The Relationship between Creative Performance and Personality, Context and Culture in the Hong Kong Police Force

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Acknowledgements

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1. Abstract

This study examined the relationship of creative performance with personality, context, and organizational culture. 120 participants from the Hong Kong Police Force completed the CPAI-2 subscales of divergent thinking, diversity, novelty, self-acceptance, and locus of control; KEYS® subscales of supervisory encouragement and work group coherence; a self-devised scale on participants’ opinion of the existence and degree of creativity-hindrance of cultural characteristics including conformity, face-consciousness, hierarchic, stability, and conventionality; and the verbal test of Wallach-Kogan Creativity Test. Result revealed that education and rank together predicted 13% of creative performance. Creative performance is also significantly correlated with divergent thinking and work group coherence. Hierarchic and conventional culture only predicted creative performance if participants perceived that they exist in the organization as well as hindering creativity. Impact of cognitive process on creativity is suggested to be stronger than the personal and contextual characteristics. Further research direction and the need for creative training are discussed.
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2. Introduction

Research of creativity has long investigated on the key factors associated with creativity. Indeed, creative thinking is a multidimensional concept, which is understood by researchers in different ways (Glove, Ronning, & Reynolds, 1989; Sternberg & Lubart, 1995).

Recent studies have hypothesized that multiple components must indeed converge for creativity to occur (Amabile, 1983; Csikszentmihalyi, 1988; Feldhusen & Goh, 1995, Gardner, 1993; Mumford & Gustafson, 1988; Sternberg & Lubart, 1996; Weisberg, 1993), and aspects on personal dispositions and other individual characteristics, the contextual environments, psychological processes, training, as well as the assessment methods have been explored which contributed to the development of various theories and frameworks.

Most of the research is conducted in the West, in particular the United States of America, whilst cross-cultural investigation on creativity is still at the start. Some of the results obtained by these studies parallel those obtained in earlier US studies, thus supporting the generalizability of creativity theories cross-culturally, yet others observed variations on different creativity dimensions.
This study attempted to investigate the relationship between creativity performance and three well-recognized dimensions of creativity, namely personality, context and organizational culture in the Hong Kong Police Force (HKPF), a disciplinary force consists of a majority of Chinese members and the organization itself shares many cultural characteristics of the Eastern culture, yet the unique nature of the police work is suggested to require ones to possess the dispositions of the individualistic culture. The next section reviews the previous literature. Following this, the study’s methodology will be described. The result and discussion of the findings will then be presented, and finally recommendations for the management of the disciplinary force and researchers.
3. Literature Review

3.1 Definition of Creativity

The Nobel laureate (economy) Herbert Simon (Simon, 2001, p.208) once stated that “we judge thought to be creative when it produces something that is both novel and interesting and valuable.” His formulation sheds a light on the basic problem with most definitions of creativity: They mix different perspectives, one referring to the cognitive sphere, the unchained freedom of thought, another to the expectations associated with creative activities (Smith, 2005).

Due to its complicated nature, there is a diversity of definition for creativity and creative individuals. One of the most common definitions of creativity is the generation of novel or original ideas that are useful or relevant, and creative performance as the behavioral manifestation of creativity potential (Amabile, 1988; Oldham & Cummings, 1996).

Helson (1996) define creativity as the construction, renewal, and revising of symbol systems in the arts and sciences, whilst creative individuals are those who spend their time in this kind of activity and make contributions to it. Lubart (1994) defined creativity as the capacity to produce novel, original work that fits within task constraints.

Amabile (1983) developed a theoretical framework of creativity and defined it as “a
product or response will be judged as creative to the extent that (a) it is both a novel and appropriate, useful, correct or valuable response to the task at hand, and (b) the task is heuristic rather than algorithmic” (p.33). Some minimum level of intelligence is required for creative performance because intelligence is, presumably, directly related to the acquisition of domain-relevant skills and the application of creativity heuristics. However, there are factors necessary for creativity that would not be assessed by traditional intelligence test, including task motivation and personality dispositions.

On the other hand, Feldhusen & Goh (1995) cautioned that they are two difference constructs, as creativity is not restricted to cognitive or intellectual functioning or behavior. Instead, it is concerned with a complex mix of motivational conditions, personality factors, environmental conditions, chance factors and even products. Drawing evidence from numerous studies, Wisberg (1993) pointed out that “creativity is firmly rooted in past experience and has its source in the same thought processes that we all use every day” (p.3). There is no longer a strong belief in what has been termed the “genius” view of creativity, and Sternberg & Lubart (1996) hypothesized that the actual creative resources are each within the scope of ordinary psychological processes, but the confluence that leads to creativity is extraordinary.
Researchers nowadays generally accepted that the development of creative thinking skills requires some degree of expertise and further, that beyond cognitive skills, creative people also require certain motivational and dispositional characteristics to adapt to demanding and often stressful new performance situations and environment. In addition, definitions of creativity vary from one person to another and from one field to another (Mumford et al., 1994; Proctor & Burnett, 2004).

Modern conceptions of creativity are so diverse and extensive that in defining creativity, researchers have to deal with the related cognitive activities of developing and using one’s knowledge database, as well as critical thinking, decision making and meta-cognition. As such, a comprehensive assessment on creativity requires multiple measures of personality, cognitive processes, motivations, interests, and styles associated with creativity; the results of creative process such as products and performances; and the effects of environmental press factors (Feldhusen & Goh, 1995).
3.2 Creative Personality

The importance of the person and personality to understanding creativity is one of the earliest topics that attract the attention of psychologists. Personality psychologists have hypothesized that certain personality traits are linked to creative performance and can be predictors of creativity. Over the past decades, many studies have been conducted to identify personality traits most often associated with creativity. The work in this area has progressed to a stage where it is now possible to differentiate several cognitive and dispositional characteristics that appear consistently in the studies of the creative personality prototype (Davis & Rimm, 1998; Dawson et al., 1999; Plucker & Runco, 1998; Runco et al., 1993). In the following paragraphs, five personality characteristics that are extensively investigated and suggested to be related to creativity are reviewed.

Divergent Thinking

One of the most extensively studied attributes of the creative cognitive style is divergent thinking (Guilford, 1967). It is one of the indicators showing the difference between creativity and intelligence, that creativity requires divergent thinking, the generation of many potential answers, whilst intelligence requires convergent thinking, the coming up with a single right answer (Sawyer, 2006). It is usually indexed by fluency, flexibility, and originality of mental operations, and is routinely measured by psychological tests given to
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children and students (Cheung et al., 2003; Runco, 1991; Runco & Albert, 1985; Torrance, 1974; Wallach & Kogan, 1965).

However, Barron and Harrington (1981) reviewed studies on divergent thinking, and found that it correlated with other measures of creative achievement in some studies but not the others. Also, there is doubt that the measures of divergent thinking do not correlate highly with real-life creative output (Baer, 1993; Wallach, 1971).

Psychologists now agree that divergent thinking tests could predict parts but not full creative ability, and creative achievement requires a complex combination of both divergent and convergent thinking, and creative people are good at switching back and forth at different stages in the creative process (Sawyer, 2006).

Creative acts are by definition original, thus it would not be surprising that creative people showed a special drive to be original. Gough (1979) has devised the 30-item scale Creative Personality Scale (CPS) which positively correlates creativity with 18 personality traits including original, unconventional, and insightful. Ypma (1968) found that when they are asked about their major motivations, the more creative scientists were likely to
answer, “To come up with something new.”

Helson (1996) suggested that there is some evidence that the most creative individuals are especially original in thought processes and are interesting as persons – characteristics suggesting a fusion of symbolic interests and power motive. In addition, she suggested that the creative personality develops in individuals who are self-directed, though people of different domains who are regarded as creative cannot be expected to have the same personalities.

Joy & Hicks (2004) proposed that creative persons have an intrinsic need to be different from others. By comparing the vDiffer scale (Joy, 2001) with the 16PF, the study lined up the cognitive and personality characteristics and found that those high in the need to be different tend to be experimenting, nonconforming, imaginative, and flexibly tolerant of disorder.

**Self-confidence**

Researchers consistently found that creative people have strong confidence on themselves. Comparative studies on creative and non-creative students, artists and writers using Cattell Sixteen Personality Factor Test (16PF) found that skepticism, aloofness, self-confidence,
self-sufficiency, critical- and free-thinking were common characteristics among creative individuals (Cattell & Drevdahl, 1955, 1958; Cross, Cattell & Butcher, 1967; Cattell & Stice, 1957). Gough (1979) has positively correlated creativity with the self-confident trait.

On the other hand, Csikszentmihalyi (1999) has described people having this attribution as intrinsically motivated, that they find their reward in the creativity itself, without having to wait for external rewards or recognition. Martindale (1989) further sought to explain self-confidence as one of the “exacerbated or extreme form” (p. 222) of the motivational factors that is necessary for creativeness.

Feist (1999) has conducted a review on the findings of personality traits of creative artists and scientists. He summarized that creative artists and scientists share some common personality characteristics when compared with less creative persons, including self-confident and self-accepting. To add, he concluded that creative personality tends to be rather stable, whilst childhood academic intelligence is a relatively poor predictor of adult creative achievement.
Openness to Experience

Some studies suggested that the most salient characteristic of creative individuals is a constant curiosity, and the ever renewed interest or enthusiasm for experience (Csikszentmihalyi, 1996; Gardner, 1993, Gough, 1979). To explain the causal relationship between novelty and creativeness, Martindale (1989) has suggested that the exposure to a wide range of interests allows the generation of creative ideas by combining ideas from different discipline. In other words, it is the diversity of interest which leads to novelty and hence creativity.

Feist (1999) has found that creative artists and scientists are more open to new experiences and less conventional. In addition, past qualitative reviews of personality and creativity, such as Barron and Harrington (1981) and Feist (1998), have summarized the key personality correlates in ways that are most suggestive of the openness factor. Jalil & Boujettif (2005) has interviewed several Nobel Laureates and concluded that they enjoy and exploit many insights, social relationships, projects, heuristics, and so on, and thus described them as “pluralistic”. These findings agree well with several studies, and the traits can be interpreted as the domain openness to experience, the fifth factor of the Big Five Personality Dimensions (McCrae, 1987; McCrae & Costa, 1985, 1987).
However, Martindale (1989) has pointed out that of the adjectives loading on the Big Five Personality Dimensions (McCrae, 1987; McCrae & Costa, 1985, 1987) labeled openness to experience factor, four refer directly to creativity (original, imaginative, creative, and artistic), six refer to traits often used by creative people to describe themselves (complex, independent, daring, analytical, liberal, and untraditional), and only three are directly or indirectly related to openness (broad interests, curious, and prefer variety). She viewed that openness and creativity in this dimension would seem to be synonyms that are used to describe the same set of traits, hence, openness in such setting cannot not be said to explain creativity.

Locus of Control

Several investigators have examined the relationship between locus of control (LOC) and creativity. Dowd (1989) has intuitively suggested that people who are creative should have an internal locus of control since they must be self-contained and self-oriented to believe that their new ideas can be applied in practice and useful to the domain. Bamber, Jose, & Boice (1975) has found that internals had significantly higher scores on the flexibility and fluency measures of the Unusual Uses subtests of the Torrance Tests of Creative Thinking, whereas externals had significantly higher elaboration scores.
Glover & Sautter (1976) has found very similar results in that internals had higher flexibility and originality scores, whereas externals had higher elaboration scores. No differences on fluency were found between the groups. In another study, Aggarwal & Verma (1977) compared the LOC of the high-creative and the low-creative high school students from India. High-creative students were significantly more internal than the low-creative students. DuCette, Wolk & Friedman (1972) studied the black and the white students, and found that internal subjects were more creative than externals regardless of race.

Cohen & Oden (1974) found more mixed results that creativity was related to internal LOC only for female kindergarteners, whilst the reverse was true for male students. Yardley & Bolen (1980) obtained an opposite gender difference on the construct. They explored the relationship of nonverbal creative abilities to LOC, gender, and race among students in North Carolina, and the results suggested that creative males were internal while creative females tended to be external in orientation.

Bolen & Torrance (1978) found no differences in creativity as measured by the Torrance test between internals and externals. Contrary to what Dowd (1989) has suggested, Richmond & de la Serna (1980) has found that Mexican externals were more creative than
internals. The authors also suggested that creative college students of the 1970s have a more external orientation than those of a decade ago.

Hence, even though the majority of the studies support the proposition that internals are more creative than externals, there are controversial findings on the relationship between LOC and creativity. The result of Richmond & de la Serna (1980) has pointed out that there are shifts over time in the relative numbers of internals and externals in the population and, therefore, in the relative numbers of creative people who are internals or externals. Nevertheless, it appears that, in general, creativity seems to be associated with an internal locus of control, although further investigation may be required to validate the evidence.
3.3 Creative Context

In the earlier part, the study of Helson (1999) was reviewed which provided a glimpse of the role of motivation and influence of environment on creativity. In fact, during these two decades, researchers discover the influence of the contextual variables, some being positive and others negative, on the psychological processes of creative thinking and product.

Amabile (1983) has noted that the creativity tests do find relatively stable attributes and abilities about creativity, but various social and environmental factors can influence test outcomes. A number of studies shown that different testing conditions and different time constraints would resulted in differences in creativity test scores (e.g. Adams, 1968; Boersma & O’Bryan, 1968; Dewing, 1970), although Hattie (1977) has found contradictory results. Indeed, Wallach & Kogan (1965) has acknowledged the influence of contextual factors, and suggested that creativity test should be administered in “a context free from or minimally influenced by the stresses that arise from academic evaluation and a fear of the consequences of error” (p. 321).

Research on the role of motivational variables in creativity is not as popular as those investigating creative traits, yet some theorists suggested that creativity is most likely to
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appear under intrinsic motivation but not extrinsic factors. Koestler (1964) has speculated that the highest forms of creativity are generated under conditions of freedom from control, since it is under these conditions that a person may most easily reach back into the “intuitive regions” of the mind.

Crutchfield (1962) has suggested that conformity would affect creative thinking, asserting that “conformity pressures tend to elicit kinds of motivation in the individual that are incompatible with the creative process” (p.121). He proposed that such conformity pressures can lead to extrinsic, “ego-involved” motivation, in which the creative solution is a means to an ulterior end, which contrasts sharply with intrinsic, “task-involved” motivation, in which the creative act is an end in itself.

Andrews (1975) has examined the relationship between social psychological factors in the workplace and fulfillment of creative potential of 115 scientists working in research organizations. Four social-psychological factors seemed most important in facilitating the realization of creative potential: (1) high responsibility for initiating new activities, (2) high degree of power to hire research assistants, (3) no interference from administrative superior, and (4) high stability of employment. Although this correlational evidence must be interpreted cautiously, the result indicated that the best atmospheres appear to be those
with little extrinsic constraint, little interference with work, and little cause for concern with problems, e.g. unemployment that are extrinsic to the research problem itself.

Amabile (1983) has proposed that intrinsic motivation is conducive to creativity, whereas extrinsic motivation is detrimental. She viewed intrinsic motivation as both a state and a trait, whilst perceptions of one’s motivation for undertaking a task in a given instance depend largely upon external social and environmental factors, specifically, the presence or absence of salient extrinsic constraints in the social environment.

Amabile (1983a, 1983b) has defined extrinsic constraints as factors that are intended to control or could be perceived as controlling the individual’s performance on the task in a particular instance. Several studies have suggested that intrinsically motivated individuals show deeper levels of involvement in the problem, are likely to engage in more risk-taking strategies and behaviors and flexible, deeply involved task behaviors, and exhibit more exploratory or set-breaking behaviors and greater persistence (Amabile, 1983a, 1983b, 1988, 1996; Condry, 1978; Condry & Chambers, 1978; Deci & Porac, 1978; Deci & Ryan, 1985; Lepper & Greene, 1978).

Ng (2001) has defined the intrinsic and extrinsic factors in different terms, the task and the
 ego. He suggested that when a person is task-involved, he is an *origin* of action, that he perceives himself as being the cause of his own behavior. As a result, he experiences an inner sense of psychological freedom to create. In contrast, when a person is ego-involved, he is a *pawn* to the action. He does not perceive himself to be the cause of his own behavior. Instead, he feels controlled by extraneous and alien forces, which include external contingencies such as rewards and punishment, or introjects such as guilt, anxiety and shame. Person engaged in such behavior fail to experience an inner sense of psychological freedom to create (p.80).

