

Cognitive Styles of Entrepreneurs, Knowledge Workers & Managers: Adaptive or Innovative?

Omer Bin Sayeed

This study compares entrepreneurs, knowledge workers and managers on cognitive styles, critical in managing the workplace. The three basic cognitive styles of functioning of people in organization namely originality, efficiency and rule/group conformity either make the organization innovative or tilt it towards being adaptive. A comparison across groups showed statistically significant differences suggesting that the style difference is uniquely affecting the work environment. The groups of entrepreneurs, lawyers and psychologists barely crossed the western standard to be called innovative. The correspondence analysis established relatively independent positioning of originality, efficiency and rule/group conformity factors while denominating professors, teachers, entrepreneurs, pilots, computer professionals as relatively more close to originality factor than the other groups.

Omer Bin Sayeed is Adjunct Professor (OB/HR), Icfai Business School (IBS) Hyderabad. Email: omersayeed@gmail.com

Major Research Studies

The construct of Adaptation-Innovation has been extensively researched in the Western context besides using the theoretical framework in students' samples. In fact, different samples from various professional groups, as reviewed here, generally held hierarchical roles and performed various structured, semi-structured or unstructured tasks in their own right as position-based leaders of small or large segments within the organizations they belonged to. This indicates certain implicit acts of managing one's leadership behavior and influencing others. Mintzberg (2009) delineated managerial roles as position-based or position-dependent skills that tend to combine interpersonal, entrepreneurial, negotiating and leadership behavior components while a manager performs his job. Drawing from the characterization of Mintzberg the activities performed by any professional group with a role (structured, semi-structured or unstructured) or type of work (routine or complex) and influence processes created by high or low position power, indicative of low or

high interaction level of person concerned highlights leadership skills and are largely determined by his unique temperament, preferential interest and dominant style of functioning.

Indian professionals are overwhelmingly high adaptors, but poor innovators.

Very few researchers in the Indian context showed interest to verify the construct of adaption-innovation using Kirton Adaption-Innovation Inventory (KAII). Singh, Bhandarkar & Prasad (1959), using a modified version of adaption-innovation scale reported that Indian professionals are overwhelmingly high adaptors, but poor innovators. On Adaption-Innovation traits, they have examined data of IAS Officers as one of the professional groups and concluded that 80.62 per cent respondents are low innovators, 14.19 per cent medium innovators and only 5.19 per cent are high innovators. Singh et al (1959) labeled this professional group as more of adaptive than of innovative-cognitive style in the Indian bureaucracy. Using a contrastingly different sample Pettigrew & King (1993) found that budding nursing professionals as students were significantly more adaptive in problem solving and were less innovative compared with non-nursing students. Nursing majors of traditional ages (17-22 years) scored as more innovative in style than did those of non-traditional ages (23 – 60 years). The above study confined itself to one professional group out of several groups in the Indian organizational setups such as manufacturing

firms, service sector and non-corporate bodies etc. Gupta (1993) documented that managers in the private companies were significantly more innovative than their counterparts in the public sector undertakings. By and large managers in computer and production departments were found to be a great deal innovative as compared to their counterparts in finance, research and development, quality assurance, engineering, personnel/administration and material/stores departments. However, studies in the West on professional groups as bankers, accountants and those involved in production, who are largely required to work within the available system in which the answer to various managerial problems can be found in an easily well defined manner, tended to be more adaptive (Kirton, 1980; Thomson, 1980; Kirton & Pender, 1982; Hayward & Everret, 1983; Foxall, 1986; Gul, 1986; Gryskiewicz, Hills, Holt & Hills, 1987). Adaptors even try to solve problems or prefer decisions that preserve as much as possible the context of the problems. Adaptors try to do things better through improvement and alteration thereby basically maintaining things much as they are (Goldsmith & Kerr, 1991). Adaptors try to build and maintain the system respecting the context of the problem whereas innovators enlarge the scope of managing change and development within the company while redefining the context of the problem itself (Singh et al., 1995). Innovators often transform or transcend the context of the problem as part of the solution, preferring decisions that more radically alter the context or framework of the problem. It is also eminently argued that “Innovators

want to do things differently, changing the way things are” (Goldsmith & Kerr, 1991; Korth & Pettigrew, 1999) so as to enable a transformational process to be built into a system of work with some degree of originality.

