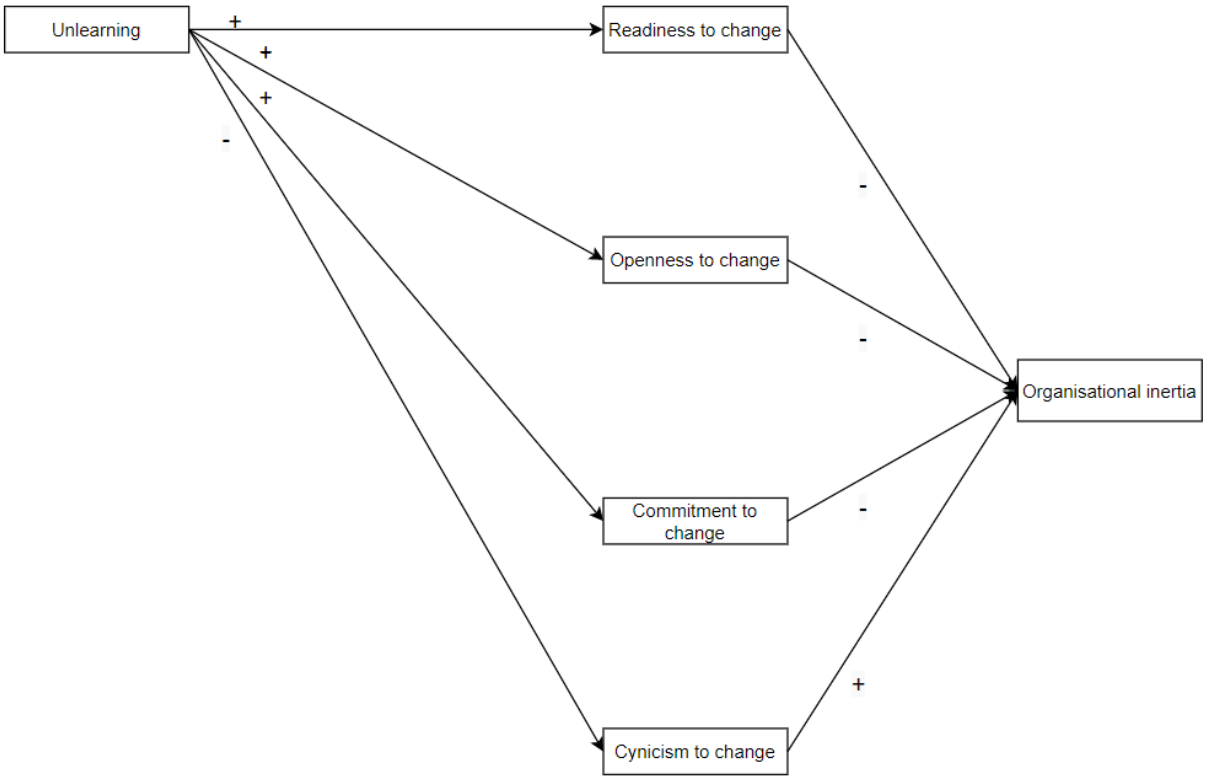
construct in which the organisation is ready to dispose of its old knowledge and embraces new structures and knowledge.

Unlearning could take place through a variety of ways, in which most scholars propose the neutralization of the existing organisational memory, often times called knowledge neutralization. This can be realized by moving existing knowledge and routines too difficult to access places in the organisations and removing the support for the knowledge (Akgün et al., 2007; Turc & Baumard, 2007). For instance, managers could banish technological systems and replace them with new ones, resulting in unlearning of old knowledge and learning new knowledge on an individual level (Becker, 2010). Besides the elimination of individual knowledge by exclusion, organisations could remove current employees holding key management positions, resulting in a) invalidity of old beliefs and structures and b) in eliminating explicit knowledge the managers' possessed (Turc & Baumard, 2007). This could be an effective way of unlearning, as it was found by Becker (2008) that other individuals significantly influence the likelihood of an individual to unlearn. Hence, organisations that apply unlearning to influence change resistance attitudes are more successful in sustainable changing their organisation and avoiding inertia (Becker, 2008, 2010), as individual change resistance is less likely, because old habits and beliefs are made irrelevant to the new goals of the organisation. Unquestionably, unlearning could aid stimulating positive change attitudes and needs to be examined in the relation to individual change resistance and therefore the following hypothesis is formulated:

H2: Unlearning in the organisation is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change.

Figure 2

Stage two of the research model



Facilitating learning to influence individual change resistance attitudes

Finally, the research model has linked unlearning to individual change resistance in the context of inertia; now, the study proceeds to examine the role of learning in coping with change resistance attitudes. During unlearning of old attitudes, the learning process could take a prominent role in the development of new attitudes and incorporate new environmental knowledge in individuals (Tsang & Zahra, 2008). In this matter, the facilitation of learning efforts takes a central role in developing necessary and rapidly-outdating mindsets for employees to realize a competitive advantage (Manuti, Pastore, Scardigno, Giancaspro, & Morciano, 2015). According to Levitt and March (1988), an organisation is learning if it allows and incorporates external influences in everyday routines to guide individuals' behaviour. However, there is an ongoing debate whether organisations or individuals learn and there is a growing amount of empirical evidence that there is a connection between the two levels

(Antonacopoulou, 2006). This connection mostly encompasses the influence of learning individuals on organisational outcomes and knowledge. In order to positively influence this, organisations need to facilitate learning between its individuals, as the interaction between individuals fosters learning and stimulates to share tacit knowledge (Sharkie, 2003; Svetlik et al., 2007). For instance, when individuals between teams work together, knowledge and tacit understanding can be shared and developed (Senge & Sterman, 1992).

Consequently, learning sources could prove beneficial to cope with change resistance attitudes during significant changes and a link between these concepts needs to be established to assist practitioners and scholars. Hendry (1996) did a first attempt to establish such a link by focusing on building individual learning capacity as a prerequisite for sustainable organisational change, whereas most other scholars put the political process during change processes on the foreground at that time. However, he mainly focused on a single learning theory, resulting in no real connection between multiple different learning theories and episodic change. In line with this attempt, scholars (e.g. Altman & Illes, 1998; Heilmann, 2007) agree that, besides intentional learning efforts, learning is a by-product during change processes, with Altman and Illes (1998) even calling learning the ‘language of change’. As a result, organisational learning and organisational change are closely related, intertwined with each other and are both heavily influenced by individuals (Akgün et al., 2007; Altman & Iles, 1998; Antonacopoulou, 2006; Heilmann, 2007). Hence, looking through a learning lens could be beneficial in order to cope with individual change resistance attitudes. By approaching individual change resistance through the facilitation of learning, individuals can learn the attitudes necessary to cope with organisational change and influence the organisational learning process. As a result, change attitudes could be positively influenced by the facilitation of learning efforts and prove their considerable added-value. In unravelling pivotal elements for the facilitation of learning on an individual level, the current study utilizes widely-used individual

(Billett, 1996; Ericsson, Krampe, & Tesch-Römer, 1993; Kolb, Boyatzis, & Mainemelis, 2001; Mezirow, 1991; Schön, 2017) and organisational (Argyris & Schön, 1997; Engeström, 2001; Lave & Wenger, 1991; Senge & Sterman, 1992) learning theories (see Table 1) as synthesized by Dochy et al. (2012) to establish a link to individual change resistance. Derived from these theories and other existing literature, three organisational learning sources were defined that could benefit and facilitate positive change attitudes: experimentation, dialogue and interaction with the external environment. Each of these learning sources is described next.

Table 1

Review of learning theories (Dochy et al., 2012)

Theory	**Author & year**	**Learning level**	**Core concepts**	**Related studies**
Deliberate practice	K.A. Ericsson (1993)	Individual	• Learning to master specific competencies and skills • Learning through feedback of peers and mentors	Charness, Tuffiash, Krampe, Reingold, & Vasyukova, 2005; Starkes, Deakin, Allard, Hodges, & Hayes, 1996
Workplace curriculum	S. Billett (1996)	Individual	• Predetermined path of learning experiences designed by the organisation • Acquiring competencies and qualifications through feedback and experience • Learning for growth/development while keeping knowledge up-to-date	Rausch, 2013; Tynjälä, 2008
Reflective Practitioner	D. Schön (2017)	Individual	• Learning through reflection-in-action and reflection-on-action • Learning to continuously improve competencies and skills	Adler, 1991; Cheetham & Chivers, 1998

			• Everyday practice is key for learning instead of theoretical learning	
Transformational learning	J. Mezirow (1991)	Individual	• Learning as a meaning-making activity • Acquiring new paradigms through reflection and experience • Learning for growth and becoming more open and critical	Bass, 1990; Clark & Wilson, 1991; Merriam, 2004
Experiential learning	D. Kolb & D. Boud (1984)	Individual	• Learning through cycles to acquire knowledge and experiences • Believes and ideas of and individual are relearned through the experiential learning stages; concrete experience, reflective observation, abstract consideration and active experimentation	Corbett, 2005; Kiili, 2005; Mainemelis, Boyatzis, & Kolb, 2002
Systems thinking	P. Senge (1992)	Organisational	• Organisations learn through individuals to stay competitive • Learning to manage change and become a learning organisation • Learning for continuous business growth and creating a shared vision	Leischow et al., 2008; Leveson, 2011; Maani & Maharaj, 2004
Situated learning	J. Lave & E. Wenger (1991)	Organisational	• Learning to acquire new skills and knowledge through communities of practice • Members of the communities of practice learn through social interaction focused on feedback and knowledge-sharing • Constructing identities among individuals	Hendry, 1996; Brown & Duguid, 1991; Cobb & Bowers, 1999; Schau, Muñiz Jr, & Arnould, 2009
Organisational learning	C. Argyris (1997)	Organisational	• Organisations learn through reflection-in-action and reflection-on-action • Single loop learning and double loop learning	Drejer, 2000; Murray & Donegan, 2003; Pemberton & Stonehouse, 2000

	• To adapt to changing external environments and to construct shared identities

Dialogue. The first source of learning is dialogue between individuals. Dialogue refers to the phenomenon in which individuals within organisations seek shared meaning and understanding (McArdle & Reason, 2008). Seeking these shared meanings, individuals within organisation reflect upon perspectives different from their own, changing themselves by what they learn. This often leads to collaborative action during times of changes (Raelin, 2012).