However, subsequent research has suggested that extrinsic motives may not be harmful to creativity in some circumstances. In the contrary, some of them have showed positive effects on creativity, in particular in the aspects of reward and evaluation (Amabile, 1993, 1996; Eisenberger & Cameron, 1995; Shalley, 1995; Sternberg & Lubart, 1991, 1995, 1996). Some studies have identified certain extrinsic motivators, which included external evaluation or feedback in the workplace that is informative or constructive or that recognizes creative accomplishment that may increase an individual’s concentration on the task (Sternberg & Lubart, 1991, 1995, 1996) or can also be conducive to creativity (Amabile et al., 1996; Amabile & Gryskiewicz, 1989; Amabile & Gryskiewicz, 1987).
Deci & Ryan (1985) has refined the concept of extrinsic motivation by dividing extrinsic factors into two facets: control and information. The first one may be detrimental to creativity yet the latter one provides useful and desired information that can act in concert with intrinsic motives. Building upon this distinction, Amabile (1993) has thus identified this kind of extrinsic motivators as synergistic extrinsic motivators. This concept has contributed to a revision of Amabile’s Intrinsic Motivation Principle: “Intrinsic motivation is conducive to creativity: controlling extrinsic motivation is detrimental to creativity, but informational or enabling extrinsic motivation can be conducive, particularly if initial levels of intrinsic motivation (of individual) are high” (Amabile, 1996, p. 119).

Other creativity theorists have also suggested that some types of extrinsic motivation may coexist with intrinsic motives in the creative person (Rubenson & Runco, 1992; Sternberg, 1988). In particular, highly creative scientists are thought to have a strong desire for recognition that coexists with their deep intrinsic commitment to their work (Mansfield & Busse, 1981). Csikszentmihalyi (1988) has suggested that, while also supported by intrinsic motives, the ability to discover problems was fueled by a sense of dissatisfaction with the current state of knowledge in the domain, which he believed could be driven by extrinsic motives such as the desire for recognition.
Some researchers have proposed an integrated view that individual creativity is posited as both a function of a variety of individual differences, including the cognitive, non-cognitive, and motivational factors, and the situation which asserted social and contextual influences that either enhance or constrain creative behavior (Kilbourne & Woodman, 1999). They focus on the interaction between intrinsic motivators, of which some studies suggested to be a personality characteristic that contributed to creativity (Csikszentmihalyi, 1990; Gardner, 1993; Woodman and Schoenfeldt, 1989, 1990), and extrinsic motivators such as positive feedback and rewards. Such conception has led to Amabile’s development inventory scales of the Work Environment Inventory (WEI) (Amabile & Gryskiewicz, 1989) and subsequently refined as “KEYS®: Assessing the Climate for Creativity” (KEYS) (Amabile, 1995; Amabile et al., 1996).

Amabile & Gryskiewicz (1989) has regarded the working environment as one type of context. The authors have defined the “work environment” as the social climate of an organization, although physical environmental variables may also be included, which was in the beginning identified as one of the indirect social-environmental factors which have an important impact on creativity (Amabile, 1983). Amabile & Gryskiewicz (1989) has suggested that individual creativity within an organization depends, in addition to the individual’s own skills and motivations, on other components of the organization
including the “motivation to innovate”, the encouragement from different levels of management for innovation; “resources in the task domain”, which include everything the organization has available to aid work in the task domain; and “skills in innovation management”, which include management at the level of the organization, individual departments, projects and teams.
3.3.1 Supervisory Encouragement

Research has suggested that management skills and styles can enhance the intrinsic motivation of individuals (Deci et al., 1981; Harackiewicz, 1979; Ryan & Grolnick, 1986), and are conducive to individual creativity provided that the supervision is supportive rather than controlling or limiting (Deci et al., 1989; Deci & Ryan, 1985, 1987) with an appropriate balance between freedom and constraint (Amabile & Gryskiewicz, 1987; West & Farr, 1989; West, 1990), and has set goal that is focused at the level of overall missions and outcomes, but loose at the level of procedural progress toward those goals (Amabile & Gryskiewicz, 1987; Bailyn, 1985). Also, supervisor who is participative and collaborative (Kanter, 1983; Kimberley, 1981), showing concern for employees’ feelings and needs, allowing open communication and encouraging them to voice their own concerns, providing positive and chiefly informational feedback (Amabile, 1988; Amabile & Gryskiewicz, 1987; Cummings, 1965; Deci & Ryan, 1987; Kanter, 1983), and recognizing the creative efforts as well as creative successes with reward (Amabile, 1988, Amabile & Gryskiewicz, 1987; Kanter, 1983) may enhance individual creativity.

Hill & Amabile (1993) has recognized that motivation of individual is the most important component for organizational innovation (p.423), and Oldham & Cummings (1996) has maintained to motivate the staff, supervisors are expected to promote employees’ feelings
of self-determination and personal initiative at work, so as to boost levels of interest in work activities and enhance creative achievement.

Kanter (1988) has looked from the employee’s perspective, and the author believed that people must feel confident that their attempts at innovation will be well received in order for them to generate new ideas in the innovation activation stage, and the management has a role to give signal of an expectation for innovation. One source of expectations lies in whether the organization’s culture pushes ‘tradition’ or ‘change’, and innovative organizations generally favor change, and leader’s value and encourage creativeness and ideas.
3.3.2 Work Group Influence

On the other hand, some research has provided evidence on the influence of team or workgroup on creativity. Ainger et al. (1995) has suggested that “a team is a group of people sharing common goals and purposes, with each individual bringing expertise and knowledge to the collective whole” (p. 86). The team-setting in the workplace serves various functions. It brings along with the possibility of brainstorming to generate ideas.

As promoted by Osborn and others (Osborn, 1963; Parnes & Meadow, 1959; Pince, 1970; Rawlinson, 1981), this approach is founded on the idea that many personal and social factors tend to inhibit generation of creative and constructive ideas (Rawlinson, 1981; Rickards, 1993).

In addition, studies have suggested that collaboration or information exchange in groups, in particular the collaborative knowledge teams in which team members possess a diversity of knowledge and skills, is related to more effective or creative performance (Burnside, 1990; Farr, 1990; McGlynn, Tubbs, & Holzhausen, 1995; Payne, 1990; West, 1990). In such a cooperative knowledge team, people are able to establish broad and rich cognitive network which help them to generate novel associations among the various elements (Simonton, 1988), and the individuals who have particular expertise on the subject feel they have unique responsibilities or contributions to make to the group, thus
are likely to be highly motivated to contribute (Harkins & Petty, 1985), although some studies indicated that not all heterogeneous groups are productive (Mullen & Copper, 1994; Torrance, 1972).

Moreover, Paulus, Brown, & Ortega (1999) has suggested that the formation of a work group may inflate individuals’ perceptions and expectations of the efficacy and performance of the group, which thus motivate the group to generate and associate ideas to reinforce their perception. On the other hand, the authors recognized that there are many other factors that will influence the effectiveness of groups or teams, including effective leadership or management, an appropriate group structure, a facilitative organizational context, the use of appropriate performance strategies, as well as individual’s personal characteristics.

In sum, contextual factors can be both conducive and detrimental to creativity, depending on their nature, level, situation as well as the perception of individual on such factors. In the working context, company policy, organizational culture and management, supervisor’s encouragement, and work group interaction may influence individual’s motivation and hence creativity and creative performance.
3.4 Culture

3.4.1 The Chinese Culture

As reviewed in the earlier parts, most of the studies into creativity are based predominantly on North American samples, and only in recent years that research is carried out on Chinese or Asia samples (Rudowicz & Hui, 1997). Creativity from a Western perspective emphasizes novelty, originality, and appropriateness, and an important feature of Western creativity seems to be its relationship to an observable product (Hughes & Drew, 1984; Lubart & Georgsdottir, 2004), which implies that it can be assessed by an appropriate group of judges, either peers or experts (Lubart, 1999).

Amabile (1983a) suggested that such assessment is in fact, to a large extent, a social judgment. Brewer (1991) has suggested that individual differences in the tendency to engage in creative and individuated behavior derive from a fundamental tension between the human need for validation and similarity with the social group and wider society on the one hand, and a countervailing need for uniqueness and differentiation from the social group and wider society on the other. These psychological needs for similarity with and differentiation from the group and society are shaped by the culture which the person has grown up in.
Triandis (1997) has pointed out that various dimensions in different cultures, for instance, cultural complexity, cultural tightness, individualism versus collectivism, independence versus interdependence, and some additional syndromes such as religion, have caused variations in individual personality and behavior. Individualist cultures, usually found in the West, value independence, self-reliance, and creativity, whereas collectivist cultures in the East emphasize obedience, cooperation, duty, and acceptance of an in-group authority (Triandis et al., 1993).

Some cross-cultural studies have investigated the cultural characteristics of Chinese and have indicated that the culture discourages creativity. In the remaining part of this section, five well-recognized and inter-related characteristics found in the Chinese culture and studies on their influence on creativity are reviewed.

**Conventional**

Yang (1981) has described the traditional Chinese pattern as the ‘social orientation’, opposite to the modern Western position “individual orientation”. The consequences of the traditional Chinese concern for the reactions of others include:

Submission to social expectations, social conformity, worry about external opinions, and
non-offensive strategy in an attempt to achieve one or more of the purposes of reward attainment, harmony maintenance, impression management, face protection, social acceptance, and avoidance of punishment, embarrassment, conflict, rejection, ridicule and retaliation in a social situation. (p. 161).

Since they are young, the Chinese receive nurturing and education which emphasize on discipline, obedience, and the acceptance of social obligations. Apart, Bond & Hwang (1986) suggests that their social orientation may have led to self-monitoring. These socio-cultural and educational elements in the Chinese tradition are often commented on as promoting submissiveness and conventionalism, which are incompatible with creative expression and an assertive and self-reliance attitude (Bond, 1991; Chu, 1975; Gough, 1979; Ho, 1981; Liu, 1990, Ng, 2001).

Hierarchy

The Eastern societies, including the Chinese, are tightly-organized and hierarchical, and interaction between individuals is governed by cultural norms (Ng, 2001). With a high power distance in the hierarchy (Bond & Hwang, 1986), Liu (1986) suggested that the Chinese acquire the ‘respect superiors’ rule during their childhood, and have to take this rule into account in responding in almost any situation. As a result, originality and
creativity, in terms of verbal fluency and ideational fluency, tends to be suppressed and
inhibited. Early research to compare creative performance between Chinese children and
others tend to support the statement (Davis, Lesser, & French, 1960; Lesser, Fifer, & Clark,
1965). It is also suggested that Chinese is less able to solve ill-defined problems that
require one to generate as many ideas as possible, due to incompatibility of generation of
many ideas with the ‘respect superiors rule, and also the acquire of more ‘behavioral rules’
than Westerners (Liu, 1986; Liu & Hsu, 1974).

In a hierarchical culture, junior members have to respect and comply with the senior ones,
and the top members in the hierarchy have the absolute authority (Ng, 2001).

Hwang & Marsella (1977) has showed that Chinese college students have relatively high
authoritarian attitudes then the American counterparts.

Cheng & Lei (1981) has collected data on Chinese moral development by adopting the
Kohlbergian paradigm. They found that the authority orientation of Stage 4 (maintenance
of social order) was the predominant type of reasoning for Chinese subjects older than 17
years. By comparing the results with those of Weinreich’s (1970) British study and
Kohlberg’s (1958) Chicago study, they found that Chinese people at and beyond
adolescence tend to display a higher level of Stage 4 moral reasoning (authority
orientation) than Western people. As a moral man of the Stage 4 type, the average Chinese usually “identifies himself with the goals and expectations of his society or the group to which he belongs, and judges things from a perspective which he believes is shared by other ‘typical’ members of the society or group. He upholds social norms and rules to avoid censure by the authorities, to avoid feelings of shame, guilt, and anxiety, and to maintain the social order for its own sake” (Yang, 1986, p. 133).

On the organizational perspective, Redding & Wong (1986) has suggested that the leadership style within Chinese companies is directive and authoritarian, which contrast with the consensual decision-making style often cited as a cause of organizational innovation (Yamada, 1991). Studies in Chinese organizations have suggested that the management adopted a more autocratic approach than that in the West, especially in the contexts of sharing information with subordinates and allowing them to participate in decision making (Bond & Hwang, 1986; Redding & Casey, 1976).

The Pursue of Harmony

Hsu (1971) has suggested that the Chinese concept “ren” (人) is an indigenous theoretical perspective in approaching human social behavior. Instead of seeing a person as a distinct entity, Chinese views human as a homeostatic constant based on the “individual’s
transactions with his fellow human beings” (p. 29). Indeed, the Chinese culture puts an emphasis on collectivism (Smith & Bond, 1999), and each person has to maintain harmony with the group he/she belongs. The Chinese paintings provide a good example of Chinese implicit theories. Weiner (2000) has observed that the Chinese paintings have a prominent and fundamental feature of leaving “space” (留白). He suggested that such an aesthetic feature illustrates the emphasis of integration and harmony with the environment and tradition.

Harmony is thought to be achieved through compromise, moderation, and conformity, and Chinese society encourages cooperation, acceptance, compromise, and conformity (Dunn, Zhang, & Ripple, 1988). Independence is discouraged and unlikely (Chu, 1979) and people are required to look for guidance from either authority or past traditions, thus Chinese are trained from very young to be obedience, self-discipline, and avoidance of conflict (Ng, 2001). Recalling the Confucian emphasis on interrelated, Yang (1981) has maintained that the Chinese, in deciding upon their behavior, attach a great weight to the anticipated reactions of others to that behaviors, which, very often leads to conformity. Hence, Chinese people often try to avoid conflict and are less likely than their Western counterparts to argue and confront each other (Leung, 1997). As such, Leung, Au, & Leung (2004) has suggested that the avoidance of open communication and debate may be
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a barrier to innovation.

To support, Meade & Barnard (1973, 1975) have found that Chinese students shifted towards the majority position more frequently than American students. Chu (1979) has found that the Chinese subjects were less likely to respond independently from the group, whilst the Americans, being relatively freed from this collectivist concern, responded with anti-conforming choices upon their own assessment of the issues involved and their importance (Jones & Kiesler, 1971; Meade & Barnard, 1973, 1975).

Research conducted in the workplace also indicates that both Chinese managers and Chinese employees give a higher rank to social needs (stability) than to ego needs (Chau & Chan, 1984; Lui, 1985; Redding & Casey, 1976).

Conformity

The traditional Chinese norm of filial piety required high loyalty and submission by children to parental wishes, and this hierarchical dynamic is generalized to cover any consensually defined situations of superordination and subordination (Bond & Hwang, 1986).
On the other hand, due to the harmony-seeking cultural norm, Yang (1981) has suggested that Chinese people has a tendency to act in accordance with external expectations or social norms, rather than with internal wishes or personal integrity, so that one would be able to protect the social self and function as an integral part of the social network in order to maintain harmony. Triandis (1996) has shared a similar view that in a collectivist society where self is defined within a social context such as the family, with its norms and obligations, members are likely to conform and take less risk. In other words, it is important, in collectivist cultures, for the work not to be different. Creators tend to emphasize exactly the opposite qualities of their work; they deny that the work contains any innovation, and claim that it accurately represents tradition, even when Western outsiders perceive a uniquely creative talent (Sawyer, 2006).

Supportive evidence is obtained to prove the conformity characteristic of Chinese people. Huang & Harris (1973) has found that Chinese subjects imitated a college professor to a greater extent than did American college students. Chu (1966) has compared with Janis & Field (1959) and found that Taiwan subjects were more affected by attempts to influence them through the mass media than were American subjects. Lai (1981) has compared Hong Kong secondary school students with English students and has obtained similar results as Chu (1966). Leung (1997) has found that Chinese show a pattern of conflict
avoidance and are less likely than their Western counterparts to argue and confront each other.

Whittaker & Meade (1968) has conducted a cross-cultural study in which student were presented with opinions on controversial issues originating from sources of high and of low credibility. The largest immediate difference in the effect of this credibility manipulation, that is, the high agreement to authority and high disagreement to the dishonored source, was found for the Hong Kong sample, whilst of the other four cultural groups only Brazil, another country high in Hofstede’s (1980) power distance, showed a similar degree of conformity impact.

Crutchfield (1962) has postulated a basic antipathy between conformity and creative thinking. At the person level rather than the cultural level, the traits of individuality and individuation have been linked to creative activities and behaviors such as offering a new, original opinion as opposed to a majority view (Sternberg & Lubart, 1995; Whitney et al., 1994). Ng (2001, 2003) have viewed creativity as a form of individuated behavior. As novel creative ideas and acts invariably upset the conventional manner of apprehending the world, their originators face social resistance from conservative members in society.
The empirical literature supports this linkage between cultural individualism-creative behavior on one hand and collectivism-conforming behavior on the other. For instance, Bond & Smith (1996) has found that collectivistic members showed higher levels of conformity than individualistic members. A few cross-cultural studies have shown links between levels of conformity or dogmatism/open-mindedness and creativity (Aviram & Milgram, 1977; Maduro, 1976; Marino, 1971; Straus & Straus, 1968). Ripple (1989) found that members of individualistic societies scored higher in fluency than their collectivistic counterparts. Dunn et al. (1988) found that Chinese respondents performed better in convergent thinking tasks, whereas American respondents performed better in divergent thinking tasks. The above studies suggest that people in the collectivist societies may have internalized and accepted the group- or other-serving values and act with conforming behavior given the Chinese norms concerning harmony maintenance.