Kirton (1980) further documented that even within an organization, the culture of which required an overall emphasis on one or the other mode of decision making and problem solving, particular departments with such managers whose collective cognitive styles were either predominantly adaptive or predominantly innovative may shift the change process. Drawing from a study of a large business firm, it was noted that the organizational members performing managerial functions, whose jobs involved interaction with other departments or external organizations were more innovative than those individuals who were entirely or almost entirely remained within a single department. The KAI means of members of internally-oriented functions (costing, maintenance, product, and support services) as compared with members of externally-oriented functions (corporate planning, sales, finance, and engineering) were more adaptive than innovative, whereas the latter group was more innovative than adaptive.

Studies on cognitive styles across the globe revealed that compared to the managerial scores from the West, the Indian scores tended to be low on the innovative style of functioning due to cognitive inadequacy that Indians are not able to take initiative (Gupta, 1993;

Hosseini, 1981; Dewan, 1982; Singh, et al., 1994). Thompson (1980) conducted a replication study on managers in Singapore and Malaysia in an attempt to validate Kirton’s theory in the far eastern milieu. Results showed that the mean scores of the Singapore and Malaysian managers were comparable with those of their western counterparts. Further, there were significant differences in the scores of managers based on the type of job they were involved in, such as civil servants showed an inclination towards adaption as compared to the general population (Singh et al. 1995; Holland, 1987). Kirton (1978) further contented that those who have chosen to live in a different culture from their own are likely to have higher mean scores on the innovative side of the adaptation-innovation continuum in a similar way as someone prefers to use computers and other advanced/efficient work producing gadgets. It is worth noting that managers in the Western owned companies in Singapore were the highest scoring of the Singapore groups on KAI (Foxall, 1992; Korth & Pettigrew, 1999).

Kirton (1994) emphatically posited that it is possible to examine the concepts of creativity, problem solving, and decision making of individuals and to predict their behaviors. His findings are consistent with the premise behind the construct of adaptor and innovator. Adaptors in a team training project accepted the ‘decision already made’ and identified strategies to design customized team training. They talked about ‘applying a methodology to the design

process so that it works in an operational sense'. It was interesting to note that the adaptors' solutions were specific, direct and relevant, developed in collaboration with the stakeholders. They did not question the chief executive officer's strategy for organizational change or the mandate for team training. On the other hand, innovators found a unique way to challenge the chief executive officer's reorganization strategy or the proposed team training. They produced numerous ideas, many of which may be neither obvious nor acceptable to others. Innovators, in pursuit of goals, treated the means for producing results with little regard. Several of the innovators proposed non-traditional approaches. They tended to prefer unstructured situations and that they used new data to build new structures or policies, accepting the greater attendant risk. Innovators proposed approaches to facilitate the team that was unstructured, dynamic, iterative, and undefined.

Certain professional role orientations structure and streamline the thinking process of individuals to become either more adaptive or more innovative or both.

In the light of foregoing review of studies it is clearly observed that certain differences between adaptors and innovators do exist. It is easy to understand that certain professional role orientations structure and streamline the thinking process of individuals to become either more adaptive or more innovative or both. Perhaps one's position being significant

and sufficiently high in the hierarchy presupposes position-based leadership function to be executed in a group with well defined task activities. Mintzberg's (1973) argument is significant in this context and needs to be considered eminently relevant that all managerial roles include leadership to be conceptualized by one self and also to be equally strongly executed for creating meaningful impact on the organization. Thus, the managerial characteristics defined and influenced by one's cognitive style highlight a critical shift in managing one's flow of activities at the workplace. Hence, the following research questions are framed to explore the linkages between cognitive styles of position based leaders and managing oneself in differing professional work environment.

- To find out the cognitive style of three types of position-based leaders: entrepreneurs, knowledge workers and managers.
- To find out the cognitive style differences within the groups of knowledge workers (i.e. professors, computer professionals, doctors, legal professionals, school teachers, nurses, pilots, psychologists and cabin crew), and testing each group's overall adaption-innovation score against the Western managers' benchmarked score of 96 documented by Kirton (1976).
- To compare and contrast the adaption-innovation dimensions across 11 professional groups in a bi-dimensional space using Correspondence Analysis Technique.

Sample

A sample of 417 respondents from three types of professional groups, whose activities defined role-based leadership characteristics in their area of specialized functions were selected. The mean age of respondents was 32.5 years and had attained 10 years of average work experience. The sample had 40 per cent of female employees serving in different professional roles, whereas 60 per cent were male respondents. The sample of 417 respondents were split into entrepreneurs (n=30), knowledge workers (n=254) and managers (n=133). The group of knowledge workers included professors, IT professionals, doctors, legal professionals, school teachers, nurses, psychologists (n = 30 in each group), pilot (n=27) and cabin crew (n = 17).

