

Relationship between Ambiguity tolerance and resistance to change in the Indian Context

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ABSTRACT

The present study investigated the relationship between ambiguity tolerance and resistance to change in the context of organisational change. Data was collected from employees whose organisations had undergone change. The relationship between ambiguity tolerance and resistance to change was examined upon 100 midlevel managerial (male and female) employees of public and private sector Research and Development organizations in India. Tools used in the study were The Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT-II) and Resistance to Change Scale. Significant correlations were found between some dimensions of ambiguity tolerance and resistance to change. There were differences in the resistance to change of individuals from the public and private sector in all the four dimensions, while gender did not have any notable influence on resistance to change. The results also indicated that when organisations undergo change endeavours, the presence of ambiguity in certain dimensions would have a relationship with the amount of resistance that employees display towards organisational change.

KEYWORDS: *ambiguity, ambiguity tolerance, change, resistance to change, public organisation, private organisation*

I. INTRODUCTION

Organisations must continuously undergo change in order to survive the dynamics of the market. These changes can be wide ranging from technological to administrative to procedural to structural. Often change brings with it uncertainty and chaos. It causes the change in the equilibrium and status quo and both employees as well as management must let go of the old ways of doing things and adapt to the new changes. This shift is uncomfortable on many accounts as it involves moving from known to unknown. Often when change management is ill defined, it causes a sense of discomfort, making the employees resistance to it. Hence when organisations change in the face of ambiguity, employees are often seen detesting change. Among the many factors which may lead to employees resisting change, ambiguity tolerance is a vital factor which needs closer attention.

Budner defined tolerance for ambiguity as "the tendency to perceive ambiguous situations as desirable," whereas intolerance for ambiguity was defined as "the tendency to perceive...ambiguous situations as sources of threat" (p. 29). Intolerance of ambiguity may be defined as "the tendency to perceive (i.e., interpret) ambiguous situations as sources of threat", tolerance of ambiguity as "the tendency to perceive ambiguous situations as desirable". It is important to clarify what is meant by ambiguous situation. An ambiguous situation may be defined as one which cannot be suitably categorized or structured by the individual because of the lack of adequate cues. There are three such situations—a totally novel situation in which there are no familiar cues, an intricate situation in which there are many cues to be considered, and a contradictory situation in which different elements or cues suggest different structures—in short, situations characterized by novelty, complexity, or insolubility. Ambiguity intolerance is defined as the predisposition to observe and interpret information that is marked by vague, fragmented, incomplete, inconsistent, contradictory, or unclear meaning as actual or potential sources of psychological threat. Ambiguity tolerance is defined as the tendency to perceive ambiguous situations as challenging and desirable.

The concept of organisational change gained prominence in the late 1940s and became a distinct field of study. One of the key findings in many studies targeting individual and organisational behavior is that organisations and their members resist change (Robbins and Millett, 1994). Resistance to change has been defined as "an individual's tendency to resist and avoid making changes, to devalue change generally and to find change aversive across diverse context and types of change" (Jaramillo et al., 2012, p 549). It considered as one of the key obstacles to organisational growth and development due to its negative effects (Boohene & Williams, 2012, p 135). It is important to pay attention to the employees in organisations as they are the primary inhibitors of change in

organisations (Agboola & Salawu, 2011, p 239). Hence more research is required to determine the factors which affect employee's resistance to change and whether they can affect customer responsiveness and performance. Boohene & Williams (2012) found a few factors which may lead to more resistance to change. These factors include low levels of trust in management, low employee participation in decision-making, lack of motivation, ineffective and poor channels of communication and coupled with weak information exchange. Giangreco and Peccei (2005) show that individuals analyse the cost and benefits of change based on their perceptions. The extent of employee participation in the change process significantly impact's the middle managers' likelihood to engage in various forms of resistance to change.