Regarding the synthetisation of learning theories, on both an individual and organisational level, dialogue between individuals is often a prerequisite in learning activities, for example for feedback on behavior for effective learning outcomes. Dialogue between individuals, for instance to reflect on their own behavior and knowledge and share this with their peers could be critical in fostering an learning environment to cope with change resistance attitudes. The individual learning theories are mostly focused on enhancing individual performance using experiences and reflection on said experiences. For example, the theory of workplace curriculum (Billet, 1996) relies on constant dialogue between the mentor and individual during a path of experiences and activities on the workplace in order for the individual to learn. Subsequently, theories such as reflective practitioner (Schön, 2017), deliberate practice (Ericsson et al., 1993) and experiential learning (Kolb, 2014), all also rely on dialogue during group processes or between individuals. For instance, individuals using deliberate practice obtain feedback through dialogue with their coach (Ericsson et al., 1993), while individuals learning through a workplace curriculum get feedback and acquire new skills through dialogue with an assigned

peer, often times called a ‘buddy’ (Argyris & Schön, 1997). Besides dialogue on an individual level, dialogue in an organisational context could be embedded in social interaction (Høyrup, 2004). For instance, during situated learning, the individuals in communities of practice maintain a constant dialogue regarding the learning of new skills resulting in learning on an organisational level (Wenger, 1999). Dialogue between individuals could bring together different visions to understand the consequences of the intended change. As a result, a common understanding about the necessity for changes can be created (Oswick, Anthony, Keenoy, Mangham, & Grant, 2000; Raelin, 2012; Schein, 1993).

As a result, facilitating dialogue between individuals and managers from a learning perspective could be beneficial in influencing change resistance attitudes. Therefore, as it is theorized that change resistance attitudes are a critical source of inertia in the main study, dialogue could be an important learning source to consider. To test the significance of dialogue between individuals in coping with change resistance attitudes, the following hypothesis is formulated:

H3: Facilitating dialogue is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change.

Experimentation. The second source of learning is experimentation by individuals within organisations. Experimentation is defined as ‘the degree to which new ideas and suggestions are attended to and dealt with sympathetically’ (Svetlik et al., 2007, p. 226). The concept contributes to learning and the development of shared mental models, which is a critical factor to invoke relevant changes in accordance to organisational goals (Nicholls-Nixon, Cooper, & Woo, 2000). Hence, it is not surprising that, according to Svetlik et al. (2007) experimentation is the most supported variable across organisational learning literature.

Naturally, regarding the individual learning theories analysed in this study, experimentation is both implicitly as well as explicitly strongly advocated. Theories such as

deliberate practice (Ericsson et al., 1993) and experiential learning (Kolb, 2014) utilize experimentation as way to acquire new knowledge. During the active experimentation stage of the experiential learning cycle, the individual tries new ways of execute a task or skill. Similarly, during deliberate practice an individual could also find ways of doing something another way and practice that way deliberately. Furthermore, in advancing through a workplace curriculum (Billett, 1996), an individual might encounter new situations which one could experiment certain action for a sufficient outcome. As much for the organisational learning theories, experimentation is a prominent factor as well. For instance, in the theory of organisational learning (Argyris & Schön, 1997), experimentation with new strategies and other activities is key in becoming a learning organisation. In this case, experimentation is a pivotal part in adapting to the external environment and thus a factor during inertia. Other theories such as situated learning (Lave & Wenger, 1991; Wenger, 1999) and systems thinking (Senge & Sterman, 1992) consider experimentation with other individuals and receiving feedback on the results through dialogue an important factor as well. Hence, both on an individual and organisational level, experimentation could be an pivotal factor in fostering positive change resistance attitudes (Svetlik et al., 2007; Nicholls-Nixon et al., 2000).

Facilitating experimentation among individuals could prove a valuable learning effort for an organisation to find the best fit between strategy and the external environment and cope with change resistance attitudes. Allowing individuals to experiment and come up with new ideas could be regarded as an important factor to cope with individual change resistance attitudes. Deriving from this, the following hypothesis is formulated regarding experimentation in relation to individual change resistance attitudes:

H4: Facilitating experimentation is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change.

Interaction with the external environment. The third source for learning, although mostly present in the learning theories on an organisational level, is the interaction with the external environment by individuals. Interaction with the external environment is described as the scope of the relationships with the external environment, or factors that are beyond the organisation's control, such as competitors and customers (Svetlik et al., 2007).

This variable is especially relevant for the concept of inertia, as inertia is often triggered by fast changes in the external environment (Godkin, 2010; Weick & Quinn, 1999). As individual change resistance could also be a source of inertia, facilitating interaction with the external environment for individuals could prove valuable in positively influencing individual change resistance attitudes (e.g. Weick & Quinn, 1999). Especially in the organisational learning theories, interaction with the external environment is an influential learning source. For instance, through both organisational learning (Argyris & Schön, 1997) and expansive learning (Engeström, 2001; Engeström & Sannino, 2010) organisations make sense of their environment through interaction, reflection on the environment while subsequently embedding them in current understandings. Furthermore, the theory of systems thinking (Senge & Sterman, 1992) actually implies that systems within organisation need to adapt to the environment, thereby considering environment as an dimension in the learning process.

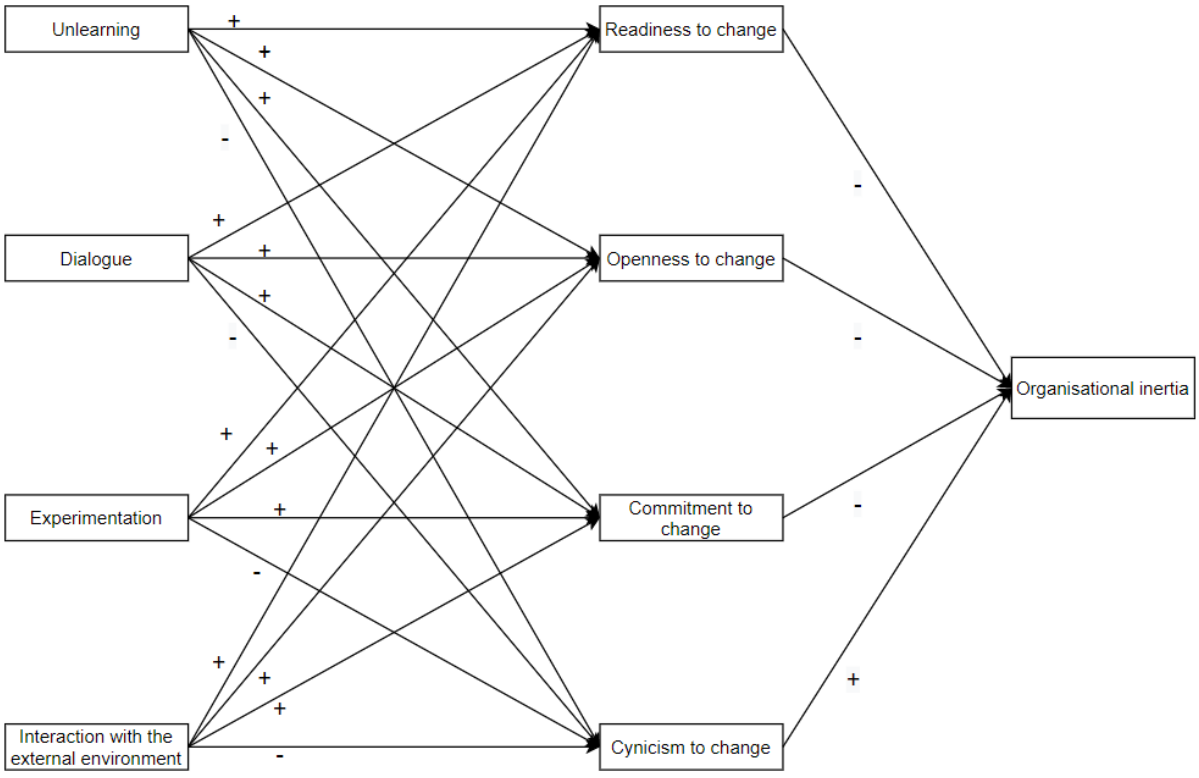
Thus, interaction is mostly present on an organisational level, however, individuals actually interact with the environment. Facilitation of interaction with the external environment is therefore necessary for organisation to adapt to the environment, especially during inertia. As change resistance attitudes are a source of inertia, individuals need to interact with the environment to positively enhance their attitudes. The following hypothesis is formulated regarding the facilitation of interaction with the external environment in relation to individual change resistance attitudes:

H5. Facilitating interaction with the external environment is positively related readiness-, openness- and commitment to change and negatively related to cynicism to change.

In conclusion, the facilitation of dialogue, experimentation and interaction with the external environment could be critical learning sources to foster positive individual change attitudes. For the reason that the variables are derived from a synthetisation of individual and organisation learning theories, multiple viewpoints are incorporated. Through unlearning and learning efforts on an individual level, change resistance as a source of inertia can be positively influenced, as shown in the final research model (see Figure 3).

Figure 3

Research model



Method

Research design

The current study followed a quantitative research design to answer the hypotheses and therefore the research question. An online survey was administered in an organisation in the Dutch textile service industry during one time point, thereby utilizing a cross-sectional design.

Participants

The sample size was determined using the rule of thumb of multiple regression analyses ($N = 50 + 8m$, m is number of independent variables) as proposed by Green (1991). As the study contained four independent variables, the sample size needed to at least include 82 participants for multiple regression analysis. After sending invitations for the survey to all employees, the sample included 121 participants out of 477 total employees, meaning a response rate of 25.4% was obtained. The participants included 62 males and 59 females, were aged between 17 and 68 years old ($M = 37.6$, $SD = 13.7$) and work at the organisation variating from 0 to 22 years ($M = 5.4$, $SD = 5.05$). The sample was selected without taking work role in account, ensuring that a variety of different individuals within the organisation participated in the study. Furthermore, the current study did not focus on one specific hierarchical role within organisations. Examples of work roles which participated in the study include team leaders, production employees and HR officers.

Instrumentation

First, preceding the items about the variables, participants answered some background information items, such as gender, age, work role and years of working experience at the organisation. Then, the participants answered the items about the different variables. Items were measured utilizing a five point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The full range of items was translated and added in the appendices.

Organisational inertia. Organisational inertia was measured utilizing two subscales of action inertia and insight inertia developed by Huang et al. (2013). Action inertia contained 5 items and sample items include '*Our company has a deep-rooted organizational cultur*e' and '*Our company values are sacred and we are absolutely not going to change them*'. Insight inertia contained 4 items and sample items include '*Our company has difficulty identifying how other firms solve problems*' and '*Our company rarely observes changes in external environment*'. Unfortunately, the consistency between the items was found to be rather unreliable; for insight inertia, $\alpha = .217$ and for action inertia $\alpha = .204$. Hence, a scale regarding impact of changes in an organisation was added, developed by Caldwell, Herold & Fedor (2004). Sample items include '*The current organisational changes include changes regarding the processes and procedures of my team*' and '*The current organisational changes include changes regarding the way how people do their job*'. The consistency between the items was found to be reliable, $\alpha = .847$. While inertia could be measured as a construct in itself, the lack of change is also an indication for inertia to be present. Even individuals who support the change could feel unpleasant when their work routines are impacted (Becker, 2010). Hence, the impact of changes could indicate whether inertia is present within an organisation.