On the creative paradigm, the above studies have given a hint that the Western culture not only correlates to but also provides a nurturing ground for creativity, whilst the Eastern culture, which put a cultural premium on social order and harmony, hinder its people to behave in a creative and individuated manner (Ng, 2003).
Locus of Control

Research has suggested that the Eastern culture, including the Chinese culture, has been described as situation-centered or context-dependent, in that the behavior of an individual is often determined by interpersonal transactions within specific situations (Cheung, 1986; Hsieh, Shybut, & Lotsof, 1969; Hsu, 1971; Kleinman, 1980; Kuo, Gray, & Lin, 1979; Shweder & Bourne, 1984).

The earliest cross-cultural study on locus of control (LOC) involving Chinese subjects was conducted by Hsieh, Shybut, & Lotsof (1969), which has used Rotter’s Internal-External Control of Reinforcement Scale to groups of Anglo-Americans, American-born Chinese, and Hong Kong Chinese. The authors found that Hong Kong Chinese exhibited a stronger belief in external control of reinforcement, the American-born Chinese come next, and the American a stronger belief in internal LOC. Lao (1977) has examined three major factors of LOC, i.e. the belief in internal control, that in powerful others, and that in chance, among Chinese and American college students. The Chinese were reported to be stronger in their belief in powerful others than Americans, and Chinese females have a weaker tendency to believe in internal events than American females. Hwang & Marsella (1977) has also showed that Chinese people have relatively low internal-control attitudes then American students.
The contextual-reliance of Chinese people can be illustrated by an unique and indigenous concept in the Chinese culture yuan (緣), an important external attribution for success or failure which embodies the interpersonal and person-object relationships among Chinese (Cheung, 1986). Originating in Buddhism, the concept is used as a post hoc explanation for a personal outcome by alluding to fate, predetermination, and external control (Lee, 1982). Yang (1982) has found that yuan is a stable external factor that may be used as a force of destiny to foster interpersonal relationships. The authors suggested that it may be serving as a defense mechanism for maintaining interpersonal harmony by attributing the success or failure of relationships to forces beyond individual’s control, thereby ridding oneself or others of the responsibility for the outcome.

**Face-conscious**

Difference expressions and proverbs about face are used and mentioned by Chinese as guidelines for interpreting or regulating social behavior (Bond & Hwang, 1986). Hu (1944) has distinguished the face concept into two categories, “lien” (禮) and “mianzi”(面子).

“Lien” represents “the confidence of society in the integrity of ego’s moral character, the loss of which makes it impossible for one to function properly within the community. It is both a social sanction for enforcing moral standards and an internalized sanction”. On the
other hand, “mianzi” is “the kind of prestige that is emphasized in the country, a reputation achieved through getting on in life, through success and ostentation” (p.45).

The concept of face has universal applicability (Ho, 1976), whilst Bond & Hwang (1986) cautioned that the prevalence of face-related explanations in Chinese society should not be misinterpreted to suggest that it is a culture-specific phenomenon, yet the specific structure and social orientation of Chinese society have constituted a local dimension on the concept. The Chinese traditional way of thinking has projected a hierarchy and permanency of statuses on people, that “rank” is fixed and people knows the implicit standing relative to others. People behave differently in various situations to display the status symbol (Stover, 1974).

Ng (2001) has maintained that face is a measure of the social recognition accorded by society to oneself, and Asians tend to be more concerned with winning the social approval of their ingroups, or in other words, to gain “mianzi” from significant others like relatives and close friends. This characteristic is contrast with the typical Western individualism, which puts a greater emphasis on the individual than the social group. The individualistic culture allows Westerners to follow their own goals in life, and they are less likely to be concerned with “mianzi” or winning the social approval of their ingroups.
Hwang (1983) has suggested that the concept of face is applied in the power games in Chinese static society where the major social resources are controlled by a few allocators who may distribute resources according to personal preferences. In order to obtain resources from the authority or power, Chinese tend to play the fame of face to strengthen the “huanxi” (關係) with them, another prominent phenomenon among Chinese. Thus enhancing and saving face of individuals and the others not only help one to maintain social identity in the society, but also serve as a mean to validate the social status and to gain political and economical benefits from other members of the society and the group that one is attached to. However, this emphasis on face is suggested to cause hindrance for the Chinese to openly point out mistakes and problems in others’ ideas (Hwang, 1987).

Since the Chinese society has a strong tendency to use considerations of hierarchy and status in making socially evaluative judgments about an individual, people view face as an important dimension, and assert great effort to behave in ways designed to display and protect both the image and reality of that position in life which one has achieved. Consequently, people’s behavior is controlled by their desire to enhance the face in the community. Ng (2001) has maintained that this manner prevent individuals from being creative, as creativity requires a person to stand independently and is free from the
shackles of the collective.

The Cross-cultural Investigation of Creativity

Weiner (2000) has suggested that different cultures might be operating with somewhat different senses of what it means to be creative, and the Western term may not easily translate into other languages. The global dominance of the Western conception of creativity has caused the negligence that there may be other notions of the subject. The focus on newness in the West reinforces an historical attitude so that people seldom recognize the common ground between Western and traditional societies’ views.

Some studies have indicated that the Eastern conception of creativity seems less focused on innovative products. Instead, the Oriental conception of creativity seems more focused on the authenticity of the discovery process than the output of innovative products (Lubart & Georgsdottir, 2004). Creativity involves a state of personal fulfillment, a connection to a primordial realm, or the expression of an inner essence or ultimate reality (Kuo, 1996; Mathur, 1982). This conceptualization resemble to the concept in humanistic psychology of creativity being part of the self-actualization (Sarnoff & Cole, 1983).

On the other hand, Sawyer (2006) has suggested that culture affects each person’s creative
style. For example, Japanese managers, typical collectivists, prefer a bustling environment when thinking about ideas, whereas Europeans prefer to be alone (Geschka, 1993). It is proposed that if one uses the Western ‘independent’ characteristic as the measure of creativity, these Japanese, working interdependently, would be regarded as less creative.

Recent studies of people’s conceptions of creativity in Western settings as well as in Asia societies, including Mainland China, Hong Kong, Japan, Korea, Singapore, and Taiwan, have suggested that the notion of novel, original thinking is present in each case (Lim & Plucker, 2001; Niu & Sternberg, 2001; Rudowicz & Yue, 2000; Soh, 1999; Tan, 2000). However, it is debatable whether the notion of “novelty” has the same meanings in those diverse cultures. For example, Li (1997) has contrasted “vertical” creative domains, such as Chinese ink-brush paintings in which novelty builds on certain fundamental elements, with “horizontal” creative domains such as modern Western painting in which novelty can occur in nearly any aspect of the work.

Rudowicz & Yue (2002) has examined the compatibility of the concepts of Chinese and creative personalities in the eyes of Chinese people living in Mainland China, Hong Kong and Taiwan. The respondents were found to have significantly different views on the characteristics of being a Chinese and that should be possessed by a creative person.
Result of the study has suggested that Chinese people acknowledge that Chinese personality does not share much of the creative attributes.

Rudowicz & Hui (1997) has found that the core characteristics of the implicit concepts of a creative and non-creative person are to some extend congruent with explicit concepts as well as with the implicit concepts held by North American respondents. Samples representing the general public identified creative characteristics including self-confidence, willingness to try, being energetic, innovative, intellectual, as well as being bold and brave. However, Hong Kong participants described a creative individual in term of his/her contribution to society “contributes to society progress, improvement, betterment” which is regarded as cultural specific. Niu & Sternberg (2002) has conducted a similar review and concluded that many similarities in the conceptions of creativity are found between the Western and Eastern societies, yet the Eastern view of creativity did not emphasize humor and aesthetic sensitivity as did the Western view, but did emphasize social and moral aspects. Rudowicz & Yue (2002) has suggested the respondents did not recognize the Western personalities, such as outspoken and individualistic, to be the attributes of creativity.
3.4.2 The Culture of HKPF

In any developed society, virtually all persons in the society can recognize a police officer and have some conception of what they do. Fundamentally, a police officer represents the most visible aspect of the body politic, and is that aspect most likely to intervene directly in the daily lives of the citizenry (Maanen, 1999). Referring to studies of police in the United States, in Europe and in Asia, Skolnick & Fyfe (1993) has observed that the culture of policing is similar regardless of the time and space, with the same features of the police role and the mandate to use coercive force.

Given this rather visible position in the society, there is, however, limited research devoted to the personality and cognitive processes of police and their behaviors. In particular, there is no research on the creativity aspect of police, despite that their typical formal organizational structure and unique work may interplay in an antagonistic nature and thus create controversial and contradictory circumstances in the premises of creativity. The following part describes the characteristics of the police force, in particular the HKPF.

Hierarchy

As a discipline department in the bureaucratic government structure with the mission as enforcing law and order in the city, the HKPF has adopted the traditional organizational
model. In general, traditional organizational views see the effective use of control as the way to get the most out of an organization (Williams & Yang, 1999). As many other agencies with the bureaucratic orientation, it holds the concepts of rationality hierarchy, specialization, and positional authority, with rules and regulations dominate daily operations (More et al., 2006).

Bittner (1999) has suggested that police force is a quasi-military institution, and is run in a bureaucratic-military nature, that the formalism which characterizes military organization, the insistence on rules and regulations, and the obedience to superiors is adopted, and the HKPF is a typical example to run in such nature. For the HKPF, the main goal for building such traditional and conservative structure is to minimize the chance for the members to undermine the rights of the public as well as the well-being of the government, or looking in another facet, to protect the employees from exposing themselves against legal allegations and physical dangers. To serve the purpose, numerous standard procedures are set and plenty of procedure manuals are developed so that employees could follow step by step when dealing with different situations.

All the procedures have been serving their purposes to the point of providing a mechanism for the members so as to use to escape from making difficult decisions, especially in the
situations of emergency and uncertainty. Reliance on these procedures supplants much of
the ideation associated with response, reducing the possibility of creating new alternatives
or taking new actions in response to the environment (Kilbourne & Woodman, 1999), so
that the management can easily control and deploy the manpower.

As mentioned, one of the key concerns of such organizations is to reduce uncertainty and
supplanting it with routine. Consequently, procedures and regulations designed to
maximize predictability and order have been seen as positive influences on organization.
Roles within organization are strictly defined according to specific functions and
jurisdictions, and hierarchies are established to ensure the accountability. The same
happens in HKPF. The charters and job descriptions of each post are clearly defined, so as
to maximize the use of human resource and avoid duplication of manpower.

However, Kanter (1988) has suggested that to aid idea generation, jobs should be broadly
defined rather than narrowly, so that people have a range of skills to use and tasks to
perform to give them a view of the whole organization, and they can focus on results to be
achieved rather than rules or procedures to be followed. Also, broader definitions of jobs
permit task domains to overlap rather than divide cleanly. People thus are encouraged to
gain the perspectives of others with whom they must then interact and therefore to take
more responsibility for the total task rather than simply their own small piece of it, which leads to the broader perspectives that help stimulate innovation.

With a total of 15 ranks, HKPF, like other police forces in the world, is regarded as a steep-hierarchical organization and have a long chain of command (Wilson & McLaren, 1977). Although there is a gradual change in the communication flow in the recent years, information and instructions are usually disseminated in a top-down direction, and suggestions are submitted and considered onwardly from rank to rank. In addition, as plenty of the information, including intelligence and tactics, are classified to various security or confidential levels, instructions and directions are given to the subordinates by their superiors on a ‘need-to-know’ basis and restricted to a specific group of members. In return, subordinates usually communicate with supervisors only to report their productivity levels and seek advice or further instructions.

Given that one requisite ingredient to the creative process is information flow, the degree of employees’ accessibility to the information and freedom to associate accordingly becomes an important variable (Kilbourne & Woodman, 1999). Indeed, research at both group and organizational levels has suggested that the free exchange of information is crucial for creativity in social setting (Damanpour, 1991; King & Anderson, 1990), whilst
the bureaucratic structure of the law enforcement agency thwarts communication and stifles innovation and creativity by demanding conformity and group thinking and limiting personal growth (More et al., 2006). It is thus suggested that the restricted bottom-up reporting relationships and top-down information flow may suppressed the motivation for creative thinking and creative behavior in the organization.

**Conformity**

Some researchers adopt a psychological orientation to study police character. They focus on the personality characteristics exhibited by people who are attracted to the police occupation, and suggest that persons with certain personalities are more likely to enter law enforcement and to behave in distinct ways (Rokeach, Miller, & Snyder, 1971). Often, this approach is limited to an examination of the personality structures of police recruits, recognizing that the training and working environment of police may influence and subsequently change one’s personality (Burbeck & Furnham, 1985; Hannewicz, 1978). For instance, Alpert & Dunham’s (1997) predispositional model indicates that police recruits are more authoritarian than people who enter other professions (Chu, 1981). The authoritarian personality is characterized by conservative, aggressive, cynical, and rigid behaviors (Kappeler, Sluder & Alpert, 1999). They are thought to be submissive to superiors but are intolerant toward those who do not submit to their own authority.
(Adorno, 1950).

Some studies reject such notion that police are more authoritarian (Broderick, 1987), and recent research has suggested that police are conformists with personalities that more closely resemble the characteristics of military personnel than those from other occupations (Carpenter & Raza, 1987). Police work appears to be a key activity in the life of police, playing an important part in determining the self conception and their future (Goldthorpe et al., 1968). Therefore, as suggested in Young (1991), police officers are likely to compromise and avoid confrontation with the superiors in order to enhance their career opportunities rather than present any challenge to the system. This can be explained by their bureaucratic orientation to work, which emphasizes the virtues of career development within the organization.

On the other side, Bayley & Mendelsohn (1969) has adopted the sociological perspective that police behavior is based on group socialization and professionalization. Professionalization is the process by which norms and values are internalized as workers learn their occupation (Alpert & Dunham, 1997; Gaines, Kappeler, & Vaughn, 1997). Skolnick (1994) has suggested that police learn their occupational personality from training and through exposure to the unique demands of police work. Supportive evidence
is found in Bennett (1984), in which recruit and probationary officers’ values from several departments are affected by the training process, yet there was little support for the idea that police personalities were shaped by their peers in the department. However, some studies maintain that the full effect of the police socialization process is developed gradually in a police career (Bahn, 1984; Putti, Aryee, & Kang, 1988).

Other sociologists adopt a culturalization perspective and view the police as a unique occupational subculture. At the point when they submit application to be a police, they must start to demonstrate that they conform to a select set of norms, beliefs of the goodness of maintaining order and fairness of law, and value conformity in ideology, appearance, and conduct (Kappeler, Sluder, & Alpert, 1999; Maanen, 1995). The conforming behavior will be continued throughout their career as police officers, which is suggested by the writer to suppress the creativity potential of individuals.

**Stability**

I have mentioned earlier that the police force, being a bureaucratic institution, has established detail and strict regulations and procedures to maintain stability within the organization. Some authors observed a subculture that police officers, particularly the patrolling officers, tend to “avoid trouble” (Brandley, Walker, & Wilkie, 1986; Maanen
The authors suggest that in a setting full of uncertainty, risk and danger, the work time of patrolling officers is dominated by “staying-out-of-trouble”. For them, the most satisfactory solution to the labyrinth of hierarchy, the red tape, the myriad of rules and regulations, the risks of street work, and unpleasantness which characterize the occupation, is to adopt the group standard, stressing a “lay-low-and don’t-make-waves” work ethic. Paoline III (2003) has also indicated that the lay-low attitude is indeed a coping mechanism or adaptive modality to mediate external pressure and demand and internal expectation for performance and production. Consequently, members try to stabilize whatever situation they face in order to secure what they are offered with, and by doing so, an occupational culture is formed up.

The "lay-low” occupational culture also develops as officers discover, either before the employment or gradually after they start the job, that the external rewards of a police career are more or less fixed, including the salary, benefits and promotion aspects (Maanen, 1999). Reiner (1978, 1980) has described this as a desire for long-term security, although his studies also revealed that the attraction of varied and interesting work is the most popular reason of people joining the force, and economic factors are of secondary importance, whilst Brown (1981) has also challenged the notion that job security is the primary interest of police officers by finding that police value the opportunity to be the
crime fighters.

After all, police are assumed to be the agents of the government in power, because the law often changes slowly and in response to challenge, criticism, or complaint, much of the work of police is in defense of the status quo. In all the cases they have to deal with, police act as defenders of the status quo and are bound by law to use their coercive capacities against those who would disturb it (Klockars, 1999). Structurally or functionally, police are committed to such a position irrespective of their personal preferences.