Instrument

Kirton's Adaption Innovation Inventory (KAII), a self report measure was used for data collection. The inventory consists of 33 items of which item number 1 is a blind one (not scorable). Each item consists of 5 alternatives to be rated. For certain items reverse scoring was required due to items being negatively worded. Theoretically, the scores may range from 32 to 160, with a SD of 17.54 (Kirton, 1976). The test-retest reliability reported by Kirton (1976) was 0.88. The Alpha reliabilities for originality, efficiency, rule/group conformity and the overall scores in our sample were found to be 0.69, 0.72, 0.72, and 0.76 respectively.

Results

Table 1 presents one-way ANOVA, depicting mean values for originality, efficiency, rule/group conformity and adaption-innovation total scores obtained by 3 types of position-based leaders such as entrepreneurs (who own the organization and run it as its top manager), knowledge workers (who perform their jobs with specialized knowledge and influence a niche of functions in the organization) and managers (who handle people, tasks, technology and various other processes in a defined way at a given level of the hierarchy while holding a unique position). The results have shown that there is no difference on the originality score of the three types of leaders ($F=1.07$; ns). However, the entrepreneurs had a higher mean value ($M=3.24$) for originality, followed by knowledge workers ($M = 3.17$) and then managers ($M = 3.11$).

With respect to efficiency as a dimension of adaption-innovation, it was found that entrepreneurs were higher on this dimension ($M = 2.72$) followed by knowledge workers ($M = 2.59$) and then managers being the lowest ($M = 2.37$). A test of mean differences showed statistically significant result ($F = 6.95$; $p < .001$). Three professional groups of the study have also shown statistically significant difference on rule/group conformity dimension ($F = 3.64$; $p < .05$). Entrepreneurs showed higher mean score on this dimension ($M = 2.93$) followed by knowledge workers ($M = 2.81$) and then by managers ($M = 2.69$). The total scores for adaption-innovation re-

vealed that entrepreneurs had a higher mean value (M = 3.01) testifying greater innovative tendencies followed by knowledge workers (M = 2.91) and then managers (M = 2.79). The ANOVA test applied to respective mean values

showed statistically significant result (F=6.82; p < .001).

Entrepreneurs had a higher mean value testifying greater innovative tendencies.

Table 1 One Way ANOVA for Originality, Efficiency, Rule/Group Conformity Dimensions & Adaptation–Innovation Total Score.

	ENTREPRE- NEURS N=30		KNOWLEDGE LEADERS N= 254		MANAGERS N=133		F
	MEAN	SD	MEAN	SD	MEAN	SD	
1 Originality	3.24	.45	3.17	.46	3.11	.55	1.07
2 Efficiency	2.72	.57	2.59	.61	2.37	.69	6.95***
3 Rule/GroupConformity	2.93	.35	2.81	.51	2.69	.59	3.64*
4 Adaptation-Innovation Total Score	3.01	.30	2.91	.35	2.79	.39	6.82***

* p < .05 ; ** p < .01 ; *** p < .001 N = 417

Table 2 shows one-way ANOVA for various categories of professionals such as lawyers, pilots, computer specialists etc. The results pointed out that psychologist had a higher mean value (M = 3.35) for originality and nurses had lower mean scores (M = 2.74) compared with other professional groups’ mean score falling within the middle range of the score continuum. The ANOVA test for the mean differences was found to be F=5.61 significant well beyond the .01 level of confidence. On the efficiency trait of adaption-innovation it was noted that nurses had a higher mean value (M = 2.91) and the lower mean value was obtained by doctors (M = 2.33) resulting in F ratio of 2.24, significant well beyond the .05 level of confidence.

The rule/group conformity as the third trait of cognitive style showed that psychologists had the highest mean value (M = 3.02) and the lowest mean was scored

by cabin crew (M = 2.39) compared with other professional groups’ mean scores spread over mid part of the score continuum. The F ratio of 4.22 being significant indicated greater field independence favoring psychologists than the cabin crew subsample. The adaption-innovation total score comparison for this professional group showed that again psychologists had the highest mean value (M = 3.04) followed by the lowest mean value for the cabin crew (M = 2.75). Using mean values for professional groups ANOVA indicated statistical significance (F = 2.12; p < .05).

