Creative Problem-Solving in Countries East and West:
Some Organizational Implications

Ray Clapp, Ph.D.
Visiting Professor, University of Hertfordshire, UK
Research Fellow, Occupational Research Centre, UK

Vorapot Ruckthum, Ph.D.
Lecturer, Graduate School of Business
Assumption University of Thailand

Abstract

Creativity and creative problem-solving are supported by two different cognitive styles, one concerned with adaption (doing things better), and the other with innovation (doing things differently). The current preoccupation with innovation would appear to favour western countries where a more innovative cultural bias exists. Furthermore, countries from the East would appear disadvantaged due to a similar bias towards adaption. However, organisations to sustain success need a diversity of style irrespective of the significance of any social or organisational leadership bias towards a single style. The pursuit of a dominant single style, be it adaption or innovation, leads to a diminishing organisational performance albeit by different routes.

Introduction

Many people in their place of work will have experienced situations where managers, some very senior, have asked their organization/staff to be more creative. When these demands are further analysed it is not clear what is meant by 'being creative'. Is it being used **adaptively** where in general, individuals, problems and solutions are seen as sound, conforming, safe, predictable and wedded to the system and thus ready improvement to the general day-to-day working arrangements are on offer , or alternatively **innovatively** where problems and solutions are seen as exciting, risky, threatening, and disturbing of the established system but offer to change performance beyond what is currently seen as possible (Kirton 2011, 1976)

Here, the main goal is to consider the differences in styles east and west, by including the role of culture in the conceptual framework in contrast to the current position where style is considered to be determined by individual preferences solely within the domain of personality (see Figure 1).
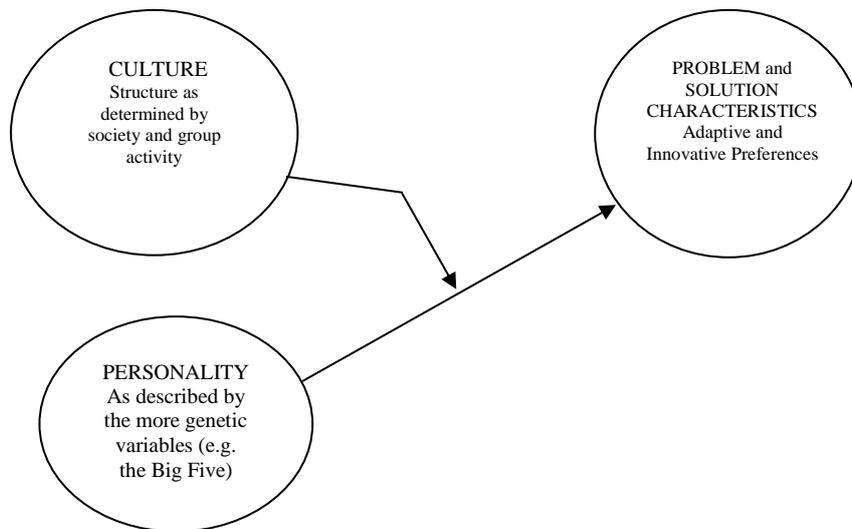
Figure 1. Conceptual Framework

Creative Context and the Individual

Kirton's (1976; 2011) view 'that all people are creative' stems from consideration of behaviours observed as part of a study of management problem-solving initiatives (Kirton, 1961). The observations located a dichotomy concerned at one end with problem solving using historic knowledge and concepts (e.g. being predictable, making steady progress, fitting into the system and preferring precise instructions) within the current paradigm. At the other end of the dichotomy problem solving using in additional non-contextual knowledge and concepts in rearranged relationships (e.g. risk doing things differently, varying set routines, standing in disagreement and preferring frequent change) outside of the current paradigm. The dichotomy was defined as Adaption- Innovation and the related pejorative preference for one or other end was considered as a reciprocally activated continuum and to be independent of intellectual capacity (Kirton, 1978), (i.e. people at either end of the style continuum may embody high or low intellectual capacity). The associated measure (the KAI), designed from behaviours that characterise the poles of the dichotomy and arranged to directly relate to individual preference. A factor analysis of the measure shows individuals at the adaptive end are mainly concerned with efficiency and rule/group conformity (a cultural contribution), while at the innovative end individuals are mainly concerned with originality (the personal contribution)