It is thus not surprising that they gradually develop occupational ideologies that reconcile them to stability. It would be difficult for them to be geared easily to incorporate structural challenge to their existing concepts of order and control, for they are set up to maintain the symbols and practice which has sustained the status quo (Young, 1991), for as Templeton (1980) has pointed out, the function of the police are to preserve the structure and to uphold the state of play. With such mentality, police officers tend to restrict their thoughts and actions to routine and by doing so, unique ideas and novel concepts are undermined, and room for creativity is strangled.
Conventional

Reiner (2000) has suggested that police have a ‘narrow-minded, conventional morality’, that they tend to be conservative, both politically and morally. Numerous studies have suggested an occupational stereotype of the police as a conservative, defiled, isolated and homogenous grouping of men bound together perceptually through a common mission (Colman & Gorman, 1982; Crank, 1998; Rubenstein, 1973; Reiss, 1971; Niederhoffer, 1967; Skolnick, 1994; Wilson, 1968). Research on psychological paradigm has also suggested that police recruits are relatively authoritative and would react instinctively in a conservative manner in order to defend the status quo (Kappeler, Sluder & Alpert, 1999).

Reiner (2000) has explained that their conservatism is partly due to their function of the nature of the job, and another part due to the hierarchical and tightly disciplined organization. Even at the start, the processes of selection and self-selection have lead police officers to be conservative.

Klockars (1999) has suggested that police are “traditionalist conservatives”, that the attitudes of police are probably more traditional than those in the general population, not only because the work they are called upon to do inclines them to adopt a personal political philosophy that comports with it, but because those who are attracted to police
work are reasonably likely to begin with a traditional political orientation.

However, Scripture (1997) has compared police view with the public ones on various aspects such as capital punishment, the right to strike, the right to active political involvement, opinions of levels of public support, and their recent voting habits, and found that there were few statistically significant differences between the two sample groups. He postulated that police might not have the strongly-opinionated nature as expected. Although the finding has shed a light to the perhaps not-so-large difference between the mindset of police and that of the public in the public issues, most studies on this regard have maintained that police generally think conservatively and act traditionally, which unavoidably hinder the generation of creative ideas.

**The Police Image**

Police in the world value an ethos of *bravery*. Indeed, *bravery* is a central component of the social character of policing. It is related to the perceived and actual dangers of law enforcement. The potential to become the victim of a violent encounter, the need for support by fellow officers during such encounters, and the legitimate use of violence to accomplish the police mandate all contribute to a subculture that stresses the virtue of bravery (Kappeler, Sluder & Alpert, 1999). The bravery ethos is so strong among police
that two authors have remarked,

Merely talking about pain, guilt or fear has been considered taboo. If an officer has to talk about his/her personal feelings, that officer is seen as not really able to handle them...as not having what it takes to be a solid, dependable police officer (Pogrebin & Poole, 1991, p. 398).

The lawsuit trappings of policing, organizational policies such as “never back down” in the face of danger, and informal peer pressure all contribute to fostering a sense of bravery or the ‘machismo syndrome’ (Reiner, 1978, p. 161). Members who are perceived as unreliable or coward are to be reprimanded, gossiped and avoided by co-workers (Hunt, 1985). In fact, disciplinary action will be held against an officer in the HKPF who performed in a coward manner in the course of the duty (Hong Kong Police Force).

There are many situations that police officers rely upon the firm and rigid ‘hard man’ presentation as a non-force tool to achieve their objectives when dealing with the public, especially to those who are breaching the peace or challenging the law and order. As such, Muir (1977) has identified the “face” paradigm of police, and has suggested that they have special concern of face-losing during the course of duties.
Some more should be added to the police’s spirit if one look into the values of the HKPF, with the vision that Hong Kong remains one of the safest and most stable societies in the world:

Values

- Integrity and Honesty
- Respect for the rights of members of the public and of the Force
- Fairness, impartiality and compassion in all our dealings
- Acceptance of responsibility and accountability
- Professionalism
- Dedication to quality service and continuous improvement
- Responsiveness to change
- Effective communication both within and outwith the Force

and, “We serve with pride and care”. (The Hong Kong Police Homepage)

On the day they graduate from the training school, all the members have to vow to work with such values, and in fact live with them as all police officers in Hong Kong have committed to devote themselves around the clock whenever necessary. These values form up an intrinsic representation of a “police” that members strive to present themselves,
which also served as another coping mechanism to help officers to regulate their occupational world (Paoline III, 2003). Albeit no research exists to investigate the paradigm, the writer proposes that police officers are pride of such representation, and are vigilance on their police image.

This strict adherence to the ‘crime fighter’ image is in fact very similar to the face-conscious culture in the Chinese society. In both cultures, members are well aware of and also emphasize in the projection of good image. They are also keen at obtaining the recognition and respect from others for the image they project for themselves. Recalling face-consciousness as a detrimental factor to creativity, it is suggested that the protection of the police image hinders the creativity of police officers.

**Collectivism**

Police work is unique in the sense that although there may be several disciplinary forces in a society, only the police force is given so much of statutory power as the protector of the citizens and at the same time the law enforcer to those who breach the law.

Maanen (1999) has suggested that police officers recognized the implied differences between themselves and the rest of society. According to a former Chief of Police:
The day the new recruit walks through the doors of the police academy he leaves society behind to enter a profession that does more than give him a job, it defines who he is. For all the years he remains, closed into the sphere of its rituals...he will be a cop. (Ahern, 1972, p.3)

Indeed, some sociologists who adopted a culturalization perspective view the police as a unique occupational subculture. Skolnick (1994) has proposed that the police develop cognitive lenses through which to see situations and events, that they have distinctive ways to view the world. The way the police view the world can be described as a “we/they” or “us/them” orientation. In the other words, they see the world as composed of insiders and outsiders – police and citizens (Kappeler, Sluder, & Alpert, 1999). Through this perception, police officers regard other members as ingroup and tight bonding is developed among them. Paoline III (2003) has indicated that the problems officers confront in their occupational and organizational environments, as well s the coping mechanisms prescribed by the police culture, produce two defining outcomes of the police culture: social isolation and group loyalty.

Some authors suggested that police impose social isolation upon themselves as a means of maintenance of the sense of their professional suspiciousness in order to detect criminals
(Bahn, 1984), protection against real and perceived dangers, loss of personal and professional autonomy, and social rejection raised from the resentment of citizens during law enforcement actions (Baldwin, 1962; Clark, 1965; Skolnick, 1994). In addition, their long and often irregular working hour couples with the community’s perception of police work as socially unattractive have caused the community to impose isolation against police (Kappeler, Sluder, & Alpert, 1999, Swanton, 1981). Hence, the police tend to seek inward to their own members for validity and support. Accordingly, police often self-impose restrictions on personal interactions with the community.

Young (1991) recalled his own experience of working as a policeman as a strategy for his research, and suggested that upon the time police have their uniforms on, they become a symbol with no personal identity beyond the small, specific numeral patch on the shoulder, and the uniform itself is a forceful barrier to demonstrate a separation between culture of control, the police, and the individuality of the controlled, the civilians. No matter in the eyes of civilians or the police themselves, “individuality is never a prized characteristic” (p. 67).

Ferdinand (1980) has noted that until the age of forty, much of a police is spent within the confines of the police subculture. On the other hand, Reiner (1978, 1980, 1983) have
viewed that British police officers have a moral involvement in the organization, a view of work as a central life interest, and a blurring of the distinction between work and non-work.

The cultural mandate of loyalty is a function of both the occupational and organizational environments. Officers depend on one another for both physical and emotional protection because of the danger, uncertainty, and anxiety found in the occupational environment (Paoline III, 2003). With such tight bonding among the members, the police are suggested to live in a collective culture, and like other collective society, members of the Force think and behave interdependently.

A number of studies have provided evidence for a solidarity subculture in the police force (Banton, 1964; Harris, 1973, Skolnick, 1994; Stoddard, 1995; Westley, 1956, 1970, 1995). Brown (1981) has observed that the demand in the police culture for unstinting loyalty to the fellow officers is a strategy for obtaining protection and support in return, whilst Kappeler, Sluder, & Alpert (1999) has maintained that this cohesion is based in part on the “sameness” of roles, perceptions, and self-image of the members of the police subculture. As received in the earlier part, interdependent culture hinders individualistic thinking and motivation for creative performance. Hence, it is suggested that the loyalty and solidarity
culture in the police force suppress members’ motivation and space for creative thinking.

**Uncertainty**

Contrary to the stability or the intent for stability that the organization attempts, with the implementation of strict and detail regulations and procedures, the everyday work of police officers is flooded with unpredictability and uncertainty despite its routine nature (Lambert, 1970). Indeed, police work, by its nature, is to react to the situation changes with moral complexity and social uncertainties, although sometimes proactive tasks may be conducted, which, back to the basic, should be viewed as the early reaction of changes that are prematurely detected or deduced. Bradley, Walker, & Wilkie (1986) has reckoned that in few other areas of work are there more difficult and ambiguous dilemmas confronting the practitioners.

As such, Rubenstein (1973) maintained that the uncertain working environment influence the LOC of police, and “A policeman who understands what he is likely to be doing when he goes to work, knows that he has little control over what he ay be called on to do” (p.63). Consequently, police tend to be more externally directed and react passively to the ever changing context. As reviewed earlier, majority of research indicated that an external LOC seems to be negatively correlated to creativity.
Individualism

In contrast to the hierarchical model of organization, much police work calls for individual judgment, localized responses, and discretionary decision. Far from being rule-driven, policing is characterized by “situationally justified actions” (Manning, 1997). As the first line of the criminal justice system, police officers have to judge independently and make decisions about when and what extent to use force, whether discretion should be used, whom and when to arrest, and what lines of enquiries should be done as priority. Police officers cling to their autonomy and the freedom to judge the situations and make decisions (Kappeler, Sluder & Alpert, 1999). Very often, police deal with these changes alone, at least at the stage when incidents occur, until backup or assistance of resources, including manpower and equipments, is presented.

Crank (1998) has proposed that with the notion of personal responsibility and accountability in their work, be it their responsibility for their own ability to control all circumstances or the personal dominion they have over the beat that they are in charged, police officers carry a profoundly individualistic perception of themselves and of work. Failure in one’s individual responsibility is to lose face or to be seen as a ‘bad cop’.

Bittner (1990) has suggested that their sense of individual responsibility was wedded to
their idea of territorial responsibility, that is, the responsibility in their own beat, whilst Hunt & Magenau (1993) suggested that officers are compelled by the need, from both internally and externally, to be self-reliant. As such, police officers are deemed to think in an individualistic manner and apply flexibility in the course of their duties, which are essential for personal creativity.

Difference in Ranks and Posts

Although most of the research on police has concentrated on the occupational culture of policing at the street level, or the uniform frontline patrolling officers, some research has been conducted to determine the difference of views and attitudes of police officers in various levels and posts. Manning (1993) has suggested that there are three subcultures of policing: command, middle management, and lower participants. Chan (1997) found that officers in middle management positions held a distinctively negative view of the organization. Ferdinand (1980) has investigated into the concepts of solidarity and loyalty of police, and maintained that solidarity declines as police move into higher ranks in the department.

On the other hand, Kappeler, Sluder & Alpert (1999) observed that members of the police administrative hierarchy are frequently categorized by frontline officers with non-police
members of the community as threatening to the welfare of the subculture. Chan (1997) has studied the attitude of different ranks in the New South Wales Police Service in respect of anti-corruption campaign implemented by the then Commissioner John Avery, and reported that the sergeants and senior sergeants were the group with the greatest resistance to change.

These findings have showed that officers in different ranks may possess different characteristics that vary from the general occupational culture. As the cultural characteristics play a role in one’s creativity, such variations as a function of rank may affect the creativity and creative performance of individual members.
4. The Present Study

4.1 Purpose

This study is conducted in Hong Kong, where the Eastern culture meets with the Western one. With 98% of the population being Chinese, Hong Kong people adopted the Eastern traditions with a flavor of the Western styles. The HKPF has a very similar ethnic composition.

The employees of the HKPF are trained, live and work in a special environment and thus generate a unique occupational culture, whether analyzed by the psychological paradigm, sociological or anthropological alternatives. With 98% of the workforce being ethnic Chinese since her localization in 1997, after Hong Kong is handed over to Mainland China, the employees are suggested to live in a collectivist culture. The authoritarian and hierarchical structure, the semi-military command chain, the restricted information flow, the job nature to maintain stability through law and order, all imitate the characteristics of the Eastern culture, which, in the Western point of view, inhibited creativity and slow down the creative process.

Interesting enough, the nature of police work, very different from the administration or management jobs in normal bureaucratic organizations, requires police officers in all ranks
and posts, to maintain autonomy and accountability. Also, the job nature itself indicates a relatively high degree of risk, and recruits of police force are suggested to be well-acknowledged of the risk and willingly accepted to “take risk” in their work. In addition, the external working environment requires them to exhibit flexibility and quick decision-making ability to all kinds of uncertainty and pressure when they are to response to the ever-changing circumstances during their duty hours.

The elements mentioned are in fact identified as the essential traits for creativeness. It is suggested that such a mixture of features cause a critical influence on police orientation, and these contradicting yet interrelated elements have important implications on the creativity of police officer.

In the last two decades, researchers have sought to propose an integrated conception of creativity in which different approaches, different pieces of the puzzle are put together and explain in different integrated models. Among them, some authors apply a multivariate approach to creativity, which proposes that creativity depends on cognitive, conative, and environmental factors that combine interactively (Amabile, 1983, 1996; Lubart, 1999; Sternberg & Lubart, 1995). According to this view, individual differences in creativity are the result of the combination of different factors and recent empirical studies provide
evidence for the model (Conti, Coon, & Amabile, 1996; Lubart & Sternberg, 1995; Csikszentmihalyi, 1988; Gardener, 1993).

Following this line, this paper attempted to search for clues on the creativity of the members in HKPF by evaluating their personalities, the influence of organizational culture, and the role of supervisor and workgroup on creativity.

On the other hand, research had indicated that despite these characteristics are generally agreed by the Chinese as important elements of creativity, they disregard the correlation between creativity as some traits such as independent, outspoken and individualistic (Geschka, 1993; Li, 1997; Rudowicz & Yue, 2002). In addition, some authors observed that the conception of creativity is different between the West and the East, that the Western culture links creativity with creative performance or product, whilst the Eastern culture emphasize the creativity process (Kuo, 1996; Lubart & Georgsdottir, 2004; Mathur, 1982).

By investigating the relationship between personality traits and creative performance of Chinese police officers, this paper intended not only to measure their creativity, but also attempt to provide some insight on the appropriateness of using the Western perspective of creativity and its measure in the East. To start with, I proposed that:

**Hypothesis 1 (H1): There is a positive relation between creative personality and creative performance.**

In her componential model of creativity and innovation in organizations, Amabile (1988) regards “supervisory encouragement” as one of the three broad organizational factors.
Some studies on the role of supervisor or manager have indicated the supervisor’s importance in goal clarity (Bailyn, 1985), which implied the critical role of supervisor in defining a problem and setting up goal in the creative process (Amabile et al., 1996; Getzels & Csikszentmihalyi, 1976). Other studies have suggested that open communication and interaction with the subordinates (Amabile, 1988; Kimberley, 1981; Kimberley & Evanisko, 1981; Deci & Ryan, 1987), and participation, support, and subjective feedback of a team’s work and ideas (Delbecq & Mills, 1985; Orpen, 1990) are essential in the creative process.

In the HKPF, setting the ultimate goal of a task may not be as difficult as the business sector, as it is usually set by the most senior management and route downward in the form of an order, but supervisors at all levels have to set benchmarks and goals in each stage or process in order to achieve the ultimate mission. On the other hand, the performance and achievement of subordinates are suggested to be highly influenced by the management style of the supervisors, their way of communication, encouragement, support, and subjective evaluation are critical for their members to plan and conduct their own tasks. I therefore proposed:

*Hypothesis 2 (H2): There is a positive relationship between supervisory encouragement within HKPF and creative performance of police officers.*
The model of Woodman, Sawyer, & Griffin (1993), as mentioned earlier, has suggested that creative behavior within organizations is a function of two categories of work environment inputs, the first is the organizational characteristics, and the other is the group characteristics which include the norms, group cohesiveness, size, diversity, roles, task characteristics, and problem-solving approaches used in the group. Due to the diversity of these characteristics, Sackmann (1992) has suggested that many aspects of cultures and subcultures within organizations can differ considerably across subgroups, and Gersick (1988) has found that different teams within an organization may experience quite different work environments due to the difference in the group design. Moreover, Van de Ven & Ferry (1980) has proposed that subunits of a given organization can vary significantly in their effectiveness, their daily functioning, and the reactions that employees have to working with them.