Individual change resistance attitudes

Readiness to change. Readiness to change was measured utilizing a measurement scale developed by Bouckenooghe, Devos and van den Broeck (2009) which contained 7 items[1]. Sample items include '*I want to make an effort for change in my organisation*' and '*Plans for improvements in the future lead to nothing*'. Additionally, the internal consistency between items was found sufficient, $\alpha = .826$.

[1] One item was overlooked from the original readiness to change scale (Bouckenooghe et al., 2009) which originally contained 8 items, however the reported Cronbach's alpha was similar ($\alpha = .83$ in original study)

Openness to change. Openness to change was measured utilizing a measurement scale developed by Wanberg and Banas (2000) which contained 4 items. Sample items include '*I am looking forward to the changes in my work role*' and '*Overall, the proposed changes are for the better*'. Additionally, the internal consistency between items was found sufficient, α = .702.

Commitment to change. Commitment to change was measured utilizing a measurement scale developed by Herscovitch and Meyer (2002) which contained 18 items distributed among the three constructs as discussed in the theoretical framework. Affective commitment was measured utilizing a sub-scale containing 6 items, which included '*I believe in the value of this change*' and '*This change serves an important purpose*'. Continuance commitment was measured utilizing a sub-scale containing 6 items which included '*I have no choice to go along with the change*' and '*It would be too costly for me to resist this change*'. Normative commitment was measured utilizing a sub-scale containing 6 items which include '*I feel a sense of duty to work towards the change*' and '*I do not think it would be right of me to oppose this change*'. Additionally, the internal consistency between items was found sufficient for all subscales, affective commitment α = .826, continuance commitment α = .864 and normative commitment α = .599.

Cynicism to change. Cynicism to change was measured utilizing a measurement sub-scale developed by Wanous, Reigers and Austin (2000) which contained 4 items. Sample items include '*Plans for future improvement will not amount to much*' and '*Suggestions on how to solve problems will not produce much real change*'. Additionally, the internal consistency between items was found sufficient, α = .849.

Unlearning and facilitation of learning

Organisational unlearning. Organisational unlearning was measured utilizing a measurement scale developed by Casillas, Aceda and Barbero (2010) containing 4 items. Sample items include '*Your enterprise is ready to change the way it operates*' and '*New forms*

of facing problems are taken into account by your enterprise'. Additionally, the internal consistency between items was found sufficient, α = .742.

Experimentation. Experimentation was measured utilizing a measurement sub-scale developed by Svetlik et al. (2007) containing 2 items. The items include '*People here receive support and encouragement when presenting new ideas*' and '*Initiative often receives a favourable response here, so people feel encouraged to generate new ideas*'. Additionally, the internal consistency between items was found sufficient, α = .836.

Dialogue. Dialogue was measured utilizing a measurement sub-scale developed by Svetlik et al. (2007) containing 4 items. Sample items include '*Employees are encouraged to communicate*' and '*There is a free and open communication within my work group*'. Additionally, the internal consistency between items was found sufficient, α =.837.

Interaction with the external environment. Interaction with the external environment was measured utilizing a measurement sub-scale developed by Svetlik et al. (2007) containing 3 items. Sample items include '*People are encouraged to interact with the external environment: competitors, customers, technological institutes, universities, supplies etc.*' and '*It is part of the work of all staff to collect, bring back, and report information about what is going on outside the company*'. Additionally, the internal consistency between items was found sufficient, α = .717.

Exploratory factor analysis

An exploratory factor analysis utilizing oblique rotation and principal axis factoring was conducted. The factor analysis distinguished 11 factor loadings, Bartlett's test of sphericity computed significant (<.000) and KMO test computed at .755. Hence, no sampling issues were present.

Table 2

Factor loadings resulting from a Principal Axis Factoring Analysis using Oblique Rotation for all survey questions (N = 121)

	Readiness to change	Unlearning	Openness to change	Affective commitment to change	Impact of changes	Dialogue	Continuance commitment to change	Normative commitment to change	Cynicism to change	Experimentation	Interaction with the external environment
I want to devote myself to the process of change	**-0.03**	0.01	0.08	-0.12	-0.07	0.78	0.04	-0.10	-0.14	-0.01	-0.06
I am willing to make a significant contribution to the change	**0.11**	0.01	-0.08	-0.08	0.07	0.70	-0.05	-0.22	-0.01	0.11	0.20
I am not willing to put energy into the process of change (R)	**-0.08**	0.07	0.00	-0.04	0.01	0.71	-0.04	0.12	0.08	-0.21	-0.08
I think that most changes will have a negative effect on the clients we serve (R)	**0.30**	-0.06	-0.13	-0.13	-0.04	0.16	-0.14	-0.12	-0.16	-0.31	0.10
Most change projects that are supposed to solve problems around here will not do much good (R)	**0.16**	-0.08	-0.19	-0.08	0.02	0.25	-0.16	0.03	0.06	-0.43	0.05
I experience the change as a positive process	**0.68**	0.17	0.15	-0.14	-0.13	0.06	-0.05	-0.17	0.00	-0.05	-0.22
I find the change refreshing	**0.50**	0.04	0.12	-0.12	-0.17	0.18	0.13	-0.15	0.03	-0.09	0.08
Your enterprise is ready to change the way it operates	0.15	**0.39**	0.00	-0.11	-0.29	-0.13	0.21	-0.05	-0.15	-0.05	-0.02
New forms of facing problems are taken into account by your enterprise	0.04	**0.38**	-0.05	0.01	-0.32	-0.14	0.10	0.01	-0.12	-0.03	0.15
Employees in your enterprise wish to work together to solve common problems	0.03	**0.81**	-0.08	0.07	-0.01	0.11	-0.07	-0.02	0.08	-0.04	-0.10
Employees in your enterprise are willing to assume risks	0.06	**0.67**	0.12	0.07	0.07	0.05	0.16	-0.02	-0.07	-0.05	0.09
I would consider myself open to changes	0.46	0.00	**-0.37**	-0.10	-0.02	0.20	-0.14	0.10	0.07	0.05	-0.15
I am looking forward to the changes in my work role	0.41	0.13	**-0.24**	0.02	0.24	0.14	0.08	0.08	-0.19	0.07	0.09

Overall, the proposed changes are for the better	0.43	-0.13	**0.08**	0.05	-0.28	0.08	0.00	-0.13	-0.14	-0.05	0.35
I think that the changes will have a positive effect on how I accomplish my work	0.51	-0.05	**-0.07**	-0.05	0.11	0.08	0.11	-0.02	-0.18	-0.10	0.40
I believe in the value of this change	0.62	0.07	-0.10	**-0.08**	0.07	0.05	0.03	0.08	0.06	-0.20	0.10
This change is a good strategy for this organisation	0.53	0.03	-0.02	**0.06**	-0.19	-0.03	0.03	-0.09	-0.11	-0.02	0.32
I think that management is making a mistake by introducing this change (R)	0.44	-0.03	0.09	**-0.06**	0.03	0.02	-0.21	-0.15	-0.07	-0.43	0.06
This change serves an important purpose	0.24	0.04	-0.10	**-0.35**	-0.17	0.02	-0.08	-0.03	-0.05	-0.07	0.15
Things would be better without this change (R)	0.47	-0.16	-0.15	**-0.13**	-0.11	-0.06	-0.11	-0.13	-0.03	-0.34	0.07
This change is not necessary (R)	0.33	-0.14	-0.11	**-0.06**	-0.03	0.00	-0.22	0.01	0.00	-0.50	0.02
Changes regarding the processes and procedures of my team	0.05	0.15	-0.06	0.76	**0.04**	-0.09	-0.21	-0.07	-0.03	0.10	-0.09
Changes regarding the way how people do their job	0.00	0.02	0.07	0.89	**-0.12**	0.02	0.01	-0.06	0.05	-0.04	0.04
Changes in the daily routines of employees in my team	-0.03	-0.02	-0.06	0.74	**-0.01**	-0.06	0.07	0.03	-0.05	-0.08	0.02
Employees are encouraged to communicate	0.00	0.04	-0.16	-0.04	**-0.72**	0.01	-0.07	-0.02	-0.15	0.11	-0.03
There is a free and open communication within my work group	-0.01	-0.06	-0.13	-0.01	**-0.77**	0.07	0.03	0.00	0.08	-0.03	0.07
Managers facilitate communication	0.11	0.11	0.02	0.05	**-0.67**	-0.03	-0.17	0.01	-0.18	0.02	-0.06
Cross-functional communication is a common practice here	0.09	-0.01	0.10	0.16	**-0.57**	-0.08	-0.05	0.01	-0.09	-0.20	0.12
I have no choice but to go along with this change	-0.09	-0.11	0.00	0.00	-0.01	**-0.17**	0.09	0.80	0.08	-0.17	0.06
I feel pressure to go along with this change	-0.16	-0.14	-0.01	-0.11	0.23	**0.19**	0.24	0.38	-0.03	0.27	-0.05
I have too much at stake to resist this change	-0.02	0.00	0.20	-0.04	-0.13	**0.11**	-0.01	0.33	0.23	0.47	-0.04
It would be too costly for me to resist this change	0.04	0.11	0.21	-0.03	0.01	**-0.05**	-0.08	0.35	0.01	0.45	-0.06