This continuum has been described (Tomasello, 1999) as: 'the fundamental dialectical tension in human cognitive development' (pp53), adding support to the view that creativity is a bipolar continuum comprising both adaptive and innovative contributions. A further perspective is provided by Drucker (1969) who suggests that, at the adaptive end, change outcomes are concerned with 'doing things better' while at the innovative end, outcomes are concerned with 'doing things better and differently'. These preferences have shown to be stable over many years (albeit within western social culture) (Clapp, 1993) and related to the personality domain through the dimensions of intuitive/sensing (Tefft, 1990) and the open/closed-minded (Costa & McCrae 1992; Von Wittich & Antonakis, 2011).

Creativity and Culture (Social and Organizational)

The supports and constraints of social culture stem from different historic values and traditions associated with a specific social boundary or country of interest and are transmitted and assimilated through early interpersonal relationships with people important to the individual. These learnt behavioural imperatives when evaluated by the individual, interact with individual personality to form a personal preferred way of behaving (Tomasello, 1999; Savani et al., 2008; Riemer et al., 2014). Witkin (1973) indicated that for field-dependence-independence, a leading indicator of personal preference associated with cognitive style:

> In overview, it seems fair to say from the evidence now on hand that
> socialization factors are undoubtedly of overwhelming importance in the
> development of individual differences in field-dependence-independence. At
> the same time, it may be that genetic [*personality*] factors are implicated as
> well, although probably to a much smaller degree (Page 12).

Challenging the view that preferences are just manifestations of personality (e.g., Von Wittich & Antonakis, 2011)

To capture the differences in social culture Markus & Kitayama (1991) described important concepts concerned with individualism-collectivism and analytic-holistic thinking that relate to the orientation of diverse cultures where interdependent social orientation and holistic thinking (as seen in eastern countries) supports a bias towards adaption (doing things better) through conformity, while independent social orientation and analytic thinking (as seen in western countries) supports a bias towards innovation (doing things differently) through freedom (Hofsteade, 2005; Varnum et al., 2010).

Furthermore, for organisational culture the supports and constrains operate in a more transient way is dependent upon the leadership style within the organisation. Cameron & Quinn (1999) have for organisational cultures suggested concepts that can be readily interpreted as: Governance, Research, Production and Marketing, operationalised using the dimensions 'flexibility-stability' and 'integration-differentiation'. Here the effects of leadership style generate a complex influence from organisational culture where integration and stability support adaption (doing things better), while flexibility and differentiation support innovation (doing things differently). These differences in support exist more as result of the relationship of the organisation with the market place and the type of product produced. Any differences between social culture along with the further constraints and supports of organisational culture and personal preferences may need individual coping behaviour to reconcile the differences resulting in lower personal efficiency (Kirton, 1989; Clapp, 1993).

Cultural content also effects measures and measurement where the tendency of people in eastern contexts to accept duality and contradiction results in distinct scoring patterns when responding to questionnaire items, including greater acquiescence (conformity) and less extreme scoring (e.g., Johnson, et al., 2011). Also, people in eastern contexts also differ in their responses to mixed-worded items in questionnaires measures, showing less consistency in correctly scoring positively and negatively positioned items, because they "view these items as positively related parts of a larger order" (Wong et al., 2003, p. 86). Therefore, scales with a small number of negative items (used to disturb scoring fixations) may be relatively unaffected. However, where there are significant numbers of both negative and positive items that support the evaluation of a construct questionable results may be obtained (Clapp & Ruckthum, 2017).