The one-sample t test (not reported in Table) evaluating Indian professional groups’ mean scores against a benchmarked score of 96 or more accepted in the Western context was used to check whether our 11 subgroups differed significantly. It may be noted that the professional groups whose scores

Table 2 One way ANOVA for Originality, Efficiency, Rule group Conformity and Adaptation-Innovation Total Score of Role Based Knowledge Workers.

	Professor (N=30)	Computer Professional (N=30)	Doctor (N=30)	Lawyer (N=30)	School Teacher (N=30)	Nurses (N=30)	Pilot (N=27)	Psycholo- gists(N=30)	Cabin Crew (N=17)	F
Originality	M 3.08	3.21	3.10	3.31	3.21	2.74	3.31	3.35	3.25	***
	SD 0.47	0.46	0.28	0.53	0.30	0.30	0.43	0.54	0.47	5.61
Efficiency	M 2.67	2.72	2.33	2.56	2.60	2.91	2.51	2.49	2.47	*
	SD 0.72	0.57	0.55	0.43	0.59	0.64	0.67	0.62	0.55	2.24
Rule group	M 2.88	2.79	2.64	2.97	2.80	2.99	2.63	3.02	2.39	***
Conformity	SD 0.61	0.37	0.43	0.42	0.47	0.60	0.45	0.44	0.54	4.22
Adaptation	M 2.91	2.94	2.76	3.02	2.92	2.87	2.88	3.04	2.75	*
Innovation	SD 0.39	0.37	0.27	0.31	0.32	0.32	0.36	0.39	0.39	2.12
Total score										

Note: N = 417; *** p < .001 ** p < .01 * p < .05

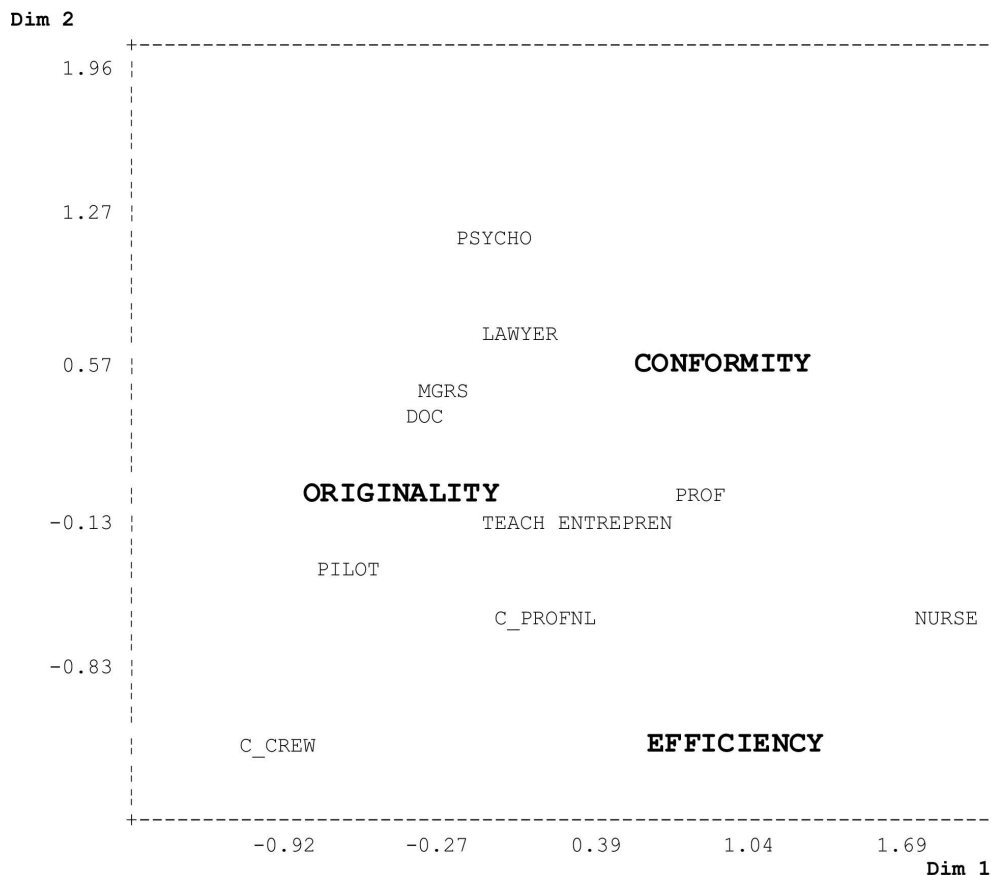
were found to be less than 96 were more adaptive whereas higher score is indicative of innovativeness. The one sample t-test specifically revealed that managers (mean = 89.35 ; t = -6.12 ; p < .001), doctors (mean= 88.38 ; t = -4.89 ; p < .001), nurses (mean = 91.98 ; t = -2.13 ; p < .05), and cabin crew (mean = 88.31 ; t = -2.53 ; p < .05) differed significantly against the standard score characterizing them as more adaptive than innovative.