It would be risky to speak out against this change	0.06	0.12	0.70	-0.01	0.12	**-0.03**	0.05	0.08	0.01	0.24	-0.20
Resisting this change is not a viable option for me	0.01	-0.07	0.62	-0.04	0.24	**0.04**	-0.12	0.18	-0.01	0.01	0.13
I feel a sense of duty to work toward this change	-0.10	0.04	0.02	-0.12	0.10	-0.01	**-0.11**	0.51	-0.17	0.17	-0.21
I do not think it would be right of me to oppose this change	0.07	-0.05	0.32	-0.02	-0.09	0.04	**-0.05**	0.56	0.12	0.01	-0.03
I would not feel badly about opposing this change (R)	-0.08	0.06	0.06	0.00	-0.09	0.08	**-0.64**	-0.04	0.22	-0.03	0.21
It would be irresponsible of me to resist this change	0.13	0.07	-0.01	0.13	-0.02	0.04	**-0.21**	0.34	-0.14	0.15	0.22
I would feel guilty about opposing change	0.12	0.13	0.25	0.05	-0.07	0.07	**-0.27**	0.16	-0.10	0.20	0.21
I do not feel any obligation to support this change (R)	-0.01	-0.11	0.00	0.05	0.01	-0.01	**-0.59**	0.04	-0.17	-0.08	-0.12
Most of the changes that are supposed to solve problems around here will not do much good	-0.18	-0.01	0.05	0.07	0.13	-0.03	0.18	**0.05**	0.20	0.52	0.02
Attempts to make things better around here will not produce good results	-0.05	-0.09	0.05	-0.02	-0.09	-0.17	-0.02	**0.03**	0.04	0.74	-0.03
Suggestions on how to solve problems will not produce much real change	0.08	-0.19	0.03	0.11	0.38	-0.03	-0.11	**-0.03**	0.07	0.54	-0.07
Plans for future improvement will not amount to much	-0.09	-0.17	0.19	0.10	0.10	-0.14	0.10	**-0.10**	0.06	0.62	0.16
People here receive support and encouragement to present new ideas	-0.08	0.06	-0.03	0.04	-0.34	0.08	-0.13	-0.06	**-0.70**	-0.11	0.06
Initiative often receives a favourable response here, so people feel encouraged to generate new ideas	-0.05	0.06	0.10	0.04	-0.49	0.11	0.07	-0.06	**-0.48**	-0.10	0.08
It is part of the work of all staff to collect, bring back, and report information about what is going on outside the company	0.00	0.36	-0.04	-0.04	-0.37	0.06	-0.13	-0.06	0.26	0.10	**0.26**

There are systems and procedures for receiving, collating and sharing information from outside the company	-0.12	0.30	0.05	-0.19	-0.10	-0.13	-0.14	-0.01	-0.01	-0.02	**0.62**
People are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers etc.	-0.14	0.50	0.09	-0.17	0.14	-0.28	-0.22	-0.14	-0.19	-0.02	**0.21**
Eigenvalues	12.29	4.58	3.05	1.96	1.70	1.43	1.24	1.10	.90	.79	.71
% of the total variance explained	25.07	9.35	6.22	3.99	3.46	2.91	2.53	2.18	1.83	1.61	1.44

Procedure

Preceding the data collection, approval of the study was asked from the ethics commission of the University of Twente. This commission is responsible for the approval of used data collection methods involving humans and ensures that both students and scholars alike follow ethical norms and values laid down by the University. Then, a pilot was conducted to determine the length and difficulty of the final survey. Subsequently, one middle-sized profit organisation that had to cope with inertia and episodic changes was contacted and asked to participate in the study. After receiving ethical acceptance and approval of the organisation, all Dutch individuals in the organisation were informed of the study and survey by sending an e-mail and data collection was started. The e-mail contained a link to the survey, which could be used to participate anonymously. Only Dutch employees participated in the study. Respondents could participate in the study during a four week period in which multiple reminders were communicated through email to all employees. Preceding the actual items in the survey which measured the constructs, participants gave their consent to participate. The survey had a maximum duration of 15 minutes and was administered using the Qualtrics survey portal, with access

granted by the University of Twente. All respondents were required to have an active internet connection to participate in the survey. Finally, the participants could indicate in a short de-brief section whether they liked to receive the results. In that case, an e-mail address was given which the participant could contact. After the survey closed, data was exported from Qualtrics and imported to SPSS.

Data analysis

The data analysis was carried out using the quantitative data analysis programme SPSS. First, the raw data was imported and prepared for data analysis, by filtering out insufficient responses, such as respondents that stopped the survey mid-way. Moreover, reversed items were recoded as well as regular items displaying deviating scores. Then, an exploratory factor analysis utilizing principal axis factoring and oblique rotation was conducted to determine whether the items were sufficiently distinguishable in varying factors. Then, descriptive statistics were computed, such as mean, variance and the standard deviation per variable. Subsequently, multiple regression analyses were utilized to determine significant influence between the study variables.

Here, for the first hypothesis, the dependent or criterion variable was impact of changes and the independent variables were the four change resistance attitudes. A multiple regression analysis was utilized to analyse the relationship between these variables. Subsequently, for the other hypotheses, the four change resistance attitudes were the criterion variables and the independent variables were unlearning and experimentation, dialogue and interaction with the external environment. Multiple regression analyses were applied on each change resistance attitude in relation to the different unlearning and learning effort variables. For instance, the variance between readiness to change on the one hand and unlearning, dialogue, experimentation and interaction with the external environment was computed. This applied to

every change resistance attitude in order to measure which (un)learning efforts affect the different change resistance attitudes.

Results

The results of the current study are reported in several sections. First, descriptive statistics were reported such as standard deviations, means and Pearson's correlations as presented in Table 4. Subsequently, the relationship between the individual change resistance attitudes and inertia was reported. Then, the relationships between dialogue, experimentation and interaction with the external environment on the one hand and the individual change resistance attitudes on the other hand were described. Finally, the hypotheses were answered and summarized in a concluding table.

Descriptives of study variables

In total, 11 variables were examined as shown in Table 4. Participants of the study displayed on average moderate change resistance attitudes, such as readiness- (M = 3.78, SD = .58), normative commitment- (M = 2.99, SD = .53) and openness to change (M = 3.5, SD = .55). Furthermore, the organisation incorporated moderate levels of unlearning (M = 3.26, SD = .63) and experimentation (M = 3.17, SD = .70), dialogue (M = 3.29, SD = .81) and interaction with the external environment (M = 2.86, SD = .67). Subsequently, the participants seemed to interpret the impact of changes as high (M = 2.42, SD = 0.80) as impact to changes was measured with a 3 point scale. Pearson's correlation analysis was utilized to determine how variables correlated and the significance of these correlation. A total of 40 out of 54 correlations between the studied variables were found to be significant, of which 23 positively and 17 negatively. This means that most variables correlated with each other significantly, which could be explained by the fact that most variables displayed similar means. However, most correlations in the variable impact of changes revealed no significance, with the exception of a

significant negative correlation between impact of changes with readiness to change (r = -.37) and affective commitment (r = -.21). This implies that on average, a higher impact of changes in organisation is likely to be accompanied by lower readiness and affective commitment to change among individuals. Furthermore, significant positive and negative correlation were found between most individual change resistance attitudes. For instance, normative commitment to change also revealed high correlation with four change resistance variables, which were readiness- (r = -.23), affective- (r = -.28), continuance- (r = .57), and cynicism (r = .36) to change. This means that individuals who display normative commitment to change, were likely accompanied by less readiness-, less affective commitment-, higher continuance commitment and higher cynicism to change. Similarly, significant positive and negative correlation were found between the learning variables. For example, unlearning correlated high with dialogue (r = .41), experimentation (r = .44) and interaction with the external environment (r = .57). This means that accompanied by unlearning, individuals practice higher levels of dialogue, experimentation and interaction with the external environment on average.

Table 4.

Pearson correlations and descriptive statistics of study variables (N = 121)

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1.	Readiness to change											
2.	Openness to change	0.68*										
3.	Affective commitment to change	0.70*	0.74*									
4.	Continuance commitment to change	-0.44*	-0.41*	-0.55*								
5.	Normative commitment to change	-0.23*	-0.12	-0.28*	0.57*							
6.	Cynicism to change	-0.61*	-0.47*	-0.71*	0.61*	0.36*						
7.	Unlearning	0.20*	0.24*	0.27*	-0.25*	0.00	-0.32*					
8.	Dialogue	0.29*	0.28*	0.41*	-0.38*	-0.13	-0.45*	0.41*				
9.	Experimentation	0.32*	0.36*	0.40*	-0.38*	-0.09	-0.49*	0.44*	0.67*			
10.	Interaction with the external environment	0.09	0.19*	0.22*	-0.15	-0.04	-0.18*	0.57*	0.40*	0.39*		
11.	Impact of changes	-0.37*	-0.16	-0.21*	-0.02	-0.04	0.17	0.02	0.10	0.08	-0.05	
Mean		3.78	3.50	3.46	2.73	2.99	2.44	3.26	3.29	3.17	2.86	2.42
SD		.58	.55	.65	.70	.53	.69	.63	.81	.90	.67	0.80

*.Correlation is significant at the .05 level (2-tailed)

The relationship between inertia and change resistance attitudes

To answer the first hypotheses, which was ‘Readiness-, openness-, commitment- and cynicism to change are positively related to organisational inertia’, a multiple regression analysis was conducted. In this analysis, readiness-, affective commitment-, continuance commitment-, normative commitment-, openness- and cynicism to change were examined as independent variables and impact of change as dependent variable. The results of multiple regression analysis indicate that the seven change resistance attitudes account for (R^2 = .16, F(6,114)

= 4.85, p = <.000) 16.1% of the variance in inertia. Examination of the individual parameters as shown in Table 5 suggests that both readiness to change (b = -.61, *SE* = .16, t(114) = -3.86, p = <.000) and continuance commitment to change (b = -.32, *SE* = .12, t(114) = -2.65, p = .009) have a significant negative influence on the level of inertia in an organisation. This means that on average when individuals display higher levels of readiness- and continuance commitment to change, their perception of inertia is lower.

Table 5

Multiple linear regression with inertia (impact of change scale) mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Readiness to change	-.61	.16	-.51	-3.86	<.000	[-.92, -.30]
Openness to change	.21	.17	.16	1.20	.231	[-.13, .54]
Affective commitment	-.14	.17	-.13	-.79	.429	[-.48, .21]
Continuance commitment	-.32	.12	-.32	-2.65	.009	[-.56, -.08]
Normative commitment	.18	.12	.13	1.42	.158	[-.07, .43]
Cynicism to change	.03	.14	.03	.19	.851	[-.25, .30]

Note. R Squared = .20 and Adjusted R Squared =.16

The relationship between (un)learning sources and change resistance attitudes

To answer the hypotheses ‘Unlearning in an organisation is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change’, ‘Facilitating dialogue is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change’, ‘Facilitating experimentation is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change’ and ‘Facilitating interaction with the external environment is positively related readiness-, openness- and commitment to change and negatively related to cynicism to change’, a series of multiple regression analyses were computed to determine the influence of (un)learning sources on the change resistance attitudes. In these analyses, readiness-, commitment-, openness- and cynicism to change were examined as dependent variables and

unlearning, dialogue, experimentation and interaction with the external environment as independent variables. First, the results of the analyses are reported. Subsequently, the hypotheses regarding the relationship between unlearning, dialogue, experimentation, interaction with the external environment and individual change resistance attitudes are answered.