As mentioned above, interpersonal communication facilitates the dispersion of ideas in an organization (Aiken & Hage, 1971), and association at group level is crucial for the creative process in social setting (Damanpour, 1991; Kilbourne & Woodman, 1999; King & Anderson, 1990).
The coherence among workgroup is particularly necessary to the work of police, as most of the tasks require co-operation of members. Indeed, the HKPF emphasizes the collective whole rather than individual’s achievement. The close bonding between each member in the team highlights the importance of workgroup coherence in order to provide a condition for creative process and product. Hence, I proposed that:

**Hypothesis 3 (H3): There is a positive relationship between workgroup coherence of the officers’ units and their creative performance.**

The police culture is viewed by many writers to hinder creativity. The hierarchical, bureaucratic, and formal structure (Bittner, 1999; More et al., 2006; Williams & Yang, 1999; Wilson & McLaren, 1977) reduces the room for innovation (Damanpour, 1991; Kanter, 1988; King & Anderson, 1990; More et al., 2006).

In addition, the authoritarian, conforming, conservative, and stability-pursuing characters found in police officers based on their personality type (Alpert & Dunham, 1997; Chu, 1981; Kappeler, Sluder & Alpert, 1999; Klockars, 1999; Reiner, 1978, 1980), the training, the commanding system and the working environment (Burbeck & Furnham, 1985; Hannewicz, 1978; Kappeler, Sluder, & Alpert, 1999; Maanen, 1995; Young; 1991) are considered for long to be obstacles of creativity.
Further, their implicit concern on maintain their ‘police image’ (Kappeler, Sluder & Alpert, 1999; Muir, 1977; Reiner, 1978) is suggested to have limited police’s openness and acceptance to new ideas. Hence, I proposed that:

_Hypothesis 4 (H4): There is a negative relationship between the HKFP culture and creative performance._
4.2 Design

The present study investigates on the creativity of the participants, and the participants’
difference in creativity-related constructs is obtained by means of questionnaire.
Personality traits related to creativity, contextual influences including the supervisory
encouragement and workgroup coherence, creative performance in terms of verbal
creativity, and influence of organizational culture were measured.

4.3 Subject

150 questionnaires were sent out to respective police officers randomly selected by
computer software. 120 questionnaires are completed and the respond rate is 80%.
The respondents incorporate the ranks from police constables (37.5%, N = 45), sergeants
(24.2%, N = 29), inspectorates (32.5%, N = 39) to superintendents or above (5.8%, N = 7).
The term ‘police’ is used to describe respondents in the sample. Most of the posts in the
Hong Kong Police Force required a post rotation within one to six years, and officers are
not bound to work in the same category when one changes a post. The type of job of the
participants comprises mainly six categories: operational (30%, N = 30), investigative
(29.2%, N = 35), administrative (16.7%, N = 20), publicity (1.7%, N = 2), information
technology (9.2%, N = 11), and training (7.5%, N = 9).
This project was approved by the Hong Kong Police College, the authority for conducting research within the Force members.

4.4 Measurement Scales

4.4.1 Variable 1: Creative Personality Traits

Chinese Personality Assessment Inventory-2 (CPAI-2) has been adopted to measure the creative personality traits of the subjects.

Finding that the local normative groups have obtained different mean scores on translated personality inventories which might cause misinterpretation of the personality of the Chinese respondents, the “Chinese Personality Assessment Inventory” (CPAI) was developed to suit to the Chinese cultural in general and the specific sociocultural contexts of the PRC and Hong Kong while retaining the standards of validity and reliability. The process of development itself also provided a review of personality constructs relevant to the Chinese culture, such as face, harmony, and rein qin (Cheung et al., 1996).

The “Cross-cultural Personality Assessment Inventory-2” (CPAI-2) is the extended and re-standardized version of the CPAI with new scales related to Openness added and names of some scales revised. It has 28 personality scales, 12 clinical scales and three validity
scales, and dichotomous true-false response format is used. It has been applied to 1,911 respondents in Hong Kong and PRC with the median Cronbach’s alpha for the personality scales .63 (Cheung et al., 2004a, 2004b).

CPAI-2 has been used in research on different facets of personality, including personality traits across various Asian people, life and family orientation, and working setting among Chinese people (e.g. Chang et al., 2004; Chen et al., 2006; Cheung et al., 2006; Li & Feng, 2005; To, 2006; Tyler & Newcombe, 2006; Yeung, Fung & Lang, 2007).

The present study adopted five sub-scales of CPAI-2 to measure the personality traits of police officers related to creativity. The ‘novelty’ sub-scale measures the novelty tendency of the respondents with reliability = .69, the ‘diversity’ sub-scale measures their openness to difference experience with reliability = .68, the ‘divergent thinking’ sub-scale measures their tendency for divergent thinking with reliability = .62, the ‘inferiority vs self-acceptance’ sub-scale measures the self-confidence with reliability = .80, and the ‘internal vs external locus of control’ measure the causal attributions of the subjects with reliability = .62.
4.4.2 Variable 2: Supervisory Encouragement

In order to investigate how supervisory encouragement affect the creativity of police
officers, “KEYS®: Assessing the Climate for Creativity” (KEYS) (Amabile, 1995;
Amabile et al. 1996), formerly known as the Work Environment Inventory (WEI)
(Amabile & Gryskiewicz, 1989) is adapted. The inventory consists of 78 items in a 4-point
scale, which assesses 10 environmental stimulants and obstacles including organizational
encouragement, supervisory encouragement, work group supports, resources, work
challenge, freedom in work, organizational impediments, workload pressure, employee’s
creativity belief, and productivity (Amabile, 1996).

The inventory is based on a database consists of more than 12,000 cases over the years
1987-1995 (Amabile et al. 1996). Its internal scale reliabilities (Cronbach’s alpha) vary
from .66 to .91. The scales correlated moderately with the scales on another work
environment inventory, the “Work Environment Scale” (WES) (Insel & Moos, 1975), and
have a relatively low correlation with a personality measure of motivational orientation,
the “Work Preference Inventory” (WPI) (Amabile et al., 1994), and with a measure of
cognitive style, the “Kirton Adaptation-Innovation Inventory” (KAI) (Kirton, 1976). Also,
a multivariate analysis of variance (MANOVA) on all KEYS scales, with company as the
independent variable, indicated highly significant differences between the work
environments of different companies (multivariate $F_{250, 38,410} = 10.59, p < .001$).

The instrument has been adapted to study the influence of workplace context on creativity in the aspects of training, evaluation, structure re-engineering in organization (Amabile & Conti, 1997; Awoniyi, Griego, & Morgan, 2002; Sundgren et al., 2005).

To assess the influence of supervisory style on the creativity of police officers, the sub-scale, the present study adapted the “supervisory encouragement” sub-scale of KEYS.

4.4.3 Variable 3: Work Group Coherence

Another sub-scale “work group supports” of KEYS is applied to measure the influence of work group interaction on subjects’ creativity.

4.4.4 Variable 4: Organizational Culture

Five characteristics of the police organizational culture have been highlighted earlier, namely “conformity”, “stability”, “hierarchical”, “conventional” and “face-consciousness”.

In order to determine if they do exist in the HKPF, a self-devised 5-point scale is developed which invited the participants to evaluate the prevalence of the cultures in the organization as well as their influence on individual’s creativity.
As these five characteristics are parallel to the characteristics found in the Chinese culture, the survey serves another purpose to demonstrate whether the police culture simulate the Chinese culture.

4.4.5 Variable 5: Creative Performance

In order to test the creative performance of the respondents, the verbal test of Wallach and Kogan Creativity Test (1965) (WKCT) has been adapted in this study.

Wallach and Kogan (1965) devised a series of creativity tests to test the ability to think divergently and produce a diversity of responses to an open-ended problem, which is suggested by Guilford (1959) as the key factors for creativity. Originally, it is developed to assess the generation and uniqueness of associates in accordance with the associational conception of the creativity in children, including verbal and visual forms of presentation. The test is game-like and open-ended, and requires children to produce as many original ideas as possible concerning a stimulus.

WKCT is adapted due to its good psychometric properties. Kolloff & Feldhusen (1984) used the Wallach and Kogan tests in research with elementary school children and found
satisfactory levels of reliability and validity. Hocevar & Bachelor (1989) also conducted a path analysis of creativity measurements using confirmatory factor analysis on the ‘verbal fluency’ subtest from the Torrance’s Tests of Creative Thinking (TTCT) and the WKCT, with both loadings of .80 obtained which exceed the actual reliability coefficient (.78), showing that both tests are measuring the same construct in a satisfactory manner. Cheung et al. (2003) measured the creativity of university students by ‘verbal - alternate uses’ subtest with significantly high stability, internal consistency and intercede correlation obtained. Further, as mentioned in Cheung et al. (2004), the test items of the WKCT have great potential for doing cross-cultural comparison in divergent thinking as the verbal items use common daily objects in eliciting responses thus allow further comparison in future study. The usage of WKCT in creativity research is robust. It has been applied to children and adults of different settings across different cultures (e.g. Chan, 2001; Chan et al., 2001; Cheung et al., 2004; Cheung et al., 2003; Davidovitch & Milgram, 2006; Kurtzberg, 2005; Lindemann & Fullagar, 1975; McCrae, Arenberg, & Costa, 1987; Narayanan, 1984; Runco & Albert, 1985; Runco, Dow, & Smith, 2006).

There are three verbal techniques, namely ‘instances’ (generating possible instances of a class concept), ‘alternate uses’ (generating possible uses for a verbally specified object), and ‘similarities’ (generating possible similarities between two verbally specified objects).
Only the naming of alternate uses was used in the present study, and two out of the eight items suggested were chosen, and participants were asked to provide all the usage of a ‘newspaper’ and a ‘knife’ that they can think of within 10 minutes.

The test provides three indices of performance: fluency, which is the number of ideas produced; flexibility, which is the number of different categories from which the ideas are drawn, and originality of the ideas. A grand total for each participant was calculated by adding together the scores from all the three indices.

It is found that two main approaches had been used in previous studies using WKCT, some counted an idea that was generated by less than 5% of the total number of respondents to be original and scored a point for originality (e.g. Cheung et al., 2003), whilst others have sub-divided originality in terms of response ‘uniqueness’ and ‘unusualness’. ‘Unique’ responses occurred when a response was given by only one individual, and ‘unusual’ responses were scored as the weighted sum of statistically infrequent responses: three points if the response was unique, two points if less than 2.5% of the sample gave it, and one point if less than 5.0% of the sample did so. A total score for each test was calculated by finding the mean of the item scores (e.g. Runco & Albert, 1985). In this study, the scoring method of Runco & Albert (1985) was used to determine
the divergent thinking ability of police officers.
5. Result

In the first part, result obtained from the analysis of personality dispositions, contextual factors, and cultural characteristics with the creative performance will be presented. Then, comparison tests on the demographic data of the participants will be illustrated.

5.1 Tested Variables

General descriptive statistics of the variables tested are listed in Table 1.

To test the internal consistency reliabilities for ratings on each of the variables of personality characteristics and contextual factors, Cronbach’s alpha coefficients are calculated and included in Table 1. The coefficients for locus of control, self acceptance, supervisory encouragement, and work group coherence are above .70, and that of divergent thinking, diversity, and novelty are above .60 which are marginally acceptable.

For Wallach & Kogan Creativity Test (WKCT), the coefficient of verbal fluency is .935, that of verbal flexibility is .828, and that of verbal originality is .777. The coefficient for the total WKCT score is .875. The items of cultural characteristics that exist in the organization are single items thus reliability analysis is not applicable.
Table 1. Descriptive statistics and internal reliability of creative variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>α</th>
</tr>
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<tbody>
<tr>
<td><strong>Personality characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Divergent Thinking</td>
<td>117</td>
<td>17.59</td>
<td>2.052</td>
<td>.652</td>
</tr>
<tr>
<td>Diversity</td>
<td>119</td>
<td>17.84</td>
<td>2.042</td>
<td>.679</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>119</td>
<td>15.86</td>
<td>2.707</td>
<td>.788</td>
</tr>
<tr>
<td>Novelty</td>
<td>117</td>
<td>16.21</td>
<td>2.111</td>
<td>.610</td>
</tr>
<tr>
<td>Self Acceptance</td>
<td>118</td>
<td>32.29</td>
<td>2.950</td>
<td>.757</td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Group Coherence</td>
<td>118</td>
<td>23.65</td>
<td>4.921</td>
<td>.897</td>
</tr>
<tr>
<td><strong>Creative Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal Fluency</td>
<td>120</td>
<td>10.30</td>
<td>6.419</td>
<td>.935</td>
</tr>
<tr>
<td>Verbal Flexibility</td>
<td>120</td>
<td>5.28</td>
<td>3.152</td>
<td>.828</td>
</tr>
<tr>
<td>Verbal Originality</td>
<td>120</td>
<td>2.87</td>
<td>3.059</td>
<td>.777</td>
</tr>
<tr>
<td>WKCT scores</td>
<td>120</td>
<td>32.82</td>
<td>21.949</td>
<td>.875</td>
</tr>
</tbody>
</table>

5.1.1 Creative Personality and Creative Performance

Pearson correlation tests were conducted between the five creative personality traits and WKCT to determine if personality is related to creative performance and Table 2 shows the results. It is found that only divergent thinking (N = 117, M = 17.59, SD = 2.052) is significantly correlated to WKCT scores (N = 120, M = 32.82, SD = 21.949), $r = .190, p < .05$.

On the other hand, the five personality characteristics are found to be highly correlated to each others ($p < .01$) as indicated in Table 1, except locus of control, which is the only characteristic that did not detect significant correlation with divergent thinking, but it is
still significantly correlated to the other characteristics.

Table 2. Correlation between creative personality traits and creative performance.

<table>
<thead>
<tr>
<th></th>
<th>DT</th>
<th>Div</th>
<th>LOC</th>
<th>Nov</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divergent Thinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversity</td>
<td>.479**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Locus of control</td>
<td>.179</td>
<td>.296**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Novelty</td>
<td>.393**</td>
<td>.668**</td>
<td>.321**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self acceptance</td>
<td>.480**</td>
<td>.418**</td>
<td>.496**</td>
<td>.373**</td>
<td></td>
</tr>
<tr>
<td>WKCT score</td>
<td>.190*</td>
<td>.166</td>
<td>.161</td>
<td>.095</td>
<td>.065</td>
</tr>
</tbody>
</table>

*p < .05, ** p < .01

Regression analysis is conducted and indicated divergent thinking as a predictor of creative performance scores ($\beta = -.190, p < .05$), but it only explains 2.8% of the estimated variance. Multiple regression analysis on the overall personality characteristics as a predictor of creative performance revealed insignificant result. Therefore, there is only limited support for H1, as only divergent thinking, among the other four creative personality characteristics, has a positive correlation with creative performance.

5.1.2 Creative Context and Creative Performance

Pearson correlation tests were conducted between the two creative context factors and WKCT score to determine if context is related to creative performance with results showed in Table 3. Only work group coherence ($N = 118, M = 23.65, SD = 4.921$) is significantly correlated to WKCT scores ($N = 120, M = 32.82, SD = 21.949$), $r = .211, p$
<.01, whilst the two contextual variables, supervisory encouragement (N = 119, M = 21.13, SD = 4.517) and work group coherence, are significantly and highly correlated, \( r = .610, p < .01 \).

<table>
<thead>
<tr>
<th>Supervisory Encouragement</th>
<th>Work Group Coherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Group Coherence</td>
<td>.610**</td>
</tr>
<tr>
<td>WKCT score</td>
<td>.061</td>
</tr>
<tr>
<td></td>
<td>.211**</td>
</tr>
</tbody>
</table>

**\( p < .01 \)

Multiple regression analysis was conducted on the contextual factors and result is showed in Table 4. Work group coherence is found to be a significant parameter of creative performance (\( \beta = .943, p < .05 \)) and explains 3.6% of the estimated variance. Multiple regression test on the two contextual variables revealed a negative sign on supervisory encouragement, which caused a reduction of explained estimated variance to 3.5% (\( \beta = .211, p < .05 \)). Therefore, H2 is rejected as there is insignificant relationship between supervisory encouragement and creative performance. H3 is supported as work group coherence has a positive correlation with creative performance.
Table 4. Regression analysis of work group coherence as predictor of creative performance.

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>WKCT</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Group Coherence</td>
<td>.211*</td>
<td>.036*</td>
</tr>
<tr>
<td>Sup. Encg. and Wk. Gp. Coh.</td>
<td>- .103</td>
<td>.035*</td>
</tr>
</tbody>
</table>

* $p < .05$

5.1.3 Combined Influence of Personality & Context

Multiple regression test was conducted to determine if divergent thinking and work group coherence together act as a predictor of creative performance. Table 5 shows that the regression coefficients are insignificant but together, they explain 5.3% of the estimated variance of WKCT scores.

Table 5. Multiple regression analysis of divergent thinking and work group coherence as predictor of creative performance.