The Correspondence Analysis (Borgatti, 1996) performed on the means of 11 professional groups as rows (representing titles of the professional groups) and their respective scores as columns was carried out to determine the positions of groups and their scores in the form of clusters relative to one another (Fig.1). This analysis has confirmed that originality, efficiency and rule/group conformity are relatively independent dimensions (Kirton, 1976, 1987a) as they occupied three separate places in a bi-dimensional plot, influencing professional groups in a distinct way. For example lawyers, managers and doctors were found to be more close to conformity, whereas cabin crew was more close to efficiency dimension. The originality dimension seemingly influenced teachers, entrepreneurs, pilots, professors and computer professionals.

Discussion

At the outset it is important to assess why different categories of professionals are to be considered as position-based leaders. Why not these profes-

Fig. 1. Visual Representation of Professional Groups and Adaption-Innovation Dimensions



NOTE: PSYCHO=psychologist; MGRS=Managers; DOC=Doctors; PROF=Professors; TEACH=Teachers; ENTREPREN=Entrepreneurs; C_PROFNL=Computer Professional; C_CREW=Cabin Crew.

sional groups be considered separate and discrete categories with their type of work and the environment in which they work? The justification for defining them as position-based leaders is drawn from the conceptual framework of Mintzberg (1973) and Pareek, (1993) who emphasized that people performing in a given job seem to incorporate activities that are expected by the organization and duly reflected some degree of leadership be-

havior created by incumbents themselves. Mintzberg (1973) was more emphatic to say so whereas, Pareek (1993) depicted a picture of role for employees in whom organizational processes, expectations, demands and constraining forces are duly incorporated. To be more specific any professional group can be defined as having a low or high hierarchical characteristics, structured-unstructured activity, degree of informality-for-

mality involved in the job and the amount of power vested in the role incumbent for executing various tasks through people. Unless these components are measured leadership remains indefinable. In view of these characteristics experienced by a professional group the leadership thrust with its express initiative is demonstrated in a work setting, which could be labeled as managing from front. The present study, highlighting differences in professional group's leadership behavior in their own right, makes an attempt to evaluate differences in adaption-innovation dimensions and how these dimensions could cause transformation at the workplace.

The sharp differences in cognitive styles of entrepreneurs, knowledge workers (who do more of specialized professional job) and managers (who operate in a context by either taking a role or making a role) pointed out that these differences partly emerged from implicit leadership role of the professionals in their field of work. It is observed that entrepreneurs who own and run the organizations as managers had higher mean value for originality, efficiency and rule/group conformity than the other two groups did. The entrepreneur is one who has to exercise effective control over his commercial undertaking focusing more on the desired results and has to maintain some degree of novelty in his product or processes so as to survive in the competitive environment of business. It is observed that entrepreneurs who run their organizations do things where activities are not fully structured, problems within and outside the organization (environment) are not well defined, and

methods and procedures are also not precise and properly laid down. Hence, in such environment it is expected that an entrepreneurial group should evince tremendous leadership talent in terms of vision, personal guiding spirit and strong team maneuvering for the business development. Rosenfeld, Winger-Bearskin, Marcia and Braun (1993) have therefore, rightly argued that it is a necessity for the successful entrepreneurs to generate large number of ideas to solve the problems of business and to be unrestrained by rules or group norms during the initial and later phase of business development. The type of business one conducts may also influence the entrepreneurial orientation and affect the systems in place. Nonetheless, if he is more innovative perhaps he can modify or mend it through better integration of skills needed for performance with group ethos to be rejuvenated through team role effectiveness (Belbin, 1993). The higher mean values received by entrepreneurs compared with managers and professional groups and the F ratios showing statistical significance are in the expected direction. On the other hand managers were more likely to show greater adaptation because they handle people and tasks in a defined manner at a given level of hierarchy. In other words they are fitted into a role and much is left to the individual manager to expand his role by way of initiative, sustained action and persistent follow up for positive action outcome. Their roles and powers are

Managers were more likely to show greater adaptation.

clearly laid down, adequately conceptualized for some room for them to act on. Thus, organization has well scripted the role of most of the managers to show proclivity towards adaptation yet with OD based enlightenment if created in organizational milieu managers may show up greater innovativeness as well.