Readiness to change. First, readiness to change was examined in relation to unlearning, dialogue, experimentation and interaction with the external environment. It was expected that unlearning, dialogue, experimentation and interaction with the external environment had a positive effect on readiness to change. The results of the multiple regression analysis indicate that the four change resistance attitudes explain (R^2 = .09, F(4,116) = 3.96, p = .005) 9% of the variance in readiness to change. Examination of the individual parameters as shown in Table 6 suggests that none of the (un)learning variables had a significant influence on readiness to change. This means that unlearning, dialogue, experimentation and interaction with the external environment had no impact on the readiness to change of individuals in an organisation.

Table 6

Multiple regression with readiness to change mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Unlearning	.10	.10	.11	.99	.33	[-.10, .30]
Dialogue	.10	.09	.14	1.19	.24	[-.07, .27]
Experimentation	.14	.08	.22	1.79	.08	[-.02, .23]
Interaction with the external environment	-.10	.09	-.11	-1.04	.30	[-.29, .09]

Note. R Squared = .12 and Adjusted R Squared =.09

Openness to change. Second, openness to change was examined in relation to unlearning, dialogue, experimentation and interaction with the external environment. It was expected that unlearning, dialogue, experimentation and interaction with the external environment had a positive effect on openness to change. The results of the multiple regression analysis indicate that the four change resistance attitudes explain 10.8% of the variance in openness to change (R^2 = .11, F(4,116) = 4.62, p = .002). Examination of the individual

parameters as shown in Table 7 suggest that experimentation (b = .17, *SE* = .07, *t*(116) = 2.28, *p* = .024) had a significant positive influence on openness to change. This means that on average when individuals experiment in their organisation, they display a higher level of openness to change. Unlearning, dialogue and interaction with the external environment did not report such significant relationships. Therefore, unlearning, dialogue and interaction with the external environment did not influence the openness to change of individuals in the sample organisation significantly.

Table 7

Multiple regression with openness to change mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Unlearning	.08	.10	.09	.80	.428	[-.12, .27]
Dialogue	.05	.08	.07	.56	.579	[-.12, .20]
Experimentation	.17	.07	.27	2.28	.024	[.02, .31]
Interaction with the external environment	.00	.09	.00	.03	.973	[-.17, 18]

Note. R Squared = .14 and Adjusted R Squared = .11

Affective commitment to change. Third, affective commitment to change was examined in relation to unlearning, dialogue, experimentation and interaction with the external environment. It was expected that unlearning, dialogue, experimentation and interaction with the external environment had a positive effect on affective commitment to change. The results of the multiple regression analysis indicate that the four change resistance attitudes explain (R^2 = .17, *F*(4,116) = 7.33, *p* = <.000) 17.4% of the variance in affective commitment to change. Examination of the individual parameters as shown in Table 8 suggests that dialogue (b = .18, *SE* = .09, *t*(116) = 2.03, *p* = .044) had a significant influence on affective commitment to change. This means that on average when individuals practice dialogue in an organisation, they display a higher level of affective commitment to change. Unlearning, experimentation and interaction with the external environment did not report such significant relationships. Therefore, unlearning, experimentation and interaction with the external environment did not influence the

affective commitment to change of individuals in the sample organisation significantly, but dialogue did.

Table 8

Multiple regression with affective commitment to change mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Unlearning	.08	.11	.07	.69	.490	[-.14, 29]
Dialogue	.18	.09	.23	2.03	.044	[.01, .36]
Experimentation	.16	.08	.22	1.90	.060	[-.01, .32]
Interaction with the external environment	.00	.10	.00	.00	.998	[-.20, .20]

Note. R Squared = .20 and Adjusted R Squared = .17

Normative commitment to change. Fourth, normative commitment to change was examined in relation to unlearning, dialogue, experimentation and interaction with the external environment. It was expected that unlearning, dialogue, experimentation and interaction with the external environment had a positive effect on normative commitment to change. The results of the multiple regression analysis indicate that the four change resistance attitudes explain (R^2 = .02, $F(4,116) = 1.57$, p = .16) 2.2% of the variance in normative commitment to change. Examination of the individual parameters as shown in Table 9 suggest that interaction with the external environment (b = .21, *SE* = .09, $t(116) = 2.38$, p = .019) has a significant positive influence on normative commitment to change although the overall model is deemed as non-significant. This means that on average when individuals interact with the organisation's respective environment, they display a higher level of normative commitment to change. Unlearning, dialogue and experimentation did not report such significant relationships. Therefore, unlearning, dialogue and experimentation did not influence the normative commitment to change of individuals significantly, but interaction with the external environment did.

Table 9

Multiple regression with normative commitment to change mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Unlearning	-.15	.10	-.18	-1.54	.13	[-.34, .04]
Dialogue	.02	.08	.03	.26	.80	[-.14, .180]
Experimentation	.01	.07	.02	.12	.91	[-.14, .15]
Interaction with the external environment	.21	.90	.27	2.38	.02	[.04, .39]

Note. R Squared = .06 and Adjusted R Squared = .02

Continuance commitment to change. Fifth, continuance commitment to change was examined in relation to unlearning, dialogue, experimentation and interaction with the external environment. It was expected that unlearning, dialogue, experimentation and interaction with the external environment had a positive effect on continuance commitment to change. The results of the multiple regression analysis indicate that the four change resistance attitudes explain (R^2 = .15, $F(4,116) = 6.41$, p = <.000) 15.3% of the variance in continuance commitment to change. Examination of the individual parameters as shown in Table 10 suggests that none of the (un)learning variables had a significant influence on continuance commitment to change. This means that unlearning, dialogue, experimentation and interaction with the external environment had no impact on the normative commitment to change of individuals in the sample organisation.

Table 10

Multiple regression with continuance commitment to change mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Unlearning	-.12	.12	-.11	-1.04	.301	[-.36, .11]
Dialogue	-.19	.10	-.22	-1.92	.057	[-.39, .01]
Experimentation	-.17	.09	-.22	-1.85	.067	[-.35, .01]
Interaction with the external environment	.09	.11	.08	.78	.435	[-.13, .30]

Note. R Squared = .18 and Adjusted R Squared = .15

Cynicism to change. Lastly, cynicism to change was examined in relation to unlearning, dialogue, experimentation and interaction with the external environment. It was

expected that unlearning, dialogue, experimentation and interaction with the external environment had a negative effect on cynicism to change. The results of the multiple regression analysis indicate that the four change resistance attitudes explain (R^2 = .26, $F(4,116) = 11.41$, p = <.000) 25.8% of the variance in cynicism to change. Examination of the individual parameters as shown in Table 11 suggest that experimentation (b = -.25, SE = .08, $t(116) = -3.03$, p = .003) had a significant negative influence on cynicism to change. This means that when on average individuals experiment in their organisation, they display a lower level of cynicism to change. Unlearning, dialogue and interaction with the external environment did not report such significant relationships. Therefore, unlearning, dialogue and interaction with the external environment did not influence the cynicism to change of individuals significantly, but experimentation did.

Table 11

Multiple regression with cynicism to change mean as dependent variable (N = 121, p = <.05)

Variable	b	*SE b*	*β*	*t*	*p*	95% CI
Unlearning	-.16	.11	-.15	-1.49	.139	[-.38, .05]
Dialogue	-.18	.09	-.21	-1.94	.055	[-.36, .00]
Experimentation	-.25	.08	-.33	-3.03	.003	[.00, -.42]
Interaction with the external environment	.12	.10	.11	1.17	.246	[-.08, .32]

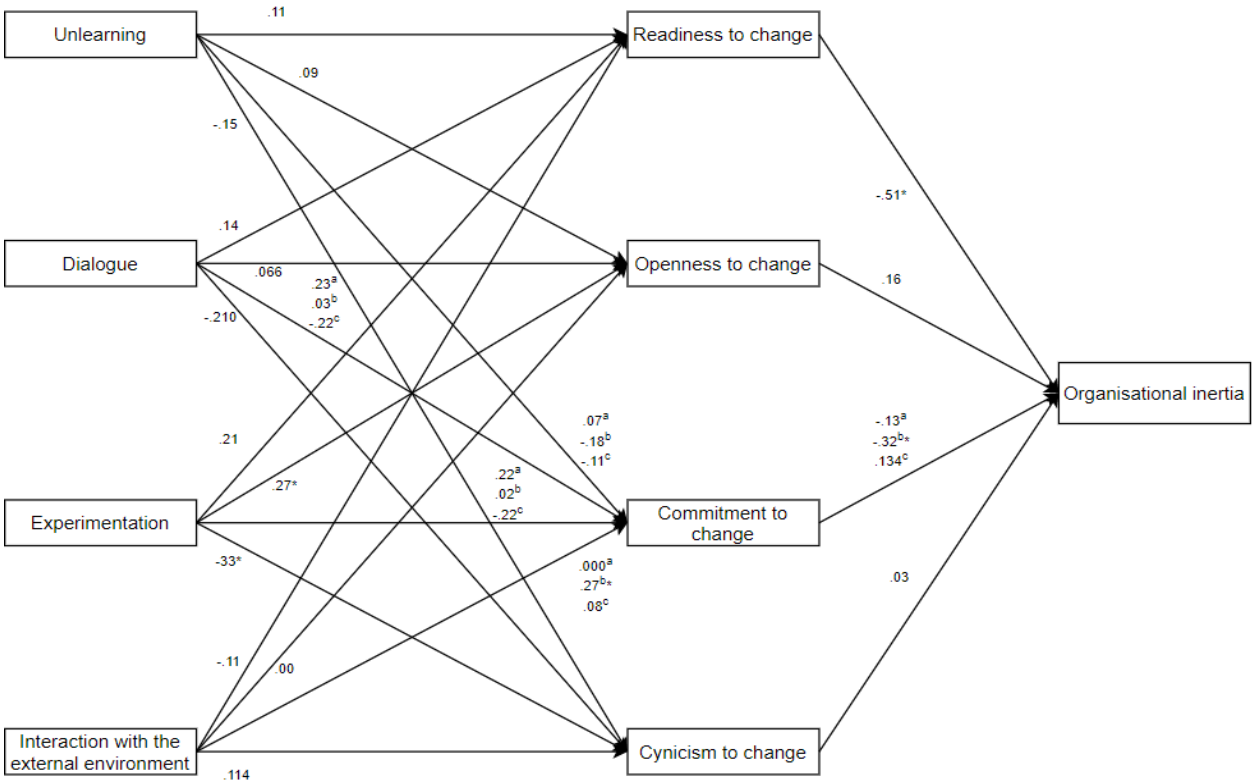
Note. R Squared = .28 and Adjusted R Squared =.26

Path model

Resulting from the analyses in this section, the following path model as shown in Figure 4 was created which entails the regression coefficients in the entire model. Furthermore, it serves as an overview for the research model.