II. METHOD

For the present study, data was collected from 100 participants working in private and public research and development organizations in New Delhi. The organisations were selected as they had witnessed some administrative as well as procedural changes in the recent times and hence collecting data from people who had witnessed change would give a clearer context. While most of the participants worked at the executive (middle) level position in their organisation, some of them held managerial posts. Participants were handed out the questionnaire and the data were taken in the presence of the researcher. The sample had a mix of male and female participants. A questionnaire was compiled consisting of three sections. Section 1 consisted of information about the demographic profile of the participants. The Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT-II) by McLain (2009), having an internal consistency reliability of .83 (Cronbach's alpha) was used to measure the ambiguity tolerance of the participants in section 2 of the questionnaire. The five dimensions used in the scale were: ambiguous stimuli in general (number of items= 5), complex stimuli (number of items= 2), uncertain stimuli (number of items= 1), New/unfamiliar/novel stimuli (number of items= 2), and insoluble/illogical/internally inconsistent stimuli (number of items= 3). Responses were recorded on a five-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Low scale scores indicate aversion to ambiguity while high scale scores indicate ambiguity tolerance. Participants resistance to change was measured in Section 3 of the questionnaire using the Resistance to change (RTC) questionnaire developed by Oreg (2003). The scale is made up of 4 dimensions-routine seeking (number of items =5), emotional reaction (number of items =4), short term focus (number of items =5) and cognitive rigidity (number of items =4). Response options ranged from 1 (strongly disagree) to 6 (strongly agree). The reliability (Cronbach's alpha) of the scale is .91. Descriptive statistics, Pearson's co-efficient of correlation and multiple linear regression was used to examine the data.

III. RESULTS

A perusal of Table 1 shows that there is no difference in the ambiguity tolerance between males and females on all the dimensions of the scale except Insoluble/ illogical/ internally inconsistent stimuli and Uncertain stimuli. It was seen that males were less tolerant of ambiguity than females on the two dimensions. The mean differences were also statistically significant for only these two dimensions (see table 1 for the results of t-test). Employees of public sector perceived higher aversion towards ambiguity than employees of private sector on the dimensions of complex stimuli and new/unfamiliar/novel stimuli. Employees of private sector had higher ambiguity intolerance on the dimensions of uncertain stimuli and Insoluble/ illogical/ internally inconsistent stimuli. There was no difference between the employees of both the sectors on the dimension of ambiguous stimuli in general. Looking at the results of t-test (Table 1), it was found that the mean difference for the two organisations was statistically significant only for the dimension of complex ambiguity.

Table 1: Mean scores and SDs on Ambiguity tolerance by gender and organisational context

	Gender		t(98)	Organisation		t (98)
	Female (N= 20)	Male (N= 80)		Public (N= 45)	Private (N=55)	
	M (S.D)	M (S.D)		M (S.D)	(S.D)	
Ambiguous stimuli in general	15.76 (2.37)	15.09 (3.04)	.927	15.14 (3.21)	15.29 (2.69)	-.257
Complex stimuli	6.63	6.8	-.449	6.33	7.13	-2.667**

	(1.01)	(1.65)		(1.37)	(1.59)	
New/ unfamiliar/ novel stimuli	6.55 (1)	6.97		6.61	7.11	
Insoluble/ illogical/ internally inconsistent stimuli	10.2	8.87	-1.211	(1.31)	(1.41)	-1.821
Uncertain stimuli	(2.09)	(2.12)	2.515**	(2.03)	(2.29)	.961
	3.45 (1)	2.83		3 (.93)	2.91	
		(1.02)	2.464**		(1.13)	.427

* < 0.05 level

** < 0.01 level

Means and SDs of scores on Resistance to Change by organisational context and gender are presented in Table 2. A close perusal showed that males expressed higher resistance to change than females on the dimensions of routine seeking and cognitive rigidity. On the other hand, females scored slightly more than males on the dimension of emotional reaction. There was no difference on the dimension of short-term focus for both the genders. However, the mean difference between the two genders was not statistically significant (see Table 2 for the details of t-test for Resistance to Change) for any of the four dimensions. Employees of public sector expressed slightly higher levels of resistance to change than employees of private sector organisation in all the four dimensions. This difference was also statistically significant for the dimension of cognitive rigidity.

Table 2: Mean scores and SDs on Resistance to change by gender and organisational context

	Gender		t(98)	Organisation		t (98)
	Female (N= 20)	Male (N= 80)		Public (N= 45)	Private (N=55)	
	M (S.D)	M (S.D)		M (S.D)	M (S.D)	
Routine seeking	13.55 (3.53)	14.51 (3.91)	-1.005	14.9 (3.65)	13.85 (3.97)	1.351
Emotional Reaction	13.2 (4.5)	12.66 (4.14)	.514	13.28 (4.01)	12.34 (4.33)	1.111
Short term focus	14.3 (5.55)	14.37 (4.74)	-.061	15.31 (5.22)	13.58 (4.49)	1.780
Cognitive Rigidity	13.85 (3.94)	14.62 (2.71)	-1.037	15.44 (3.31)	13.67 (2.46)	3.065*

* < 0.05 level

** < 0.01 level

Pearson's coefficient of correlations was computed to find out the nature of relationship between ambiguity tolerance and resistance to change (see Table 3). This analysis revealed that routine seeking had significant positive correlation with ambiguous stimuli in general ($r = .251$, $p < 0.05$), and complex stimuli ($r = .376$, $p < 0.01$). Short term focus had significant negative correlation with new/ unfamiliar/ novel stimuli ($r = -.206$, $p < 0.05$). Cognitive rigidity had significant negative correlation with new/ unfamiliar/ novel stimuli ($r = -.277$, $p < 0.01$), insoluble/ illogical/ internally inconsistent stimuli ($r = -.317$, $p < 0.01$) and uncertain stimuli ($r = -.223$, $p < 0.05$). No other correlation reached to the level of statistical significance.