The findings also highlighted, the deviation of our professional groups' scores vis-à-vis the standard scores of 96 suggested either adaptation (for low-end scores) or innovation (high-end scores). It was noted that there were three groups of professionals such as lawyers, psychologist and entrepreneurs, who matched and to some extent surpassed innovators' standard score with statistical test showing non-significance for these comparisons. This is in line with the previous Indian studies on cognitive styles where the Indian scores tended to be low on the innovation (Gupta, 1993; Hosseini, 1981, Dewan, 1982; Singh, Bhandarkar and Prasad, 1994). These 3 groups in our study have occupied their roles in various work environments based on their knowledge requirement, HR skills to lead the group and produce expected results while holding a given position. They worked in an environment which is replete with diverse problems, the solution to which cannot be easily obtained without effective role performance or adequate role innovation. This signifies that the work environment poses a threat, with constraining or debilitating conditions in which conformity alone may help much. In fact, it is quite revealing that our professional groups did not compete well

with Western sample, the obtained scores obviously hinted upon a domain condition mentioned above, because of which adaptation was made use of by our professional group rather than innovation is tried at the workplace.

Professionals who are low on organizational roles tend to be more adaptive than innovative.

It can also be observed that professionals who are low on organizational roles tend to be more adaptive than innovative. Two sharp examples are the nurses and the cabin crew, whereas the school teachers though seemingly low on organizational position showed relatively higher score on adaptation-innovation total score. It might be due to less constraining condition of working environment as it is known that teachers seemingly enjoy higher level of informality than the nurses and cabin crew and they also enjoy more of role making functions created by them. In fact informality given by the organization or allowed to assume by the employees both are directly relevant for making an impact on work environment. It can be witnessed that the correspondence analysis that placed cabin crew and nurses at a lower level in the bi-dimensional space (Fig. 1) are also not fully influenced by the three major traits of the study. Hence it can be argued that cognitive aspects are greatly influenced by what one does as part of the professional work and the degree of role innovation generally allowed by the organization. On the contrary strong need for achievement and taking risks for organi-

zation fuel the entrepreneurs (mean=96.40), and professional zeal and fervor drive the psychologists and the lawyers.

It would be interesting to evaluate how cognitive style is likely to develop a better match with the professional role so that one is seen more innovative. In this respect Kirton, Bailey and Glendinning (1991) expressed a point of view that innovators have a preference for procedures loose in structure, with aims not easily defined, and without easy methods of assessment. On the contrary, the adaptors showed a preference for procedures containing a tighter structure, more definable aims, and more precise methods of assessment. In order that this theoretical framework is validated empirically, Puccio, Treffinger and Talbot (1995) examined the perceptions of adaptors and innovators with reference to the qualities of their creative products. Results showed consistent relationship between creativity style and perceived characteristics associated with the end products. The adaptive style was linked to product characteristics such as logical, adequate, well-crafted and useful. The innovative style was linked to characteristics such as original, attractive, transformational and expressive. Perhaps adaptors tend to experience more pressure when completing a novel task than innovators, and since cognitive capacity is limited in the former case, they tend to prefer routine and structured task (Elder, 1989). This is suggestive of a situation in which initiative, decision-making and giving a directional thrust to the group suffer considerable loss. Foxall and Goldsmith (1988) is another example of adaptors and

innovators in that where shoppers who were more of adaptors tended to buy greater quantity of fewer products, whereas innovators targeted to buy a wider variety of products. In the light of findings noted above what has been obtained in our study is a clear testimony to the fact that almost all the groups failed to emerge as innovators though, as mentioned earlier, some of them barely matched with the innovators score, and more number of professional groups fell well below innovators' criterion/benchmarked score for being called confirmed adaptors than innovators.

Adaptors group tended to prefer affiliation as important for them whereas n-achievement was given some importance by innovators.