Figure 4

Path model



Note. [a] = affective commitment, [b] = normative commitment, [c] = continuance commitment.

* = significant at the .05 level

Status of study hypotheses

In this section, the status of the hypotheses are described, which are summarized in Table 12. Regarding the individual change resistance attitudes in relation to inertia (H1), both readiness- and continuance commitment affected the level of inertia in the sample organisation. This means that on average, a higher level of readiness- and continuance commitment to change in individuals reduces inertia in organisations based on the results of the current study. Concerning unlearning and individual change resistance attitudes (H2), no significant relationship was found, which means that unlearning did not affect individual change resistance attitudes in the sample organisation. The other learning sources which were dialogue (H3), experimentation (H4) and interaction with the external environment (H5) did yield some significant relationships with individual change resistance attitudes. The analyses indicated that dialogue had a positive effect on affective commitment to change, which means that on average,

the level of affective commitment to change is higher in organisations which practice dialogue among organisational members. Furthermore, experimentation affected both openness to change positively and cynicism to change negatively. This implicates that individuals in organisations which practice experimentation, display on average a higher level of openness and less cynicism towards changes. Lastly, individuals in organisations which practice interaction with the external environment could display more normative commitment to change on average.

Table 12

Status of the five hypotheses

Hypothesis	Finding
Readiness-, openness- and commitment to change are negatively related to organisational inertia. Cynicism to change is positively related to organisational inertia.	Both readiness- and normative commitment to change were found to be significant negative predictors of inertia. Openness-, affective-, continuance- and cynicism to change had no significant relationship with inertia.
Unlearning in an organisation is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change.	Unlearning had no significant influence on any change resistance attitude.
Facilitating dialogue is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change.	Dialogue was found to have a significant positive influence on affective commitment to change. Dialogue had no significant relationship with readiness-, openness-, normative commitment-, continuance commitment and cynicism to change.
Facilitating experimentation is positively related to readiness-, openness- and commitment to change and negatively related to cynicism to change.	Experimentation was found to have a significant positive influence on openness to change and a significant negative influence on cynicism to change. Readiness-, affective-, normative- and continuance to change had no significant relationship with experimentation.
Facilitating interaction with the external environment is positively related readiness-, openness- and commitment to change and negatively related to cynicism to change.	Interaction with the external environment was found to have a significant positive influence on normative commitment to change. Readiness-, openness-, affective-, continuance- and cynicism to change had no significant relationship with interaction with the external environment.

Discussion

The current study intended to reveal the interaction between unlearning, learning, individual change resistance attitudes and inertia. It did so by answering five hypothesis which were formulated in order to examine the interplay between several (un)learning sources, individual change resistance attitudes and inertia. As a result, both theoretical and empirical value emerged which could add value to current change literature. Practical and scientific implications were presented as well as the limitations of the current study, on which further research was suggested. Finally, a conclusion to the current study was formulated.

Change resistance attitudes and inertia

The first part of the model, which entailed the influence of individual change resistance attitudes on inertia, revealed varying results. It was expected that readiness-, openness-, affective commitment-, continuance commitment- and normative commitment would have a negative influence on inertia. Furthermore, it was expected that cynicism to change has a positive influence on inertia. Although support was found for a negative significant relationship of readiness- and continuance commitment to change with inertia, the other change resistance attitudes yielded no significant results. The significance of readiness- and continuance commitment to change is in line with previous studies, which describe readiness to change as a key concept in mobilizing support for the implementation of changes (Choi, 2011), which is lacking in organisations in a state of inertia. Logically, continuance commitment would also be a key factor in lowering inertia. Individuals in organisation who recognize the financial costs of the organisation for the organisation to change, but also recognize their own personal costs when resisting the change are more likely to support intended changes (Herscovitch & Meyer, 2002).

Surprisingly, the change resistance attitudes openness-, affective commitment-, continuance commitment-, normative commitment- and cynicism to change yielded

insignificant results in regards to inertia. This could be a significant finding in itself as this implicates that not all change resistance attitudes could decrease inertia, once again showing the complex nature of the concept. Firstly, the insignificant findings could be attributed to the possibility that specific change resistance attitudes do not always influence inertia individually. It could be an accumulation of change resistance attitudes which is responsible for fostering inertia. For instance, Godkin (2010) did not distinguish specific change resistance attitudes, but attributed these attitudes to the broader term 'psychological factors'. Relevant for the current study, readiness to change is often used as a generally accepted notion of feeling towards change in other studies regarding inertia (Billett & Garfinkel, 2004). In this matter, Choi (2011) also found that the change resistance attitudes utilized in this study could overlap in practice. This was also demonstrated in the current study, as the correlations between individual change resistance attitudes were high. Although this study found insignificant results for most individual change resistance attitudes in relation to inertia, this could thus be different in practice. It might be that readiness to change represents all other individual change resistance attitudes in this study as readiness to change is often regarded as a general accepted notion of feelings towards change (M. T. Billett & Garfinkel, 2004). Subsequently, readiness to change may be the most important change resistance attitude as it is highly likely to positively influence management evaluation of environmental triggers, which is an organisational cause of inertia (Kelly & Amburgey, 1991; Timmor & Zif, 2010; Weick & Quinn, 1999).

(Un)learning sources and change resistance attitudes

The second part of the model, which entailed the influence of unlearning, dialogue, experimentation and interaction with the external environment on the different change resistance attitudes, also revealed varying results. It was expected that both unlearning and the three learning sources would have a significant positive impact on all change resistance attitudes. However in reality, the three learning sources had a limited significant impact on the

change resistance attitudes. Surprisingly, unlearning had no significant influence whatsoever on any change resistance attitude. In the next paragraph, the results of unlearning and dialogue, experimentation and interaction with the external environment in relation to literature are discussed. Lastly, the insignificant variables in relation to dialogue, experimentation and interaction with the external environment are explained.

Unlearning. While the scarce theoretical (e.g. Tsang & Zahra, 2008) and empirical research (e.g. Becker, 2008; Wang, 2013) on unlearning suggests the importance of the concept during times of change and inertia in organisations, the results of this study suggest otherwise which was unexpected. Contrary to the hypothesized association, unlearning had no significant effect on any individual change resistance attitude. This could be explained by the fact that unlearning remains an inconclusive concept (Klammer & Gueldenberg, 2019), which could remedy change resistance attitudes, but could also trigger them.

To elaborate on this, individuals within organisations could display resistance against unlearning as stereo types and dysfunctional mental models are present. Due to these established mind-sets, individuals tend to resist the forgetting and unlearning of existing routines, obstructing real change and thus fueling inertia. In this case, unlearning might be a obstructing factor which actually fosters change resistance in an organisation (Hislop, Bosley, Coombs, & Holland, 2014; Klammer & Gueldenberg, 2019). For instance, according to Zell (2003) both individuals and groups in organizations could display increased resistance to unlearning as fear of lost time and resources in acquiring earlier knowledge prevails. For instance, cynicism to change could increase as unlearning efforts are being started, because individuals view the necessary changes as lost time.

However, it is exactly the disregarding of dysfunctional mental models and routines which is stimulated by unlearning. Hence, by cautiously implementing unlearning interventions, unlearning could actually remedy change resistance attitudes. Subsequently,

individuals could absorb new insights from the external environment and thus eliminate inertia and foster innovation (Wang et al., 2013; Godkin, 2010). Consequently, unlearning is often linked to individual change resistance and prudence is necessary to design effective unlearning interventions. Hence, the majority of scholars (Klammer & Gueldenberg, 2019; Navarro & Moya, 2005; Zell, 2003) interpret change resistance as inherent to the unlearning process; change resistance could arise during unlearning. As a result, unlearning is a complicated concept as both the interplay between learning and unlearning is inconclusive as well as the interaction between unlearning of individuals and organisations as a whole (e.g. Tsang & Zahra, 2008). The insignificant results of unlearning could thus be explained by the weak, inconclusive theoretical foundation it is built upon (Hislop et al., 2014). Furthermore, unlearning is a process over time; the current study did not allow for such a data collection method due to time constraints. As such, it is premature to state that unlearning does not influence individual change resistance attitudes and further research is certainly necessary to yield conclusive insights into unlearning.

Dialogue. For dialogue, a positive significant relationship with affective commitment to change was found. Affective commitment to change entails the believe of individuals that the change has inherent benefits for the organisation as a whole (Herscovitch & Meyer, 2002). The positive relationship with affective commitment could be attributed by the possibility that whenever individuals enter into dialogue about changes, they realize the benefits of the changes as different viewpoints are elucidated and a common understanding is built (Brown & Duguid, 1991). Furthermore, through dialogue, individuals could be made aware of the necessity of change, which is often a prerequisite for successful change efforts (Oswick et al., 2000; Raelin, 2012). Hence, dialogue could lead to more insights of individuals in why an intended change is necessary and therefore stimulate affective commitment towards change. Besides this, no other relation of significance was found indicating that dialogue does not have a positive influence

on all change resistance attitudes, despite the proven positive effects of previously conducted studies (Raelin, 2012). The possibility could be present that dialogue on its own does not necessarily influence change resistance attitudes, but needs to be combined with other learning sources as a combination of learning sources was found most effective (Simons, Germans, & Ruijters, 2003). Therefore, mostly insignificant results arised as dialogue was measured individually from the other learning sources. Subsequently, the current research design could have rendered dialogue insignificant towards most individual change resistance attitudes. Data was collected on one time point, hence the process over time could not be captured.

Experimentation. Experimentation revealed the most significant interactions with the individual change resistance attitudes out of all three learning sources. This is not surprising, as experimentation is the most supported learning source across all of literature (Svetlik, Stavrou-Costea, Chiva, et al., 2007). In the current study, experimentation had a significant positive effect on openness to change and a negative effect on cynicism to change. This could be attributed the possibility that experimentation with new potential changes enhances an individual ability to be open towards that intended change. Through experimentation with new changes, individual could become acquainted with the change and are therefore more likely to support it. On the part of cynicism, experimentation without boundary or personal costs could make individuals realize that new changes are not always for the worst. Moreover, Choi (2011) argued that involvement in the change process is a key concept in negatively influencing cynicism to change. Thus, by letting individuals experiment with intended changes, they are involved in the process and therefore cynicism to change could be lowered. For the insignificant change resistance attitudes, the same could have occurred as with dialogue. Again, experimentation needs to be combined with other learning sources and measured over a time period to reveal its real potential and significance regarding change resistance attitudes.