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>WKCT</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divergent Thinking</td>
<td>-.168</td>
<td>.053*</td>
</tr>
<tr>
<td>Work Group Coherence</td>
<td>.170</td>
<td></td>
</tr>
</tbody>
</table>

* $p < .05$

5.1.4 Cultural Influence on Creative Performance

The descriptive statistics of cultural characteristics are showed in Table 6. All the variables suggested to have hindered creative performance have a mean score higher than 3 (“cause some hindrance on my creativity”), showing that participants perceived the variables do
cause hindrance on participants’ creativity. In particular, they believed that *stability*, with a highest mean (M = 3.69), affects creativity the most among the five cultural characteristics.

Concerning whether these characteristics exist in HKPF, result shows that all the variables have a mean score higher than 2 (“sometimes face during work”), which indicated that participants perceived to encounter the respective circumstances in their working environment. In particular, the *hierarchic* characteristic has the highest mean (M = 3.10) which reflected the hierarchical organizational structure and the long chain of command of the HKPF.

When comparing the two sets of data, *stability* which ranked the first for hindrance only rank the fourth for its existence in the HKPF, which reflected participants’ perception that this detrimental variable was not very common found in the HKPF as compared with the other cultural factors.

On the other hand, the *hierarchic* variable which ranked the highest for its existence only ranked the third as a hindering characteristic. This indicates that even though *hierarchic* is most commonly existed, it is perceived to be not very harmful to creativity.
Apart, *conventionality* is ranked the lowest for its existence as well as its hindrance, showing that the variable is perceived to be the least influential to creativity, and also the least common in the workplace.

Table 6. Descriptive statistics of cultural characteristics that hinder creativity and exist in organization

<table>
<thead>
<tr>
<th>Cultural Characteristics hindering creativity</th>
<th>Cultural Characteristics exist in HKPF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Conformity</td>
<td>3.46</td>
</tr>
<tr>
<td>Face-consciousness</td>
<td>3.53</td>
</tr>
<tr>
<td>Hierarchic</td>
<td>3.52</td>
</tr>
<tr>
<td>Stability</td>
<td>3.69</td>
</tr>
<tr>
<td>Conventionality</td>
<td>3.06</td>
</tr>
</tbody>
</table>

Pearson correlation test was conducted to determine the relationship between the cultural hindrance to creativity, the existence of these cultural characteristics, and the creative performance. The result is showed in Table 7. None of the cultural characteristics, whether believed by the participants as hindering creativity or existing in the workplace, has a significant correlation with creative performance. Hence, H4 is rejected.

On the other hand, it is found that besides *stability*, all other characteristics have their degree of hindrance correlated to their pair that existence in work.
Table 7. Correlation between cultural characteristics that hinder creativity, cultural characteristics that exist in work, and creative performance

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Culture Characteristics hindering creativity (-H)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conformity</td>
<td>.172</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hierarchic</td>
<td>.257**</td>
<td>.347**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.457**</td>
<td>.247**</td>
<td>.158</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convent.</td>
<td>.321**</td>
<td>.413**</td>
<td>.296**</td>
<td>.289**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Culture Characteristics exist in HKPF (W)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conformity</td>
<td>.217*</td>
<td>.176</td>
<td>.112</td>
<td>.110</td>
<td>.143</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face-consc.</td>
<td>.110</td>
<td>.443**</td>
<td>.359**</td>
<td>.212*</td>
<td>.295**</td>
<td>.278**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hierarchic</td>
<td>.183*</td>
<td>.311**</td>
<td>.405**</td>
<td>.258**</td>
<td>.182*</td>
<td>.448**</td>
<td>.549**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability</td>
<td>.112</td>
<td>.291**</td>
<td>.136</td>
<td>.129</td>
<td>.298**</td>
<td>.429**</td>
<td>.445**</td>
<td>.360**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convent.</td>
<td>.155</td>
<td>.238**</td>
<td>.173</td>
<td>.293**</td>
<td>.308**</td>
<td>.301**</td>
<td>.457**</td>
<td>.444**</td>
<td>.342**</td>
<td></td>
</tr>
<tr>
<td><strong>Creative Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WKCT score</td>
<td>.028</td>
<td>-.131</td>
<td>-.131</td>
<td>.009</td>
<td>-.132</td>
<td>.057</td>
<td>-.102</td>
<td>.134</td>
<td>-.050</td>
<td>.111</td>
</tr>
</tbody>
</table>

*p < .05, **p < .01

With the findings that the existence of the cultural characteristics do not significantly correlated with creative performance, whereas each pair of these characteristics are inter-correlated, attempt has been made to examine if the creative performance was caused by the mutual influence of the pairs, that is, creativity would be hindered only if the cultural characteristics exist in the working environment and at the same time believed by the police officers to cause hindrance to creativity.

Two sets of regression analysis were conducted to ascertain if these five pairs are
co-variables. In the first set, the ten variables were tested individually to determine if they have any causal relationship with creative performance, and as predicted according to the insignificant correlation showed earlier, the regression result revealed no significant difference.

In the second set, the ten variables were matched into five pairs, that is, *conformity* that is believed to hinder creativity paired with *conformity* exists in work, *conventionality* that is believed to hinder creativity with that exists in work, *face-consciousness* that is believed to hinder creativity with that exists in work, *hierarchic* that is believed to hinder creativity with that exists in work, and *stability* that is believed to hinder creativity with that exists in work. Multiple regression analysis was then conducted to ascertain if the five pairs have caused influence to creative performance. The result is showed in Table 8.

Significant findings are obtained between the *conventionality* pair which explained 3.9% of the creative performance, and the *hierarchic* pair which explained 3.8% of the creative performance. Moreover, the result contradicted the participants’ perception showed above.

The most contrary finding is observed in the *conventionality* characteristic. It is perceived as the least common and least harmful by the participants, but the multiple regression
analysis revealed that it did affect the creative performance the most. Another less
vigorous but equally important finding is observed in the *hierarchic* pair, of which the
participants found most common in the HKPF but only ranked third for its hindrance,
whilst the analysis here indicated it is another factor that influence creative performance.

Table 8. Multiple regression analysis of the 5 pairs of cultural characteristics that hinder
creativity and exist in work as predictor of creative performance.

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>WKCT $\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformity as hindrance</td>
<td>.010</td>
<td>-.014</td>
</tr>
<tr>
<td>Conformity in work</td>
<td>.055</td>
<td></td>
</tr>
<tr>
<td>Conventionality as hindrance</td>
<td>-.218*</td>
<td>.039*</td>
</tr>
<tr>
<td>Conventionality in work</td>
<td>.178</td>
<td></td>
</tr>
<tr>
<td>Face-conscious as hindrance</td>
<td>-.089</td>
<td>.000</td>
</tr>
<tr>
<td>Face-conscious in work</td>
<td>-.063</td>
<td></td>
</tr>
<tr>
<td>Hierarchic as hindrance</td>
<td>-.210*</td>
<td>.038*</td>
</tr>
<tr>
<td>Hierarchic in work</td>
<td>.219*</td>
<td></td>
</tr>
<tr>
<td>Stability as hindrance</td>
<td>.022</td>
<td>-.015</td>
</tr>
<tr>
<td>Stability in work</td>
<td>-.053</td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
5.2 Demographic Comparison

T-test and one-way ANOVA were used to compare the creative variables of personality characteristics, context, degree of hindrance that culture plays on creativeness, and cultural factors that exist in the working environment as well as the WKCT scores among the six demographic variables, namely, gender, age, education level, rank, and job nature of participants.

5.2.1 Gender

T-test was used to compare the creative variables between gender, and the results are showed in Table 9. Among the others, significant difference between male officer (N = 78, M = 3.71, SD = 1.229) and female officer (N = 39, M = 3.15, SD = 1.113) was only observed in the hindrance variable face consciousness \( t = 2.357, p < .05 \), showing that male officers perceived that the face consciousness culture being more harmful to creativity than the female officers.
<table>
<thead>
<tr>
<th>Personality Characteristics</th>
<th>Male Mean</th>
<th>SD</th>
<th>Female Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT</td>
<td>17.45</td>
<td>2.062</td>
<td>17.67</td>
<td>2.017</td>
<td>-.528</td>
</tr>
<tr>
<td>Diversity</td>
<td>17.70</td>
<td>2.090</td>
<td>18.03</td>
<td>1.993</td>
<td>-.802</td>
</tr>
<tr>
<td>LOC</td>
<td>16.05</td>
<td>2.795</td>
<td>15.67</td>
<td>2.506</td>
<td>.725</td>
</tr>
<tr>
<td>Novelty</td>
<td>16.11</td>
<td>2.030</td>
<td>16.42</td>
<td>2.309</td>
<td>-.747</td>
</tr>
<tr>
<td>Self Acceptance</td>
<td>32.20</td>
<td>3.250</td>
<td>32.56</td>
<td>2.315</td>
<td>-.627</td>
</tr>
</tbody>
</table>

| Context                     |           |    |             |    |         |
| Supervisory Encouragement   | 21.39     | 4.531 | 20.56       | 4.650 | .919    |
| Work Group Coherence        | 23.65     | 5.007 | 23.61       | 4.768 | .045    |

<table>
<thead>
<tr>
<th>Cultural Characteristics Hindering Creativity</th>
<th>Male Mean</th>
<th>SD</th>
<th>Female Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformity</td>
<td>3.47</td>
<td>1.125</td>
<td>3.36</td>
<td>.959</td>
<td>.548</td>
</tr>
<tr>
<td>Conventionality</td>
<td>3.60</td>
<td>1.121</td>
<td>3.36</td>
<td>.903</td>
<td>1.179</td>
</tr>
<tr>
<td>Face consciousness</td>
<td>3.71</td>
<td>1.229</td>
<td>3.15</td>
<td>1.113</td>
<td>2.357*</td>
</tr>
<tr>
<td>Hierarchic</td>
<td>3.65</td>
<td>.991</td>
<td>3.74</td>
<td>.966</td>
<td>-.466</td>
</tr>
<tr>
<td>Stability</td>
<td>3.06</td>
<td>.858</td>
<td>3.03</td>
<td>.707</td>
<td>.242</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Characteristics Exist in HKPF</th>
<th>Male Mean</th>
<th>SD</th>
<th>Female Mean</th>
<th>SD</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conformity</td>
<td>2.73</td>
<td>.801</td>
<td>2.72</td>
<td>.615</td>
<td>.057</td>
</tr>
<tr>
<td>Conventionality</td>
<td>2.53</td>
<td>.788</td>
<td>2.53</td>
<td>.762</td>
<td>.040</td>
</tr>
<tr>
<td>Face consciousness</td>
<td>2.73</td>
<td>.898</td>
<td>2.51</td>
<td>.961</td>
<td>1.163</td>
</tr>
<tr>
<td>Hierarchic</td>
<td>3.13</td>
<td>.864</td>
<td>2.97</td>
<td>.833</td>
<td>.918</td>
</tr>
<tr>
<td>Stability</td>
<td>26.2</td>
<td>.844</td>
<td>2.42</td>
<td>.770</td>
<td>1.247</td>
</tr>
</tbody>
</table>

| Creative Performance                         |           |    |             |    |         |
| WKCT                                         | 31.31     | 23.771 | 33.72       | 17.048 | -.564   |

*p < .05

5.2.2 Age

One-way ANOVA was used to compare the creative variables between the four age groups.

As the age group ’51 or above’ comprised of only 5 participants, this age group was eliminated from the analysis. The result is showed in Table 10, which reveals that none of
the between age group difference is significant.

Table 10. Age difference on creative variables

<table>
<thead>
<tr>
<th></th>
<th>21-30</th>
<th></th>
<th>31-40</th>
<th></th>
<th>41-50</th>
<th></th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td><strong>Personality characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DT</td>
<td>12.58</td>
<td>1.929</td>
<td>12.47</td>
<td>2.122</td>
<td>12.33</td>
<td>2.087</td>
<td>.092</td>
</tr>
<tr>
<td>Diversity</td>
<td>11.92</td>
<td>2.353</td>
<td>12.10</td>
<td>1.982</td>
<td>12.22</td>
<td>2.054</td>
<td>.121</td>
</tr>
<tr>
<td>LOC</td>
<td>14.67</td>
<td>2.774</td>
<td>14.16</td>
<td>2.809</td>
<td>14.15</td>
<td>2.526</td>
<td>.196</td>
</tr>
<tr>
<td>Novelty</td>
<td>13.33</td>
<td>2.015</td>
<td>13.59</td>
<td>2.179</td>
<td>14.04</td>
<td>2.043</td>
<td>.828</td>
</tr>
<tr>
<td>Self Accept.</td>
<td>22.75</td>
<td>3.769</td>
<td>22.04</td>
<td>3.000</td>
<td>21.46</td>
<td>2.767</td>
<td>1.054</td>
</tr>
<tr>
<td><strong>Context</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Super. Encg.</td>
<td>22.25</td>
<td>4.413</td>
<td>2.012</td>
<td>4.592</td>
<td>22.04</td>
<td>4.363</td>
<td>2.653</td>
</tr>
<tr>
<td>Wk Gp Coh.</td>
<td>25.42</td>
<td>2.539</td>
<td>22.88</td>
<td>5.619</td>
<td>24.04</td>
<td>4.429</td>
<td>1.568</td>
</tr>
<tr>
<td><strong>Cultural Characteristics Hindering Creativity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conformity</td>
<td>2.92</td>
<td>1.240</td>
<td>3.50</td>
<td>1.035</td>
<td>3.49</td>
<td>1.043</td>
<td>1.590</td>
</tr>
<tr>
<td>Conventionality</td>
<td>3.17</td>
<td>.937</td>
<td>3.56</td>
<td>1.053</td>
<td>3.45</td>
<td>1.100</td>
<td>.677</td>
</tr>
<tr>
<td>Face consciousness</td>
<td>3.83</td>
<td>1.115</td>
<td>3.54</td>
<td>1.110</td>
<td>3.37</td>
<td>1.334</td>
<td>.770</td>
</tr>
<tr>
<td>Hierarchic</td>
<td>3.75</td>
<td>.866</td>
<td>3.74</td>
<td>.965</td>
<td>3.69</td>
<td>.962</td>
<td>.035</td>
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<td>21.611</td>
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<td>24.802</td>
<td>.692</td>
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5.2.3 Education

One-way ANOVA was conducted to explore whether there is any difference in the creative variables among participants of different education attainment. The group of ‘postgraduate
cert/ diploma’ (N = 3) was eliminated due to small sample size. The result is showed in Table 11.

Significant difference is observed in diversity (F(3, 111) = 3.012, p < .05). Post hoc Turkey HSD test (Turkey HSD was used for post hoc test in the remaining analysis unless specified) was unable to find significant between-group difference on diversity within the four educational attainment groups. LSD test was conducted and showed that the ‘secondary or below’ group scored significantly lower than the ‘cert/diploma’ group and the ‘university graduate’ group on this personality characteristic.

The second significant difference is observed in locus of control (F(3, 111) = 3.669, p < .05). Turkey HSD detected significant difference in the ‘secondary or below’ group and ‘university graduate’ group on locus of control, that the former tends to be more internally oriented.

The third significant difference is found in novelty (F(3, 109) = 3.973, p = .01), and the ‘secondary or below’ group is found to have a lower novelty rating than the ‘cert/diploma’ group.
Also, there is significant difference in *conformity in working environment* \( (F(3, \ 112) = 2.801, p < .05) \), and the ‘secondary or below’ group experienced more *conformity in the working environment* than the ‘master’ group.

The most important finding is observed in the *WKCT score* \( (F(3, \ 112) = 6.725, p < .01) \). The ‘secondary or below’ group scored highly and significantly lower than the ‘university graduate’ group and the ‘master’ group. The ‘second or below’ group also scored lower than the ‘cert/diploma’ group but the difference is insignificant. In other words, officers in the lowest education group scored the lowest in the *WKCT*. 
Table 11. Educational difference on creative variables.

<table>
<thead>
<tr>
<th></th>
<th>Secondary / below</th>
<th>Cert / Diploma</th>
<th>University Graduate</th>
<th>Master Degree</th>
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<td>Mean</td>
<td>SD</td>
<td>Mean</td>
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</tr>
<tr>
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<td>17.71</td>
<td>2.053</td>
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<td>32.00</td>
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<td></td>
</tr>
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<td><strong>Cultural characteristics hindering creativity</strong></td>
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<tr>
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<td>3.27</td>
<td>.767</td>
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<tr>
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</table>

*p < .05, **p < .01

5.2.4 Rank

In the HKPF hierarchic structure, the higher the rank, the lesser the number of officers.

Therefore, it is not surprising that in this study, there are only seven participants who are
superintendents or above. However, such a small number may not be optimal for statistical analysis, thus the comparison between groups was conducted with the ‘superintendent or above’ group (N = 7) eliminated.

One-way ANOVA was conducted in attempt to find whether there is any difference in the creative variables among participants of different ranks categorized as ‘Police Constable’, ‘Sergeant / Station Sergeant’, and ‘Inspector’. The result is showed in Table 12.