Managerial Implications

1) The Problem-Solving Context

To be creative, we need a problem to solve as well as the motivation to solve it. Our lives are spent solving problems and we build mental models of practical solutions to help us. However, before we can solve a problem, the context and expected outcomes need some consideration. If the problem is within the capability of one individual, then it can be more

easily resolved, and the solution determined. Where the problem is more complex, many different skills may be needed to contribute to the solution. In the latter case, a team is needed to avoid ill-informed decisions. When the mental models of the team members are shared, the diversity of views from the different skills and knowledge help build a more complete understanding of the issues involved. However, the integration of these views involves proactive leadership to ensure direction, and cooperation with the minimum of conflict, all without the promotion of conformity (Kirton, 1989; Goncalo & Staw, 2006), all of which opens the way for both creative solutions as well as individual and group understanding and learning.

2) Range of Solutions

For each problem there is only a limited range of solutions that offer an effective answer. If the constraints of the problem require solutions that lay at the adaptive end where considerable gains in organizational performance are available from improvements, then little is to be gained by the manager insisting that the solution should be more innovative. Similarly, if events define the problem such that an innovative solution is needed, then all adaptive solutions will be considered as inadequate either because no worthwhile improvements can be made to the current product, or because a precipitating event such as a significantly improved product has appeared in the market place. It is not that any of the ideas associated with these differences in style are inherently poor; they all may have significant intellectual merit but still not meet the constraints of the problem context.

3) Group Dynamics

When considering any organization, the need for people to work together is of paramount importance. Such a view promotes efficiency and cooperation as well as the need for individuals to adopt interpersonal behaviour that minimizes conflict. At its heart, this means individuals must understand each other so that issues that are going to promote conflict can be avoided/resolved to enable pursuit of the task in hand. However, when individuals with a wide separation between either their personal preferences or their cultural traditions come together to discuss any issue, their mental models may be so different that they disregard each other's views. This results in much of their energy being used to resolve their differences in outlook rather than progressing the problem or issue to be solved. So, while individual diversity in teams adds a wider perspective to problem solving, it also involves management and leadership to bridge any cultural differences (be they social or

organisational) if progress and harmonious interpersonal relationships are to be obtained or supported. Lack of suitable situational leadership support may result in excessive coping behaviour by members of the team and in turn may result in stress, inefficiency and potentially members leaving the team. The consequential reduction in available diversity means options and decisions tend to follow the current path, be it adaptive or innovative, rather than the wider demands of the problem-solving context.

Being more effective

In most commercial organizations, there is always a search for more profitable ways of using the resources and competencies available. Some of these ways will be through the more adaptive change concerned with 'doing things better'. These ideas mainly address improvement to existing systems. If they offer significant value, these improvements are quickly adopted. However, as they can be easily copied, they diffuse quickly into competitor organizations and do not offer lasting profitability or a differentiating competence for the originating organisation. Over time, much of the profitability variance between organizations in the same business sector is eroded, leading to a convergence of productivity and profit. This sets the context for a style of creativity where routes to more profit will be through more innovative ideas concerned with 'doing things differently'. Such changes offer a longer-term vision of how the organizational competencies can be used to supply goods and services that are of greater value to the customer than the current offerings and so increase the profitability of the originating organization. These ideas are less easily replicated and involve higher costs and more risk due to the nature of the competencies and technologies involved. The way these characteristics are combined by cross-functional processes and involving all members of the supply chain adds to their uniqueness. Factors such as: organizational disruption, supply chain disturbance, costs, profits, timescales, and risk, all tend to be higher for innovative outcomes and lower for adaptive. After recovery of the implementation costs these ideas lead to a widening of the profitability differences between organizations in the same sector, potentially eliminating the less profitable organizations. After such a period of successful organizational innovation, consolidation is necessary to preserve the profitability variance between organizations for as long as possible. This change calls for low-risk adjustments to improve the efficiency of the innovative changes, in short, for the more adaptive style of creativity. Irrespective of their differences, both styles of outcome should be recognised as being able to provide creative solutions that offer a match to the problem-solving context (e.g., Clapp 1991; Clapp & Ruckthum, 2016).

Conclusion

If innovation is followed by more innovation, costs tend to rise, and the organization moves towards a more chaotic form. The opposite occurs where innovation is avoided, adaptive ideas predominate, and the organization moves towards a more predictable form with low differentiation between competitors. By continuing with either style to the point where profitability is affected, the organization moves towards the lower end of the performance ranking for the sector albeit by different routes. To avoid this position, it is necessary to have enough diversity available to the team or the organization to both generate options and make decisions that offer a situational advantage. Without such diversity, a diminishing organizational performance can be expected.