In an experimental study Sinha and Gupta (1989) documented the extent to which adaptors and innovators preferred three needs (n-affiliation, n-power and n-achievement) as critical in their work environment. It was found that adaptors group tended to prefer affiliation as important for them whereas n-achievement was given some importance by innovators; it was also noted that need for power was of considerable importance for the innovators. These findings are suggestive of the link between innovators and their orientation for power in the organizational context. Hence, managers who tend to be more adaptive often perform their leadership role with less importance given to building group resource thereby becoming less capable of influencing organization as a whole. As per our re-

sults they are seen as sustaining their maintenance administration much more than inculcating a value system among people that can help achieving developmental administration.

What has been documented by Rosenfeld et al. (1993) in their comparative study of entrepreneurs and technology manager and compared with Kirton's original sample score also validated a point of view that entrepreneurs' mean score for all the three subscales and composite score was higher than technology managers and Kirton's original benchmarked score. In our study as well, a trend was noted in which entrepreneurs scored higher than managers and knowledge workers even though they failed to surpass the Western criterion score of adaption-innovation. Entrepreneurship calls for strategic planning for business development, capability to define and choose among alternatives and lead a group of people that may have divergent skills and mental make up (Martin, 1984). Perhaps due to these requisite qualities well practiced in a flexible yet relatively unstructured work environment the entrepreneurs even in the Indian context attained relatively higher mark on the innovation dimension.

Conclusion

In conclusion, cognitive styles of functioning among entrepreneurs, knowledge workers and managers measured through KAI were perceived differently, yet originality aspect in comparison with other two traits surpassed them as a dominant cognitive style. The core

cognitive styles as defined by Correspondence Analysis and association of professional groups with them confirmed that entrepreneurs, teachers, professors and pilots are more close to the originality dimension whereas managers, doctors, lawyers and psychologist showed greater inclination towards rule/group conformity. Efficiency as a cognitive dimension was seldom used by others, except cabin crew, computer professionals and nurses, who tended to show some proclivity towards this dimension. By and large, entrepreneurs, lawyers and psychologists came close to the benchmarked/criterion score of 96 as set by the Western researchers, but failed to surpass it to a significant extent, suggesting that adaption at the workplace is a way of managing professional work rather than using high level of innovation. Hence, it is concluded that adaption rather than innovation is a way of life in the Indian context irrespective of nature of professional work or professionalism, managing acumen seen in the workplace and the entrepreneurial enthusiasm, spirit and zeal defined and created by oneself for an economic goal.

Adaption rather than innovation is a way of life in the Indian context irrespective of nature of professional work.

Implications

Wider implications of our findings are observed in the present Indian organizations due to dominant cognitive style of employees being adaptive rather than innovative. Top Management should con-

sider it a serious condition within the organization which can degenerate further into greater slackness at the workplace if not taken care of urgently. Hence, interventions through either at the training level or at a larger organizational framework may create a mental shift from being adaptive to being more innovative. Hence, the action research program should follow a system of constant feedback for checking current mental makeup of employees and help making a shift in the direction of greater innovativeness to be slowly toning up organizational practices.