Significant difference is found in locus of control \( F(2, 109) = 7.227, p < .01 \). Post hoc test revealed that the ‘Police Constable’ group tends to be more internally oriented than the ‘Inspector’ group.

Secondly, there is significant difference in self acceptance \( F(2, 108) = 4.384, p < .05 \), and the ‘Police Constable’ group has less self-acceptance than the ‘Sergeant / Station Sergeant’ group.

Thirdly, result in conventionality as hindrance of creativity \( F(2, 110) = 5.242, p < .01 \) is found significant, in which the ‘Sergeant / Station Sergeant’ group rated it higher than both the ‘Inspector’ and ‘Police Constable’ groups.
For *face-consciousness as hindrance of creativity* ($F(2, 110) = 7.171, p < .01$), both the ‘Police Constable’ group and the ‘Sergeant / Station Sergeant’ groups regarded *face-consciousness* more harmful to creativity than the ‘Inspector’ group.

Fifthly, significant difference is observed in *stability as hindrance of creativity* ($F(2, 110) = 5.247, p < .01$) as well as in *stability in working environment* ($F(2, 110) = 3.928, p < .05$).

In both variables, the ‘Sergeant / Station Sergeant’ group gave a higher rating than the ‘Inspector’ group.

The last but obviously not the least, both the ‘Police Constable’ group and the ‘Sergeant / Station Sergeant’ groups scored significantly lower than the ‘Inspector’ group in the *WKCT* ($F(2, 110) = 12.444, p < .01$), and the ‘Sergeant/Station Sergeant’ group scored the lowest among the three groups.
### Table 12. Rank difference in creative variables.

<table>
<thead>
<tr>
<th></th>
<th>Police Constable</th>
<th>Sergeant / Station Sergeant</th>
<th>Inspector</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>F-value</th>
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<tr>
<td>Coh.</td>
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<td>.763</td>
<td>.825</td>
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</table>

*p < .05, **p < .01

### 5.2.5 Job Nature

One-way ANOVA was used to explore the difference on the creative variables among the
seven job nature groups, namely ‘operational’, ‘investigation’, ‘administrative’, ‘publicity’, 
‘information technology’, ‘training’, and ‘others’. However, due to small sample size on 
the ‘publicity’ group (N = 2) and the ‘others’ group (N = 7), the analysis was conducted 
without these two groups, and the results are shown in Table 13.

The only significant difference was observed on supervisory encouragement. Post hoc 
Turkey HSD test revealed no significant result. LSD test found that the ‘operational’ group 
experienced higher supervisory encouragement than the ‘investigation’ group and the 
‘administrative’ group, whilst the ‘training’ group also experience higher supervisory 
encouragement than the groups of ‘investigation’, ‘administrative’, and ‘information 
technology’. Although the ‘training’ group was statistically higher than the ‘operational’ 
group on getting supervisory encouragement, the difference was found to be insignificant.
Table 13. Job nature difference on the creative variables.

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<th>Operational</th>
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<th>Training</th>
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<td>3.15</td>
<td>.82</td>
<td>3.30</td>
<td>.72</td>
<td>14.41</td>
</tr>
<tr>
<td>Stability</td>
<td>8.21</td>
<td>23.05</td>
<td>2.58</td>
<td>.86</td>
<td>8.29</td>
</tr>
<tr>
<td><strong>Creative Performance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WKCT</td>
<td>28.21</td>
<td>20.50</td>
<td>35.48</td>
<td>24.86</td>
<td>37.12</td>
</tr>
</tbody>
</table>

*p<.05

5.2.6 Further analysis on Education, Rank, and Creative Performance
The statistic shows that there was significant difference in the education attainment groups and the rank group on creative performance. Given that promotion in the HKPF to higher rank required education advancement, Pearson correlation test was conducted to determine if there is any relationship between education level, rank, and creative performance, and the result is showed in Table 14. It was found that the three variables are highly significantly correlated with each others. Education attainment is highly correlated with rank ($r = .555$, $p < .01$), and has a medium correlation with WKCT ($r = .362$, $p < .01$); whilst rank also has a medium correlation with WKCT ($r = .297$, $p < .01$).

Table 14. Correlation between education, rank, and creative performance.

<table>
<thead>
<tr>
<th></th>
<th>Education</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>.555**</td>
<td></td>
</tr>
<tr>
<td>WKCT</td>
<td>.362**</td>
<td>.297**</td>
</tr>
</tbody>
</table>

**$p < .01$**

Multiple regression analysis has been conducted to determine if education attainment and rank can predict creative performance, and the result is showed in Table 15. Education alone significantly predicted creative performance and can explained 12.4% of the estimated variance, whilst rank alone is also a significant predictor of creative performance which can explained 8.1% of the estimated variance. Most importantly, the two factors together become the most promising predictor of creative performance in this study, which explained 13% of the estimated variance.
Table 15. Multiple regression analysis on education and rank as predictor of creative performance.

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>WKCT $\beta$</th>
<th>$R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>.362</td>
<td>.124**</td>
</tr>
<tr>
<td>Rank</td>
<td>.297</td>
<td>.081**</td>
</tr>
<tr>
<td>Education and Rank</td>
<td>.286**</td>
<td>.130**</td>
</tr>
<tr>
<td></td>
<td>.137</td>
<td></td>
</tr>
</tbody>
</table>

**$p < .01$**
6. Discussion

The discussion will first illustrate the findings between the creative performance as measured by the WKCT and the tested variables in the dimensions of personality, context and organizational culture. Implications on creativity of Chinese people as well as the psychological process based on the findings will also be discussed. In the second part, the relationship of demographic data and creative performance will be discussed, which highlight the cognitive process of police officers in the HKPF as well as the need for creative training.

6.1 Creative Personality and Creative Performance

First of all, concerning the creative personality characteristics, the only significant correlation was found between divergent thinking and creative performance as measured by the verbal-alternate form of WKCT. This significant correlation is not unexpected, as the WKCT is suggested by many authors to be a test battery to measure creative potential by means of the ability for divergent thinking (e.g. Cheung et al., 2004; Cheung et al., 2003; Runco & Albert, 1985).

Although correlations between the other four personality characteristics and creative performance as measured by WKCT are insignificant, diversity, novelty, and
self-acceptance are strongly correlated with divergent thinking less locus of control, which at least shed a light that the four correlated personality characteristics have some bearing on creative performance, and also reinstated the literature that these personality dispositions may be inter-related. However, the findings failed to duplicate previous studies conducted on the Chinese respondents, in which they perceived that creativity is related to novelty, self confidence, and diversity (e.g. Rodowicz & Hui, 1997; Rudowicz & Yue, 2002).

On the other hand, regression analysis showed that even though there is significant correlation between the WKCT score and divergent thinking, but the disposition only explains very limited part of creative performance. There are two possible explanations for this result. Firstly, some unidentified personality characteristics actually play a role on creativity. Indeed, the five personality characteristics are identified based on previous research that mostly conducted in the West, thus as many cross-cultural psychologists have pointed out, such creative personality characteristics observed in the West may not be as crucial to creativity in the East (e.g. Geschka, 1993; Li, 1997; Niu & Sternberg, 2002; Rudowicz & Yue, 2002; Weiner, 2000). Research to identify the creative personality traits in the East has just started. In fact, enquiry with the developer of the indigenous CPAI-2 scale revealed that this study is the first one to adopt the five personality sub-scales for
The second explanation on the limited correlation between personality and creative performance is simply that personality only plays a very peripheral part on creative performance, and it is the other dimensions that determine creativity of police officers. In the later part, some of these dimensions, which are included in the study, will be discussed.

Apart, it is in doubt whether WKCT can only measures the divergent thinking ability. A finding concerning education attainment may give a clue to the question. Result shows that educational level does not have significant correlation with divergent thinking, but it does with WKCT. This suggests that WKCT measures divergent thinking ability as a function of creativity but not necessarily a sole test for divergent thinking. The non-parallel findings that there is positive correlation among the four personality characteristics, excluding LOC, but insignificant correlation between three of these four characteristics and creative performance is therefore suggested to be due to several reasons, including the relative small sample size against the variables, the dichotomous scale of CPAI-2, and the cultural influence of central tendency of Chinese when filling up the research on creativity. Given time, a fuller picture on the creative personality traits in Chinese will be constructed.
questionnaire. These issues will be further illustrated in the latter part of the section.

6.2 Creative Context and Creative Performance

For the contextual variables, only work group coherence, but not supervisory encouragement, is correlated to WKCT score. Even so, work group coherence can only explain very limited part (3.6%) of WKCT. Even when multiple regression analysis revealed both supervisory encouragement and work group coherence together is a better predictor of creative performance, they can only explain 5.3% of the creative performance. Similar queries are thus raised, including whether there is any other contextual factors influencing creative performance, or if the contextual factors do play important part on creative performance.

The personality & contextual variables are identified based on the past research that mostly conducted in the West. However, given the largely insignificant result, it is suggested that the factors influencing creativity of HKPF members may be indigenous either to the HKPF or the Chinese culture that may not be the same as those in the West.

6.3 Cultural Influence on Creative Performance

The third set of variables deal with the organizational culture in the HKPF. The five
cultural characteristics are found to be inter-correlated which corroborated with the previous literature as reviewed. The scores of the five cultural characteristics that hindering creativity and the cultural characteristics that exist in the working environment scored above the ‘no effect’ category, it is confirmed that the police officers agreed that the five characteristics, which exist in the HKPF, do adversely affect their creativity. However, a belief is often different from the fact, as in this study, although the variables hindering creativity are positively correlated with their existence except for the stability aspect, none of the ten variables form a significant correlation with the creative performance.

One explanation for the findings may be the inadequate sample size, but I suggested that simply having the belief that the characteristics exist in the organization, or that they hinder one’s creativity, does not affect the overall creative performance of the police officers. With further analysis of the finding that the hierarchic and conventionality variables are significant predictors of creative performance if the individuals think that they hinder creativity and at the same time exist in the organization, there is some evidence to show that the creative performance are influenced if and only if the cultural factors are perceived to be both existing and detrimental to creativity. In other words, individuals’ creativity will be influenced by the culture through their cognitive process which forms the perception on the cultural characteristics.
Causal relationship was only observed in the hierarchic and conventionality variables but not the conformity, face-consciousness, and stability. Indeed, conformity and stability are typical characteristics in the Hong Kong Government departments such as the HKPF. To apply for a post in the HKPF suggest that the individuals have the tendency or willingness to conform and pursue for stability. However, such tendency may not necessarily mean that these people lack the potential and ability to be creative. The effect of face-consciousness may have limited in the HKPF, since no matter how an individual is cautious about face and how superior he/she hope to project oneself as a crime fighter idol, one is bound by the law and procedure and the mission of HKPF to serve the community.

One of the most interesting findings is the discrepancy between individuals’ perception and the actual creative performance in relation to the cultural characteristics. Participants opined that the conventionality culture is the least common in the working environment and affects their creativity the least; and for the hierarchic culture, though it is most common in the workplace, they only rated it as an average hindering factor. However, their WKCT scores show the contrary, that the perceived existence and hindrance of these two culture factors do have an adverse effect on their creative performance. In other words, what they perceived as of minimal influence does play an influential role on their
creativity. This finding is alarming, as many previous research on creativity (e.g.
Rudowicz & Hui, 1997; Rice, 2006) made conclusions based on the respondents”
perception and opinion on their creativity instead of their actual creativity. By obtaining
respondents’ opinion as well as measuring their creative performance, the evidence here
has proved that the perception and the actual creativity may have discrepancy. Caution
should therefore be required in considering the validity of similar studies.

The influence of the hierarchic and conventionality characteristics, though relatively
limited, seems to be related to the day to day experience and interaction with the
management of the organization. That one have to seek approval from rank to rank and
from one department to another, with creative idea being critically evaluated and
considered by traditional bureaucracy, is suggested to create great challenge for police
officers to perform creatively.

6.4 Demographic Data

Following the above discussion about the tested variables, implications derived from the
demographic statistics is presented in the remaining paragraphs. During the examination
on the demographic data, the most prominent findings are observed on educational
attainment and rank. Participants with lower education background are less diversify and
novel, more internally oriented, and have a lower creative performance. The first three
personality characteristics tend to relate to background and environment surrounding them.
With lower education, their exposure to the world, and hence the variety and depth of
knowledge, skills and experience acquired seem to be limited. As discussed earlier, many
researchers maintained that creativity involved multi-components including expertise and
past experience (e.g. Amabile, 1983; Csikszentmihalyi, 1988; Sternberg & Lubart, 1996;
Wisberg, 1993). It is thus not difficult to understand why they scored relatively low in the
WKCT.

Apart, their ratings on the existence of conformity characteristics in the HKPF are the
highest. Considering that low education attainment is an obstacle in promotion in the
HKPF, which implies that members of lower education would be likely to remain in lower
ranks, it is originally postulated that this group of lower-educated participants may be of
lower ranks which result to their high rating on the existence of conformity.

However, analysis revealed that the difference in the same variable among ranks is
insignificant. As the variable of the existence of conformity is a perceptual opinion,
whether the perception is formed up through the psychological process, triggered by the
low education background, has yet to be ascertained.
Despite that the level of rank and that of education may have a positive relationship, the two factors should not be regarded as confounding. Evidence can be obtained by comparing the variables with significant difference with education as a function against those with rank as a function. Except for the locus of control variable, there is no overlapping finding. In the education group comparison, diversity, novelty and conformity existence are significantly different. In the rank group comparison, self-acceptance, hindering variables including conventionality, face-consciousness, and stability, and the existence of stability in the HKPF are significantly different.

Nevertheless, education and rank together showed to be the best predictor of creative performance in this study, which explained 13% of the estimated variance. Whether this implied that knowledge obtained through education and exposure acquired by the rank status is more essential than personality, context, and culture for creative performance has to be further explored.

Another possibility is that the education attainment and rank cause influence on the cognitive process, such as the self-fulfilling prophecy, which in turn affects the creative performance has yet to be ascertained. Although this is only a speculation, the fact that the police constables, who comprised the lowest rank in the organization and are often
low-educated, are less self-accepted than the other ranks, has inferred the influence of rank on self-concept which possibly reduce their motivation for creative thinking and performance.

The Sergeant and Station Sergeant ranks were found to constitute the main difference in three culture characteristics that hinder creativity, namely conventionality, face-consciousness, and stability, yet interesting enough, there is no significant difference on the existence of the above characteristics among ranks. Before proposing an explanation, some background information concerning the role and characteristics of the Sergeant and Station Sergeant ranks should be attended to. Police Constable, Sergeant, and Station Sergeant form up a segment of manpower officially known as the “Junior Police Officer” (JPO). Their main duty is restricted to the execution of decision made by another segment, the management group, which included totally nine ranks of Inspectors, Superintendents and Commissioners. Within the hierarchy, Sergeants and Station Sergeants are all promoted from Police Constables and play a supervisory role on their lower ranks.

With this background, it is not difficult to rely the people in the Sergeant and Station Sergeant ranks to these three variables. Given their duty to be execution of orders, their
supervisory role, seniority, as well as the years of service, the three cultural characteristics
c冬奥版, 面貌, 和 老板级别 中文

conventionality, face-consciousness, and stability are indeed typically found in people of

their ranks. As mentioned, the interesting part remains on the insignificant result of the

existence of these characteristics in the HKPF. One explanation may be that they are well

aware that they are being perceived by others of having such culture, but do not agree

themselves actually being so, yet another explanation may be related to the projection

mechanism (Freud, 1924). Further research has to be conducted on their psychological

process before a conclusion can be obtained.

On the other hand, the findings concerning locus of control tends to contradict much

pervious research which suggested the construct is related to creativity. In this study, the

two significant findings in locus of control are observed in education and rank, in which

the low-educated officers, who tend to be more internally oriented, are found to have the

lowest creative performance; and the Police Constables, who are found to have more

internal locus of control, also scored significantly lower than the Police Inspectors. The

findings in this study, which may have reflected the unique characteristics of the police

officers in Hong Kong, has added supporting evidence to the limited volume of literature

which has cast doubt on the positive relationship between internal orientation and

creativity.
The HKPF has a wide variety of jobs with very different nature. In order to achieve a satisfactory result, more creativity may be required when working in some fields, such as criminal investigation, than some others fields, such as administration work. Even though all police officers are entitled for job rotation in different work fields, it is originally speculated that the creative performance of individuals should be varied in accordance to their job nature. However, the insignificant result on the creative variables and creative performance with job nature as a function in this study fail to support the speculation.

One explanation to the findings is that police officers are equally creative no matter what kind of job nature they are working on, whilst this statement has to be verified further using the observer method or analysis on the appraisals of the officers. The second explanation is that even though they work in different fields which required varying experience, skills, and ability, all police officers are work under the same roof of the HKPF and difference in job environment is slim. Indeed, this possibility explains the very limited difference on creative variables and performance with various demographic factors as function.