Interaction with the external environment. For interaction with the external environment, a positive significant interaction with normative commitment to change was found. Normative commitment to change entails whether individuals feel obliged to support changes in an organisation (Herscovitch & Meyer, 2002). There is an explanation for this significant relationship. As individuals interact more with the environment, such as other companies, they become aware of the changes around them. This could make the individuals aware of the fact that changes in the organisation are necessary to keep up with the environment (Bapuji & Crossan, 2004) and thus make individuals feel obliged to support change. However, this may not be the case for other individual change resistance attitudes. For instance, interaction with the external environment could not stimulate readiness for change for the reason that change is often a process within the organisation from an individual's perspective (George & Jones, 2001). This could also be the case for other individual change resistance attitudes and therefore interaction with the external environment had no impact on all individual change resistance attitudes. Moreover, similar to dialogue and experimentation, the research design could have had a role in the insignificant outcomes and the fact that learning sources are more effective when combined.

Theoretical implications

The results of the current study yield implications for academic literature. First of all, this study contributed to literature by exposing what change resistance attitudes could cause inertia and how (un)learning sources influence these change resistance attitudes. The current scientific understanding of the dynamics of change in organisations is ever evolving and many different viewpoints are present. This study therefore contributed to scientific understanding by connecting several learning sources, unlearning and change resistance attitudes in the context of inertia with the goal of incorporating multiple viewpoints. Therefore, the added value of this study is also partially theoretical. Multiple factors within change literature were connected and

presented clearly in the research model through an extensive theoretical framework. Then, the empirical component of this study helped in finding first evidence for the constructed research model. This was highly relevant as several scholars acknowledge the role of individual change resistance during inertia (Barnett & Pontikes, 2008; Godkin, 2010; Tsang & Zahra, 2008); however, specific change resistance attitudes have not yet been investigated in relation to inertia. Thus, the current study connects concrete change resistance attitudes to inertia, which has not yet been done before through extensive theoretical research and first empirical confirmation. The majority of scholars which examine individual factors in the context of inertia, describe these factors more broadly as psychological factors (e.g. Godkin, 2010). Hence, this study is highly relevant as it clarifies specific change resistance attitudes in relation to inertia, instead of combining change resistance attitudes as psychological factor.

The gained insights implicate that not all change resistance attitudes affect inertia; practitioners and scholars alike need to distinguish these attitudes in order to design effective practices to cope with inertia. Therefore, the current study might enable more complete and detailed empirical research. Moreover, the current study ought to discover what role unlearning has in the matter of change resistance and therefore contributed to the scarce body of literature of unlearning in relation to change resistance attitudes. However, the results of unlearning in the current study raised more questions that it answered and suggestions for improvement on the subject are done in the header further research. Subsequently, not all learning sources could influence change resistance attitudes, exposing the nuances and complexity between learning and change resistance. Hence, caution is necessary when further investigating and designing interventions for these concepts. Scholars could build upon these insights with an extended version of the current model to create a better understanding of the dynamics between unlearning, learning, individual change resistance attitudes and inertia.

Practical implications

The results of the current study also yield implications for HR practitioners and leaders in general in organisations when attempting to avoid inertia. First of all, practitioners could utilize the results to determine learning interventions to influence change resistance in their organisation. For example, when cynicism to change prevails in an organisations, practitioners could utilize experimentation to eliminate cynicism by letting individuals experiment with the new change itself and the process of the implementation. In a study conducted by Hansen & Nørup (2017), such experimentation regarding change implementation was applied in a Danish hospital with multiple locations. Within the hospital, two local units were given permission to formulate their own leadership- and implementation strategy, which diverged from the basic change strategy which was adapted by the hospital. Evidence was found for the utilization of a local strategy, which was found to be significantly more effective than a basic implementation strategy (Hansen & Nørup, 2017). On the basis of the results of the current study, such experimentation with different, local change strategies could yield more effective change implementation as cynicism to change decreases by such experimentation interventions.

Furthermore, when inertia in an organisation is ascertained, practitioners could focus on the readiness- and continuance commitment to change of its individuals in order to implement intended changes and escape from the state of inertia. The learning sources dialogue, experimentation and interaction with the external environment had no effect on readiness- and continuance commitment. Thus, other interventions need to be designed in order to influence these change resistance attitudes to overcome inertia. For instance, Walinga (2008) found cognitive appraisal, focus of change and perceived control of change of individuals to be critical factors to positively influence readiness to change in an organisation. Cognitive appraisal refers to the personal interpretation of individuals of certain events, which influences the level of stress over this situation. Hence, interventions to positively influence individuals' readiness to

change could incorporate a deep engagement into an individuals' cognitive appraisal. For example, practitioners could intervene with a reformulation of work roles, which fits with the changes in processes of the organisation with the goal of decreasing the workload intensity. Workload intensity increases emotional exhaustion, which could result in negative cognitive appraisal of changes. Hence, decreasing workload intensity by reconstructed work roles could be a favourable intervention for practitioners to stimulate cognitive appraisal and readiness to change in an organisation (Paškvan, Kubicek, Prem, & Korunka, 2016). This could lead to a focus shift which changes the individuals perception and feelings of power over a change (Walinga, 2008).

However, as most antecedents of individual change resistance attitudes display overlap to some extent in other studies as found by Choi (2011), it could be possible that other attitudes also negatively impact inertia. Thus, the full range of change attitudes needs to be taken into account when breaking through inertia. Furthermore, while some learning sources have demonstrated significance in this study on some change resistance attitudes, in practice this could logically be different. The learning sources could thus prove beneficial for organisational learning interventions (Brown & Duguid, 1991; Rhodes, 1996; Tynjälä, 2008) during times of inertia.

Limitations

As is the case with all studies, the current studies has some limitations. First, the interaction between the variables has not been captured over time as the study utilized a cross-sectional research design instead of a longitudinal design. The interaction over time between (un)learning and individual change resistance attitudes has thus not been clarified in the current study. Consequently, it is not sure whether the proposed research model holds up over a longer period of time.

Secondly, some results may not be significant due to the data collection method. Utilizing a questionnaire during one time point and one sample could have rendered these change resistance attitudes insignificant. A longitudinal research design could have generated more significant results as differences in change resistance attitudes over time could have been measured. However, the current study was cautiously successful in mapping out specific change resistance attitudes which need to be influenced in order to decrease inertia, which were readiness- and normative commitment to change. Other scholars could utilize and develop the current model as a first proposition to gain new insights in the interaction between inertia, unlearning and learning. Hence, the current research model serves as an explorative model on which further steps have to be taken to confirm its added value.

Third, there are some remarks about the sample and contexts, although any sample that could have been chosen has consequences for the generalizability of the current study. The sample was rather small in the context of organisational change. While greater sample size could have generated more accurate results, the current sample size is more than sufficient for relevant results (Green, 1991). However, the current model could yield different results in other contexts and organisations as the data was collected only from one particular organisation's sample. The study was conducted in the context of the Netherlands and the sample was extracted from one organisation in one specific context. Therefore, the generalizability of the results is somewhat limited. It may be possible that the results in replications of this study in other organisations differ notably. To further verify the research model, it needs to be tested in other contexts and organisations as the current research model does not allow for a waterproof comparison between varying contexts and organisations.

Fourth, some limitations in regards to the data analysis persist. Most importantly, inertia could have been measured more effectively in the survey. The utilization of two subscales was not effective, which was indicated by Cronbach's alpha reported insufficient consistency

between the items regarding action inertia and insight inertia. Hence, the hypothesis regarding inertia and individual change resistance was tested using another survey scale which measured the impact of changes. As the impact of changes could indicate inertia (Becker, 2010), the scale did not measure the concept inertia itself. This could be attributed to the possibility that there is a limited amount of quality survey scales which measure inertia as one concept in current change literature. Most inertia scales are fragmented into different subscales, such as the original subscales utilized in this study (Huang et al., 2013). A fundamental flaw of the concept inertia could be the underlying factor of the lack of quality survey scales applicable in multiple contexts and capture inertia as one concept. Moreover, although the study utilized previous constructed scales to measure the variables, the exploratory factor analysis did not group the items corresponding to their respective scales in this study. Hence, the data was analysed without taking an exploratory factor analysis into account and the items were grouped in scales as constructed in previous studies. Therefore, the results of the analysis should be interpreted with caution.

Lastly, examining the context of the sample organisation would have helped the current study to reveal more relevant insights as inertia is highly context sensitive (Barnett & Pontikes, 2008; Jack Walker et al., 2007). By incorporating context when examining inertia, the reason why an organisations is inert could be revealed while subsequently linking contextualized change resistance attitudes. Moreover, both unlearning and the learning sources examined in this study are often context sensitive, such as interaction with the external environment (Svetlik, Stavrou-Costea, Chiva, et al., 2007). Gaining insights into the organisation's context could have aided to nuance the reasons why inertia is present in the first place. Besides measuring the context of the sample organisation, considering the ongoing changes could have generated insights into how individual change resistance attitudes affect those changes. Then, inertia could be measured as the relation between individual change resistance attitudes and ongoing

changes could have been exposed. Nevertheless, examining such relationships is only within the realm of possibilities when utilizing a longitudinal data collection method.

Although the current study has its limitations, it has proven as a valuable basis to open up further research on the relation between unlearning, learning and individual change resistance attitudes in the context of inertia.

Further research

As derived from the current study' limitations, opportunities for further research are suggested on the interaction of (un)learning, individual change resistance and inertia. Follow-up research should take a step back and determine which fundamental concepts trigger inertia as there is still inconclusiveness about this subject. There is still a gap between organisational factors on the one hand and individual factors such as change resistance on the other hand (e.g. Godkin, 2010; Huang et al., 2013; Wolf, 2013; George & Jones, 2001). Furthermore, on the matter of change implementation during inertia and change resistance, Trullen, Bos-Nehles & Valverde (2020) suggest the importance of incorporating different viewpoints and more complex relationships with different elements, such as political processes. Hence, studies which combine organisational- and individual level factors and test those factors in longitudinal empirical research, both quantitative and qualitative, could add significant value to existing scientific understanding. Qualitative research could deepen our understanding of the contextual factor in change subjects and increase the significance of extracted results, as shown in a longitudinal study conducted by Walinga (2008). Hence, by combining quantitative and qualitative data collection methods, more significant, contextualized data could be extracted from multiple organisations.

Important to note is that subsequently, much attention has to go out to designing a model that is also effective in practice. There is often a discrepancy between theory and practice in which research models are too theoretical to effectively apply in practice (Austin & Bartunek,

2003). Hence, empirically confirmed models need to be designed in such a way that it could prove as a effective tool for practitioners. As a result, fundamental causations of inertia could be synthesized on organisational- and individual level factors and dealt with accordingly in practice. Besides multiple level empirical research, much attention has to go out to the context of sample organisations as inertia is highly determined by contextual factors (Barnett & Pontikes, 2008; Jack Walker et al., 2007). For instance, to sufficiently examine inertia, further research could utilize change theories such as the cycles of organisational change by Mintzberg and Westley (1992). Utilizing such change theories could assist in revealing how inert organisations interact with the environment in different dimensions of change, such as change content and processes.