References

- Belbin, R.M. (1993), *Team Roles at Work*, Oxford: Butter-Heinemann.
- Borgatti, S.P., Everette, M.G. & Freeman, L.C. (2002), *Ucinet for Windows: Software for Social Network Analysis*, Harvard, MA: Analytic Technologies.
- Dewan, S (1982), *Personality Characteristics of Entrepreneurs*, Unpublished Doctoral Dissertation, Indian Institute of Technology, Delhi.
- Elder, R.L (1989), "Relationship between Adaption-Innovation, Experience Control, and State-trait Anxiety", *Psychological Reports*, 65 (1): 47-54.
- Foxall, G. R (1986), "Managerial Orientations of Adaptors and Innovators", *Journal of Managerial Psychology*, 1: 24 – 27.
- Foxall, G.R. (1990), "An Empirical Analysis of Mid-Career Manager's Adaptive-Innovative Cognitive Styles and Task Orientations in Three Countries", *Psychological Reports*, 66 (3, Pt. 2): 1115 – 24.
- Foxall, G.R. (1992), "Gender Differences in Cognitive Styles of MBA in Three Countries", *Psychological Reports*, 70 (1): 169 – 70.
- Foxall, G.R. & Goldsmith, R.E. (1988), "Personality and Consumer Research: Another look. Special Issues: Developments in Consumer Research", *Journal of the Market Research Society*, 30 (2): 111-25.
- Goldsmith, R. E & Kerr, J. R (1991), "Entrepreneurship, Adaptation and Innovation", *Technovation*, 11 (6): 373 – 82.
- Gryskiewicz, S. S., Hills, D. W., Holt, K & Hills, K (1987), *Understanding Managerial Creativity: The Kirton Adaptation – Innovation Inventory and Other Assessment Measures*, Greensbro N. C.: Centre for Creative Leadership.
- Gul, F. A (1986), "Differences between Adaptors and Innovators Attending Accounting Courses on Their Preferences in Work and Curricula", *Journal of Accounting Education*, 4: 203 – 09
- Gupta, M (1993), "Indian Managers: Adaptors or Innovators", *Indian Journal of Industrial Relations*, 28 (4), 340 – 50.
- Hayward, G & Everett, C (1983), "Adaptors and Innovators. Data from the Kirton Adaptation Innovation Inventory in Local Authority Setting", *Journal of Occupational Psychology*, 56: 339 – 42.
- Holland, P. A (1987), "Adaptors and Innovators. Application of the Kirton Adaptation-Innovation Inventory to Bank Employees", *Psychological Reports*, 60 (1): 263 – 70.
- Hosseini, H. R (1981), *Leadership Effectiveness and Cognitive Styles among Iranian and Indian Students*, Unpublished Doctoral Dissertation, Indian Institute of Technology, Delhi.
- Kirton, M. J (1961), *Management Initiative*. London: Action Society Trust.
- Kirton, M. J (1976), "Adaptors and Innovators, A description and Measure", *Journal of Applied Psychology*, 61 (5): 622 – 29.
- Kirton, M. J (1980), "Adaptors and Innovators in Organizations", *Human Relations*, 3, 213 – 24.

- Kirton, M.J. (1987). *Adaption-Innovation Inventory (KAI) Manual* (2nd edition). Hatfield, Herts: Occupational Research Centre.
- Kirton, M. J (1994), *Adaptors and Innovators: Styles of Creativity and Problem-solving*, New York: Routledge, (2nd ed.)
- Kirton, M.J, Bailey, A & Glendinning, W (1991), "Adaptors and Innovators: Preference for Educational Procedure", *Journal of Psychology*, 125 (4): 445-55.
- Kirton, M. J & Pender, S (1982), "The Adaptation – Innovation Continuum, Occupational Type, and the Course Selection", *Psychological Reports*, 51 (3, Pt 1): 883 – 86.
- Korth, S. J & Pettigrew, A. C (1999), "Adaptors and Innovators: Differing Approaches to Designing Organizational Change Interventions", *Psychological Reports*, 85: 633 – 45.
- Mintzberg, H. (1973), *Nature of Managerial Work*, New York:
- Mudd, S (1996), "Kirton's A-I Theory: Evidence Bearing on the Style/Level and Factor Composition Issues", *British Journal of Psychology*, 87: 241-54.
- Pareek, U (1993), *Making Organizational Roles Effective*. New Delhi: Tata-McGraw-Hill
- Puccio, G.J., Treffinger, D.J. & Talbot, R.J. (1995), "Exploratory Examination of Relationship between Creativity Style and Creative Products", *Creative Research Journal*, 8(2), 157-72
- Pettigrew, A. C & King, M. O (1993), "A Comparison between Scores on Kirton's Inventory for Nursing Students and a General Student Population", *Psychological Reports*, 73 (1): 339 – 45.
- Rosenfeld, R.B., Winger-Bearskin, M., Marcic, D & Braun, C.L. (1993), "Delineating Entrepreneurs' Style: Application of Adaption-Innovation Subscales", *Psychological Reports*, 72: 287-98.
- Singh, P, & Bhandarker, A (1994), *IAS, Profiles, Myths and Realities*. New Delhi: Wiley
- Singh, P., Bhandarker, A & Prasad, L (1995), "Crisis of Innovation: The Indian Scenario", *ASCI Journal of Management*, 24 (2): 69 – 85.
- Sinha, S & Gupta, M. (1989), "Cognitive Algebra of Adaptors and Innovators", *Psychological Studies*. 34 (1): 39-45.
- Skinner, N.F (1989), "Behavioral Implications of Adaption–Innovation: Managerial Effectiveness as a Function of Sex Differences in Adaption–Innovation", *Social Behavior and Personality*, 17 (1): 51 –55.
- Thompson, D (1980), "Adaptors and Innovators: A Replication Study on Managers in Singapore and Malaysia", *Psychological Reports*, 47: 383 – 87