Table 3: Correlation between ambiguity tolerance and resistance to change

Variables	Routine seeking	Emotional Reaction	Short term focus	Cognitive Rigidity
Ambiguous stimuli in general	.251*	.01	.185	.061
Complex stimuli	.376**	.152	.17	-.196
New/ unfamiliar/ novel stimuli	.041	-.164	-.206*	-.277**
Insoluble/ illogical/ internally inconsistent stimuli	.012	.016	-.165	-.317**
Uncertain stimuli	.075	.151	-.021	-.223*

*<0.05 level

**< 0.01 level

IV. DISCUSSION

Change involves movement from known to unknown, from familiar to unfamiliar. It involves unlearning and re-learning and often is uncomfortable. Bovey and Hede (2001) postulate that the change process consists of four phases which are, initial denial, resistance, gradual exploration, and eventual commitment. Robbins (2003) adds that since change involves movement from the known to the unknown, resistance is bound to occur. Berham (1966) defined resistance as, "an aversive motivational state, initiated when one perceives that one's freedom is threatened, and directing thought and action toward regaining the threatened freedom". Resistance to change is any attitude or behavior that reflects a person's unwillingness to make or support the desired change (Hunt and Osborn 1994). Resistance towards change has usually been regarded in relatively negative terms. It is viewed either as a problem that needs to be removed or minimized (Carnall, 1991; McCrimmon, 1997) or as a sign of failure (Armenakis and Harris, 1995).

While planning any major change effort it is essential to put into place a suitable system to manage resistance as it can determine the either the change would be a success or a failure (Pardo del Val and Martin et al., 2003). The looser ends there are, the more the change process is open to ambiguity. Generally, it is observed that more the ambiguity surrounding change, more likely the entire process becomes uncomfortable and chaotic leading to greater resistance among the stakeholders, especially among those who must adapt.

Against this backdrop, this study aimed to understand the relationship between ambiguity tolerance and resistance to change in two research and development organisations experiencing change. The study empirically investigated the two variables in relation to organisational context and gender. The study looked into details into the relationship between ambiguity tolerance (ambiguous stimuli in general, complex stimuli, uncertain stimuli, new/unfamiliar/novel stimuli, and insoluble/illogical/internally inconsistent stimuli) and resistance to change (routine seeking, emotional reaction, short term focus and cognitive rigidity).

Results from the Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT-II) indicates that there were no differences observed between males and females as well as employees of public and private sector on the dimensions of Ambiguous stimuli in general. An ambiguous situation may be defined as one which cannot be adequately structured or categorized by the individual because of lack of sufficient cues" (Budner, 1962, p. 30). it was observed that both the genders as well as employees of both the types of organisations were relatively more tolerant towards an ambiguous stimulus in general. A complex stimulus overwhelms the perceiver who must sift through a lot of information in order to understand the situation. In the present sample, it was observed that in general both male and female participants displayed higher aversion towards a complex stimulus which would require more cognitive processing. However, this difference was found to be statistically significant in case of the types of organisations where employees of private sector were more tolerant towards uncertainty displayed in terms of complex stimuli. This difference maybe on account of the nature of job security and employability of the two sectors. In general employees of private sector work in environments which have low job security and in order to retain their jobs, they are constantly innovating and working in a relatively more dynamic environment than public sector. Novelty, also called newness or unfamiliarity, presents a situation that has been experienced rarely, if at all. Even if parts of a situation are familiar, the way the parts are combined or behave together may be unfamiliar. In this dimension, it was seen that there wasn't much difference between the two genders. The employees of private sector were found to be a little more tolerant towards new/ unfamiliar/ novel stimuli, but this difference was not statistically significant. Females were found to be more tolerant towards insoluble/ illogical/ internally inconsistent stimuli than males and this difference was statistically significant. Insoluble stimuli present conflicts in information that must be resolved if the situation is going to be understood. These conflicts may range from mild incongruities to impossible contradictions and can result in multiple interpretations of the situation (Poesio, 1996). One possible reason to explain this difference could be the societal roles which women play which may expose them to many inconsistent frameworks and the expectation to excel in each role may prepare them for such type of stimuli. On the other hand, although there was a difference seen between employees of private and public sector, with employees of public sector being more tolerant of ambiguity in this dimension, the difference was not significant statistically. A stimulus is regarded as uncertain when there is doubt regarding its nature as it is not consistent or reliable. Such a situation leaves the subject not knowing what to do or believe, or not able to decide about something. Females were