Furthermore, follow-up studies should focus on examining the concept of unlearning as this could prove a beneficial tool in avoiding in inertia. Unlearning has potentially useful usage as a theoretical concept. However, conclusive definitions and quality empirical findings prove to be scarce in both change and learning literature throughout the years (Hislop et al., 2014; Klammer & Gueldenberg, 2019; Tsang & Zahra, 2008). An important step in unravelling the concept of unlearning and the link with inertia is Tsang's (2008) literature review, however empirical confirmation of this review is still missing many years later. Similar to inertia, researchers should take a step back and examine unlearning at its most fundamental level and how it interacts with change variables on multiple levels. Again, a longitudinal research design which combine quantitative and qualitative data collection methods is necessary to capture how unlearning could be utilized in effectively changing routines and organisations as a whole as this has not yet done before (Klammer & Gueldenberg, 2019).

In such a longitudinal research, examining the interplay between learning and unlearning is recommended, as this interplay could prove a problem in itself. Due to the weak empirical fundament of unlearning, the concept is often interpreted as a form of learning.

However, theory suggests that unlearning is a distinctive concept different from learning (Tsang & Zahra, 2008). Although most scholars argue that unlearning and learning are most effective when combined, there is some ambiguity about whether unlearning and learning should be combined or whether unlearning should precede learning (e.g. Navarro & Moya, 2005; Tsang & Zahra, 2008; Becker, 2010). As a result, further research should examine the interaction between unlearning and learning.

Conclusion

The interplay between (un)learning, change resistance attitudes and inertia is a complex one, which is prone to a variety of contextual nuances. Logically, research on the grand subject of episodic organisational change is never definitive, as this theme is ever evolving and contains continuing additional variables. This may also be implicitly the reason many organisations end up with inertia as they struggle to fully conceive and map out the factors that need to be addressed to successfully implement episodic organisational changes. This study added on insights in this complex subject by examining the relationship between (un)learning, learning and change resistance attitudes in the context of inertia. By doing so, it mapped out learning efforts which organisations could deploy to positively influence specific individual change resistance attitudes and combined various viewpoints, which in turn could decrease inertia. However, follow-up research needs to drastically examine the fundamentals of inertia and unlearning in longitudinal research. Furthermore, the interaction between unlearning and learning needs to be reconsidered. This would greatly benefit scholars and practitioners alike in seeking to unravel the fundamental meaning and phenomenon inertia, as there is considerable inconclusive understanding of the causes of inertia, unlearning as whole and the interaction between unlearning and learning.

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Appendices

Appendix A: items of the questionnaire

Constructs and items	Authors and Dutch translations of items
Change readiness	Bouckenooghe et al. (2009)
I want to devote myself to the process of change	Ik wil mij inzetten voor veranderingsprocessen
I am willing to make a significant contribution to the change	Ik ben er toe bereid om een grote bijdrage te leveren ten behoeve van verandering
I am not willing to put energy into the process of change (R)	Ik ben er niet toe bereid om energie te steken in veranderingsprocessen
I think that most changes will have a negative effect on the clients we serve (R)	Ik denk dat de meeste veranderingen een negatief effect zullen hebben voor onze klanten
Plans for future improvement will not come to much (R)	Plannen voor verbeteringen in de toekomst leiden tot niets
Most change projects that are supposed to solve problems around here will not do much good (R)	De meeste projecten die problemen zouden moeten oplossen, leiden hier tot niets[2]
I experience the change as a positive process	Ik ervaar verandering als een positief proces
I find the change refreshing	Ik vind verandering verfrissend
Openness to change	Wanberg and Banas (2000)
I would consider myself open to changes	Ik zou mezelf omschrijven als ‘open’ voor veranderingen
I am looking forward to the changes in my work role	Ik kijk uit naar veranderingen in mijn functie
Overall, the proposed changes are for the better	Over het algemeen zijn de voorgestelde veranderingen een verbetering
I think that the changes will have a positive effect on how I accomplish my work	Ik denk dat de veranderingen een positief effect zullen hebben op hoe ik mijn werk uitvoer
Commitment to change	Herscovitch and Meyer (2002)

[2] Item not included in actual survey since it was overlooked

Affective commitment	
I believe in the value of this change	Ik geloof in de waarde van de verandering binnen de organisatie
This change is a good strategy for this organisation	De huidige verandering is een goede strategie voor deze organisatie
I think that management is making a mistake by introducing this change (R)	Ik denk dat het management een fout maakt met het invoeren van deze verandering
This change serves an important purpose	De huidige verandering dient een belangrijk doel voor de organisatie
Things would be better without this change (R)	Dingen zouden beter zijn zonder de huidige verandering in de organisatie
This change is not necessary (R)	De huidige verandering is niet nodig
Continuance commitment	
I have no choice but to go along with this change	Ik heb geen andere keuze dan meegaan met de huidige verandering
I feel pressure to go along with this change	Ik voel druk om mee te gaan met de huidige verandering
I have too much at stake to resist this change	Er staat te veel op het spel voor mij om niet mee te gaan met de huidige verandering
It would be too costly for me to resist this change	Het zou teveel kosten om weerstand te bieden tegen de huidige verandering
It would be risky to speak out against this change	Het zou te riskant zijn om mezelf tegen de huidige verandering uit te spreken
Resisting this change is not a viable option for me	Weerstand bieden tegen de huidige verandering is geen optie voor mij
Normative commitment	
I feel a sense of duty to work toward this change	Ik voel een plicht om mee te werken aan deze verandering
I do not think it would be right of me to oppose this change	Ik denk dat het niet goed zou zijn van mij als ik de huidige verandering tegenwerk
I would not feel badly about opposing this change (R)	Ik zou me niet slecht voelen als ik deze verandering tegenwerk
It would be irresponsible of me to resist this change	Het zou onverantwoordelijk zijn om weerstand te bieden tegen de huidige verandering
I would feel guilty about opposing change	Ik zou mezelf schuldig voelen om tegen de verandering te werken
I do not feel any obligation to support this change (R)	Ik voel geen verplichting om de huidige verandering te ondersteunen

Cynicism towards change	Wanous, Reigers and Austin (2000)
Most of the changes that are supposed to solve problems around here will not do much good	De meeste veranderingen die zich hier plaatsvinden zullen niet veel goeds betekenen
Attempts to make things better around here will not produce good results	Pogingen om zaken beter te maken zullen geen goede resultaten brengen
Suggestions on how to solve problems will not produce much real change	Suggesties over hoe er problemen opgelost kunnen worden zullen niet veel echte veranderingen teweeg brengen
Plans for future improvement will not amount to much	Plannen voor de toekomst zullen niet veel bijdragen aan iets
Unlearning	Casillas et al. (2010)
Your enterprise is ready to change the way it operates	Jouw organisatie is klaar om de manier hoe het opereert te veranderen
New forms of facing problems are taken into account by your enterprise	Nieuwe vormen van het oplossen van problemen worden meegenomen door jouw organisatie
Employees in your enterprise wish to work together to solve common problems	Medewerkers in jouw organisatie willen graag samenwerken om algemene problemen op te lossen
Employees in your enterprise are willing to assume risks	Medewerkers in jouw organisatie zijn bereid om risico's te nemen
Experimentation	Svetlik et al. (2007)
People here receive support and encouragement to present new ideas	Mensen krijgen hier de ruimte en worden aangemoedigd om met nieuwe ideeën te komen
Initiative often receives a favourable response here, so people feel encouraged to generate new ideas	Initiatief word vaak op prijs gesteld, dus mensen voelen zich gestimuleerd om met nieuwe ideeën te komen
Dialogue	Svetlik et al. (2007)
Employees are encouraged to communicate	Medewerkers worden aangemoedigd om te communiceren
There is a free and open communication within my work group	Er is een vrije en open communicatie binnen mijn team

Managers facilitate communication	Managers zorgen ervoor dat er gecommuniceerd kan worden
Cross-functional communication is a common practice here	Communicatie tussen verschillende functieteams is normaal hier
Interaction with the external environment	Svetlik et al. (2007)
It is part of the work of all staff to collect, bring back, and report information about what is going on outside the company	Het is onderdeel van ieders werk om informatie over wat er gebeurd buiten het bedrijf te verzamelen, terug te halen en te rapporteren
There are systems and procedures for receiving, collating and sharing information from outside the company	Er zijn systemen en procedures voor het ontvangen, bij elkaar voegen en delen van informatie van buiten het bedrijf
People are encouraged to interact with the environment: competitors, customers, technological institutes, universities, suppliers etc.	Mensen worden gestimuleerd om interactie te hebben met de omgeving, zoals met concurrenten, klanten, technologische instituten, universiteiten, leveranciers etc.
Action inertia	Huang, Lai, Lin, & Chen (2013)
Our company has a deep-rooted organizational culture	Onze organisatie heeft een diepgewortelde cultuur
Our company values are sacred and we are absolutely not going to change them	De normen en waarden binnen deze organisatie zijn heilig en we gaan deze absoluut niet veranderen
I will follow the suggestions and requirements of others to change my methods for solving problems	Ik neem de suggesties en benodigdheden van anderen mee in het oplossen van problemen
Past knowledge and experience can increase my work efficiency	Eerdere kennis en ervaring kan de efficiëntie van mijn werk verhogen
When we change our behaviour, it is hard to convince others to do the same	Als we ons gedrag veranderen, is het moeilijk om anderen te overtuigen om dat ook te doen
Insight inertia	Huang et al. (2013)
Our company has difficulty identifying how other firms solve problems	Onze organisatie heeft moeite met erachter komen hoe andere organisaties problemen oplossen

Our company rarely observes changes in external environment	Onze organisatie observeert zelden hoe de externe omstandigheden veranderen
Our company will utilize past information and knowledge to solve problems	Onze organisatie zou eerdere informatie en kennis gebruiken om problemen op te lossen
I rarely try to observe and learn new concepts to change my thinking and behaviour	Ik probeer zelden om nieuwe concepten te leren, zodat ik mijn gedrag en denkwijze verander
Impact of change	Caldwell et al. (2004)
The current organisational change includes:	De huidige organisatieverandering omvat:
Changes regarding the processes and procedures of my team	Veranderingen in de processen en procedures van mijn team
Changes regarding the way how people do their job	Veranderingen in de manier waarop mensen in mijn team hun werk kunnen doen
Changes in the daily routines of employees in my team	Veranderingen in de dagelijkse routines van medewerkers uit mijn team