References

Cameron, K. & Quinn, R. (1999). *Diagnosing and Changing Organisational Culture*. NY USA: Addison-Wesley.

Clapp, R. G. (1991). *The fate of ideas in large organisations*. Unpublished PhD Thesis Council for National Academic Awards. UK.

Clapp, R. G. (1993). The stability of cognitive style in adults: A longitudinal study of the kai. Psychological *Reports*, 73, 1235-1245.

Clapp, R. G. & Ruckthum, V. (2016). Using large scale individual creativity to improve organisational efficiency . *ABAC ODI Journal Vision. Action. Outcome*, 3(2).

Clapp R. G, Ruckthum V. (2017) The cross-cultural use of the kirton adaption- innovation inventory: a further exploration. *ABAC ODI Journal Vision. Action. Outcome*, 4 (2).

Costa, P. T., & McCrae, R. R. (1992). Neo-pi professional manual. *Psychological Assessment Resources*, FL USA: Lutz

Drucker, P. F. (1969). Management's new role. *Harvard Business Review*, 47(6), 49-54.

Goncalo, J.A. & Staw, B.M. (2006). Individualism-collectivism and group creativity. *Journal of Organizational Behaviour and Human Decision Processes*, 100, 96-109.

Hofstede, G. (2005). *Cultures and organizations: Software of the mind*. New York, NY: McGraw-Hill

Johnson, T. P., Shavitt, S., & Holbrook, A. (2011). Culture and response styles in survey research. In D. Matsumoto & F. van de Vijver (Eds.), *Cross-cultural research*

methods in psychology (pp. 130–175). England: Cambridge University Press. Cambridge.

Kirton, M. J. (1961). *Management initiative*. London: Acton Society Trust.

Kirton, M. J. (1976). Adaptors and innovators: A description and measure. *Journal of Applied Psychology*, 61(5), 622-629.

Kirton, M. J. (1978). Have adaptors and innovators equal levels of creativity? *Psychological Reports*, 42, 695-698.

Kirton, M. J. (1989). Adaptor and Innovator at Work. In M. J. Kirton (Ed) Adaptors and *Innovators: styles of creativity and problem solving* (pp. 56-78). London: Routledge.

Kirton, M. J. (2011). A*adaption-innovation in the context of diversity and change*. East Sussex UK: Routledge.

Markus, H. R., Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98, 224–253.

Riemer, H., Shavitt, S., Koo, M. & Markus, H. (2014). Preferences don't have to be personal: expanding attitude theorizing with a cross-cultural perspective *Psychological Review* 121(4), 619–648.

Savani, K., Markus, H. R., & Conner, A. L. (2008). Let your preference be your guide? preferences and choices are more tightly linked for north americans than for indians. *Journal of Personality and Social Psychology*, *95,* 861–876.

Tefft, M. E. (1990). *A factor analysis of TTCT, MBTI and KAI: The creative level/style issue re-examined* (Thesis). SUNYC, Buffalo, USA.

Tomasello, M. (1999). *The cultural origins of human cognition*. USA: Harvard University Press.

Varnum, M. E., Grossmann, I., Kitayama, S., & Nisbett, R. E. (2010). The origin of cultural differences in cognition: Evidence for the social orientation hypothesis. *Current Directions in Psychological Science*, 19(1), 9-13.

Von Wittich, D. & Antonakis, J. (2011). The KAI cognitive style inventory: Was it personality all along? *Personality and Individual Differences*, 50(7), 1044-1049.

Witkin, H. A. (1973). The role of cognitive style in academic performance and teacher-student relations. Princeton, N.J. USA: Educational Testing Service.

Wong, N., Rindfleisch, A., & Burroughs, J. E. (2003). Reverse worded scales confound results in cross-cultural research? The case of the materialism values scale. *Journal of Consumer Research*, 30, 72–91.