found to differ significantly than males on this dimension. Females were found to be more tolerant of uncertain stimuli. Very minor differences were noted between the employees of public and private sector organisations and this difference wasn't statistically significant.

Results from the resistance to change scale indicates that males were more resistant to change than females while employees of public sector displayed more resistance on the dimension of routine seeking. However, the differences were not statistically significant. While females are tasked with the job of managing both the domestic front as well as the professional front, they tend to be more flexible in order to deal with multiple responsibilities of varying nature. Routine seeking pertains to incorporation of routine into one's life. When individuals encounter new stimuli, familiar responses may be incompatible with the situation thus producing stress. The dimension of emotional reaction implies that change is often considered a stressor by many individuals. People often face strong emotions during change as they feel that their control over their life situation is being taken away from them with the imposed change.

Women scored higher on this dimension in comparison to males while public sector employees had higher scores than their counterparts in the private sector. However, this difference was not significant statistically. In general, studies on emotional intelligence indicate that in general females experience positive and negative emotions more intensely than the male gender (Grossman & Wood, 1993). The dimension of short-term focus emphasizes on the immediate inconvenience or adverse effects of change. Despite the awareness to the potential long-term benefits involved in change, people resist it owing to their intolerance for the adjustment period involved in change and the reluctance to lose control. There was no difference observed between the two genders on this dimension. Employees of the public sector had higher short-term focus than employees of the private sector. One factor that could explain this could be job security, which would make them more reluctant to take risks. Males in general displayed higher cognitive rigidity than females. The difference between employees of public and private sector was significant on this dimension with employees of public sector displaying more cognitive rigidity. Cognitive rigidity manifests itself through the trait of rigidity. Such individuals are characterized by inflexibility and close mindedness and therefore might be less willing and capable of adjusting to new situations.

Looking at the relationships between the variables, it was observed that cognitive rigidity had strong negative correlations with new/ unfamiliar/ novel stimuli, insoluble/ illogical/ internally inconsistent stimuli and uncertain stimuli. This indicates that individuals who are inflexible in their outlook would prefer stimuli low on novelty and uncertainty as they are less willing to adapt to different stimuli. Short term focus yielded strong negative correlation with new/ unfamiliar/ novel stimuli. This means that people who avoid change despite its long-term benefits as they are focused on the immediate gains and comfort will be less comfortable in new or unfamiliar set up. Routine seeking had positive correlation with ambiguous stimuli in general and complex stimuli.

While the findings of this study do throw insights on two important variables involved in the process of change in organisations, there are a few limitations with this study. The first among the limitations was the kind of change taking place in the two organisations. The nature of change occurring in the two organisations was not the same and the reason why the employees of the two organisations differ in resisting the change and the level of ambiguity tolerance could be attributed to that factor. Since the form of change is not uniform, the reactions would be different. Another limitation would be the timing of change and its impact. Ideally there should be some time gap between implementation of change and data collection. A longitudinal study would give a more in-depth understanding of the phenomena. In future a qualitative study should be undertaken in organisations undergoing change so that more subjective data can be gathered. The present study focuses on two variables which may impact change. However, there could be many moderating variables which may play a significant role in the change process and hence they need to be investigated with greater details.

V. CONCLUSION

The main objective of the present study was to investigate the relationship between ambiguity tolerance and resistance to change. The sample consisted of 100 public sector and private sector employees from two research and development organisations in Delhi. The findings indicate that in terms of ambiguity tolerance, there is difference between males and females in the dimensions of insoluble/ illogical/ internally inconsistent stimuli and Uncertain stimuli. It was seen that males were less tolerant of ambiguity than females on the two dimensions and this difference was statistically significant. It was found that the mean difference for the two organisations was statistically significant only for the dimension of complex ambiguity. While employees of public sector expressed

slightly higher levels of resistance to change than employees of private sector organisation in all the four dimensions, this difference was not significant in case of the two genders. The results indicate that there is a relationship between some of the dimensions of ambiguity tolerance and resistance to change. There were a few limitations to the study and future research could be carried out in organisations facing similar kinds of change.

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