Another alternative explanation points to the level of creativeness of police officers and
importance of creativity in some of the work fields. For any organization, the best deployment must be to match employee of different levels of creative potential to the jobs having different creative demand. However, result in this study has showed that in the HKPF, human resource in terms of creative potential is not best-fitted with the job nature. In other words, police officers of average creativity may be working in posts that actually demand for creativeness, and officers with high creativity may not be identified to apply his ability to the jobs that suit them best.

In today’s HKPF, there is no scientific and objective assessment on officers’ creativity or the ability requirement of job nature, thus such possibility of manpower displacement cannot be eliminated. Recognizing the difficulties and cost for such kind of assessments, it is suggested that training should be given to police officers, especially those who are currently working in fields that require creativeness. Also, officers should be arranged to rotate to different work fields in order to widen their horizon and empower their potential for thinking divergently and diversely, so as to step up the general awareness and ability of creativity. Further, it is suggested that resource should be allocated in the recruitment of new police officers, so that creative people can be identified and trained to prepare for the future increasing challenge and demand from the public for a professional public service.
6.5 Issues on the Insignificant Findings

Concerning the largely insignificant findings in this study, one possible explanation which has been mentioned in the previous part, is that despite the probable variation in individual’s personality and context, the participants all work in the same organization with similar overall culture and environment. An alternative explanation remains in the manner of completing the questionnaires. The questionnaire consists of three types of measurement. The CPAI-2 adopted a dichotomous scale and participants are to give ‘yes’ or ‘no’ answer. The items can be easily understood but also makes a disadvantage of the ease for the respondents to ‘fake good’. In addition, such scale is suggested to be less powerful than the Likert scale in differentiating participants’ preferences, resulting in the confusing data in many dimensions in the study.

To add, the locus of control subscale of the CPAI-2 measures the dipolar of the construct of locus of control with the basic assumption the construct is a continuum from the internal orientation to external orientation. However, it is suggested that the subscale is unable to differentiate between the high and low scorers in the internal orientation, as well as that in the external orientation. It is thus difficult to interpret participants’ attribution for the success and failure in their work and life.
For the other scales, the KEYS and the self-devised measure on cultural characteristics are Likert scales, and the writer suggested that participants might have a central tendency (Albaum, 1997; Bardo & Yeager, 1982; Bardo, Yeager, & Klingsporn, 1982) in choosing the preference. In fact, Yu, Albaum, & Swenson (2003) has found that the Hong Kong people have a higher tendency for such central tendency in filling in questionnaire. It is suggested that the participants were reluctant to give extreme scores and as a result, many of the dimensions are found statistically insignificant and even for the significant findings, many data is confusing and no trend can be observed across the demographic statistics.
7. Limitation and Future Direction

Limitation of this study included the relatively small sample size in examining the numerous variables as mentioned already, and the uncontrolled setting in filling up the questionnaire. This affects the preciseness of the WKCT which required participants to complete with time limit. Since the participants filled the questionnaire on their own time and place, some of them may take as long time as they could no longer think of any usage of the knife and newspaper, whilst some others might be too busy and stopped filling up even though they have plenty of ideas.

In addition, the inappropriateness to call for more kinds of creative assessment which test other creativity dimensions had limited the definition of creative performance variable in the study. The WKCT, which mainly measure the divergent thinking ability, may not be able to provide sufficient evidence for measuring the overall creative performance, despite its popularity usage in many studies. For future research, attempt should be made to deployed creativity tests which measure different constructs of creativity to obtain a better picture.

On the other hand, it has already been mentioned in the above part that the findings might have been affected by the scaling of the inventories adopted. Although there is some
previous literature to support the postulation, the study could not determine if the fake
good tendency and central tendency did happen to the participants. In fact, to concretely
prove if one does have the above tendencies may not be an easier job in many studies.
Therefore, it is suggested that some strategies should be implemented to avoid such
situation, which include the use of forced-choice method (Hogan, 2003), and the two-stage
scale which split the item also into two questions as the forced-choice method, but the first
question addressed the direction dimension of attitude and the second one measured the
amount dimension (Sykes & Collins, 1988; Yu, Albaum, & Swenson, 2003).

Furthermore, this study attempts to compare the difference in the numerous creative
variables and creative performance among police officers of the HKPF, but how does the
police perform as comparing with other occupations has yet to ascertained. As mentioned
in the earlier part, I have tried to search for relevant research investigating creativity of
other disciplinary forces, and it is found that there is a lacking of the literature, not even
study on other government departments, both locally and in overseas. If it is the
government or the organization management who think that creativity is not important in
the organization, they may have to open themselves to the society and beware of
importance of creativity to both the employee performance in their day to day operation
and the organizational achievement as a whole. Further study should be conducted in other
disciplinary force or government departments for making comparison, both locally and in
overseas.

To sum, research in new cultural settings can benefit our understanding of universal trends
and culture specific variations in people’s perceptions, concepts, and behaviors, as well as
to bring balance to the main stream psychological studies, mainly North American data
(Rudowicz & Hui, 1997). Nevertheless, research on the creativity in the East, particularly
on creative personality and creative process, is still at a very initial stage.

After all, there is an overwhelming agreement between psychologists, that simply
adopting all the concepts developed within one society into other communities may result
in an incomplete or distorted understanding of people from other cultures. In fact, people’s
views on the creative characteristics and who is creative are based on the standards
existing in the social and cultural domains in which they are living with (Rudowicz & Yue,
2002).

Csikszentmihalyi (1999) has also suggested that creative persons are characterized not so
much by single traits, as by their ability to operate through the entire spectrum of
personality dimensions as situation demands. Creativity cannot be recognized except as it
operates within a system of cultural rules, and it cannot bring forth anything new unless it can enlist the support of peers. This statement is especially valid for the people in the East, who are situation-dependent and interdependent. Further studies have to be made to gather data from the different people and walks of life in the East in order to ascertain the universal and indigenous factors and process of creativity.
8. Reference


Bond, M. H., & Hwang, K. (1986). The social psychology of Chinese people. In M. H. Bond (Ed.), *The psychology of the Chinese People* (pp. 213-266). Hong Kong: Oxford University Press.


Creativity in Hong Kong Police


the Chinese Personality Assessment Inventory and the Minnesota Multiphasic Personality Inventory-2: Preliminary findings with a normative sample. *Journal of Personality Assessment, 82*, 92-103.


Conti, R., & Amabile, T. M. (1999). The impact of downsizing on organizational creativity


Creativity in Hong Kong Police


Hong Kong Police Force. *Police General Order*, Ch.6, Conduct and Discipline.


Creativity in Hong Kong Police 134


Random selection tool in: [http://www.randomizer.org/form.htm](http://www.randomizer.org/form.htm)


Redding, G., & Wong, G. Y. Y. (1986). The psychology of Chinese organizational behavior. In M. H. Bond (Ed.), The psychology of the Chinese People (pp. 267-296). Hong Kong: Oxford University Press.


Sundgren, M., Selart, M., Ingelgård, A., & Bengtson, C. Dialogue-Based evaluation as a creative climate indicator: Evidence from the pharmaceutical industry. *Creativity and Innovation Management, 14*(1), 84-98.


Appendix A   Psychology Questionnaire

This questionnaire is used for a psychology research in fulfillment of the Postgraduate Diploma of Psychology of the City University of Hong Kong. All the data obtained will be kept strictly confidential and used solely for research purpose.

Please do not discuss with others when you are filling the questionnaire. Your choice solely reflect individual views, but does not imply right or wrong.

This questionnaire could be completed in 35 minutes. Please complete the questionnaire within the instructed time by pencil, and return to the writer before 21st November 2006 (Tue). Thank you!

To: SIP CHAN Sin-nga, Teresa

Police Public Relations Branch
Date: ________________

Part I

A. The following 48 sentences describe how people view matters. Please consider each item and decide if the content correctly describe you. If it does, please circle True (T) answer. If not, circle False (F) answer.

T = True        F = False

1. I usually look down and dare not look people in the eye. T F
2. I feel I have no control over my future. T F
3. I would like to get to know people from different ethnic backgrounds. T F
4. I appreciate different types of music. T F
5. I always feel as if I sort of did something wrong. T F
6. I seldom do adventurous activities to avoid getting hurt. T F
7. I am not very interested in things unrelated to my job. T F
8. I am afraid of trying new things. T F
9. I would not spend time learning knowledge outside my profession. T F
10. I feel excited when facing new challenges. T F
11. I can easily link up ideas that appear unrelated. T F
12. I have many new and creative ideas. T F
13. I feel I have suffered so many grievances but can turn to nowhere to complain. T F
14. I feel enthusiastic about things and like to try new things. T F
15. I like exploring for new methods in order to arrive at a breakthrough. T F
16. I always examine a particular issue from many different angles. T F
17. Even if I have already made a choice, I would easily regret and reverse it. T F
18. I am confident in my ability to accomplish something, even though I have not done it before. T F
19. I often ask “why” questions. T F
20. I am very curious about things that are ambiguous or uncertain. T F
21. I seldom leave what I have started unfinished, and I will not give up even when I encounter obstacles. T F
22. I would rather maintain my present lifestyle, since changes do not always bring improvements.  
   T   F
23. I am active in learning new things.  
   T   F
24. I do not like thinking about the meaning of life.  
   T   F
25. I seldom think from other peoples’ point of views in order to understand them.  
   T   F
26. It is unlikely for a person to become a successful leader without being given the right opportunity.  
   T   F
27. I have a lot of different interests.  
   T   F
28. After being criticized by others, I would hide myself from everyone for a while.  
   T   F
29. My decisions are easily changed due to others’ influence.  
   T   F
30. Only lucky people can find a good job.  
   T   F
31. It seems that no one understands me.  
   T   F
32. I believe that all things are predetermined in destiny.  
   T   F
33. I would drop what I was originally going to do, if others think that it is not worth doing.  
   T   F
34. I am willing to learn a sport that I have never tried before.  
   T   F
35. I believe matrimony is pre-determined in heaven.  
   T   F
36. Innovations and taking risks are necessary for improvements.  
   T   F
37. I believe I should always rely on my persistent hard work and not on luck.  
   T   F
38. I am very confident in my ability.  
   T   F
39. I do not like stable jobs; instead I like challenges.  
   T   F
40. I have no confidence in my future.  
   T   F
41. I have a keen sense of new things.  
   T   F
42. I often abandon what I am working on, because I feel I cannot do it myself.  
   T   F
43. I always look for inspiring experiences to stimulate my thinking.  
   T   F
44. I always give constructive suggestions to other people.  
   T   F
45. When I am at work, I always worry I will not be able to manage it.  
   T   F
46. Since world events are changing and unpredictable, it is unwise to make
   T   F
long-term plans.

47. I am always thinking and contemplating several issues at the same time. T F

48. Often I feel I have no control over what is happening to me. T F

49. My friends respect my opinion. T F

50. I feel that I am useless. T F

51. When I have to speak up, my mind would go blank, and I cannot think of anything. T F

52. I am often so indecisive that I have missed many opportunities and incurred losses. T F

53. Who will become the leader often depends on luck. T F

54. I like cooperating with different types of people. T F

55. Whether someone can be successful depends on his/her talent and hard work rather than on luck and opportunity. T F

56. I find it hard to think about a problem from many different angles. T F

57. I am interested in deep understanding of customs and habits of different places. T F

58. I find it very difficult to respond when others ask me for innovative ideas. T F

B. The following 16 sentences describe your impression or feeling of the current work environment. Please circle the number most represents your view.

1 = Never 2 = Sometimes 3 = Often 4 = Always

59. My co-workers and I make a good team. 1 2 3 4

60. My supervisor clearly sets overall goals for me. 1 2 3 4

61. There is a feeling of trust among the people I work with most closely. 1 2 3 4

62. Within my work group, we challenge each other’s ideas in a constructive way. 1 2 3 4

63. My supervisor has poor interpersonal skills. 1 2 3 4

64. People in my work group are open to new ideas. 1 2 3 4

65. My supervisor serves as a good work model. 1 2 3 4

66. In my work group, people are willing to help each other. 1 2 3 4
67. My supervisor plans poorly. 
68. There is a good blend of skills in my work group. 
69. My supervisor supports my work group within the organization. 
70. The people in my work group are committed to our work. 
71. My supervisor does not communicate well with our work group. 
72. There is free and open communication within my work group. 
73. My supervisor shows confidence in our work group. 
74. My supervisor is open to new ideas. 

C. The following five items describe circumstances that may cause effect on creativity. Please write the number most represents the degree of effect on your creativity when you face the following circumstances.

1 = Will increase my creativity   2 = Have no effect on my creativity
3 = Cause some hindrance on my creativity   4 = Quite hinder my creativity
5 = Seriously hinder my creativity

75. Conformity _____ 76. Stability-consciousness _____ 77. Hierarchic _____
78. Conventionality _____ 79. Face-consciousness _____

D. Please select the circumstances you face during your work (can choose more than one item). Write the number that most represents your view. Your choice solely reflect individual views, but does not imply right or wrong.

1 = Never   2 = Sometimes   3 = Often   4 = Always

80. Conformity _____ 81. Stability-consciousness _____ 82. Hierarchic _____
83. Conventionality _____ 84. Face-consciousness _____
**Part II**

E. List out the different ways you could use a “newspaper” and a “knife”. Please write as many as possible. You can write at the back of this paper if there is no enough space. Please complete **within 10 minutes**

<table>
<thead>
<tr>
<th>Usage of “newspaper”</th>
<th>Usage of “knife”</th>
</tr>
</thead>
<tbody>
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</table>
Part III

F. Please fill in personal data, and put a ‘✓’ in the suitable ‘☐’.

1 Gender :  ☐ Male   ☐ Female

2 Age:  ☐ 20 or under  ☐ 21-30  ☐ 31-40  ☐ 41-50  ☐ 51 or above

3 Educational Background (On-going or completed):
   ☐ Secondary or below  ☐ Certificate/diploma course  ☐ University graduate
   ☐ Master degree  ☐ Postgraduate certificate/diploma  ☐ Other: ________________

4 Marital status :  ☐ Single  ☐ Married  ☐ Married with ____ children
   ☐ Other __________

5 Years of service:  ☐ 1-5  ☐ 6-10  ☐ 11-15  ☐ 16-20  ☐ 20-25
   ☐ 26 or above

6 Rank :  ☐ Police Constable  ☐ Sergeant or Station Sergeant
   ☐ Inspector or Chief Inspector  ☐ Superintendent or above

7 Main job nature of existing post :
   ☐ Operational  ☐ Investigation  ☐ Administrative  ☐ Publicity
   ☐ Information technology  ☐ Training  ☐ Other: __________

The questionnaire is completed, thank you very much!
問卷調查

此問卷調查為作者於城市大學心理學深造文憑課程中研究課題，所收集之資料只作研究用途，並會保密。

填寫過程中，請不要與別人商量。你的選擇純粹反映個人的意見，它們無正確與錯誤之分。

請於指定時間內完成各題，並用鉛筆作答。問卷於三十五分鐘內可完成，並請於 2006 年 11 月 21 日（二）前交回以下人士。謝謝！

致: 陳倩雅高級督察

警察公共關係科
填寫日期: __________________

**第一部份**

一. 下面 48 句話描述了人們對事情的看法，請在每句話旁圈寫最能代表你感覺。若你覺得說得對，請圈《是》; 若你覺得說得不對，請圈《否》。你的選擇純粹反映個人的意見，它們無正確與錯誤之分。

<table>
<thead>
<tr>
<th>序號</th>
<th>句子</th>
<th>是</th>
<th>否</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>我經常低著頭，不敢正視別人。</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>我覺得無法把握自己的未來。</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>我有興趣結識不同種族的人。</td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td>我欣賞不同類型的音樂。</td>
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<tr>
<td>5</td>
<td>我總覺得自己好像做錯了什麼事似的。</td>
<td></td>
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<tr>
<td>6</td>
<td>我很少作冒險的活動，以避免受傷。</td>
<td></td>
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<tr>
<td>7</td>
<td>我沒有太大興趣去學習一些與我工作沒有直接關係的事物。</td>
<td></td>
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<tr>
<td>8</td>
<td>我害怕嘗試新的事物。</td>
<td></td>
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<tr>
<td>9</td>
<td>我不會花時間去學習一些自己本行以外的知識。</td>
<td></td>
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<tr>
<td>10</td>
<td>我遇到新挑戰時會感到興奮。</td>
<td></td>
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<tr>
<td>11</td>
<td>我很快便能將幾個看來無關的觀點貫連起來。</td>
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<tr>
<td>12</td>
<td>我有許多新奇的想法。</td>
<td></td>
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<tr>
<td>13</td>
<td>我覺得自己受了太多委屈，有冤無處訴。</td>
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<tr>
<td>14</td>
<td>對新事物，我總會投入很大的熱情去嘗試。</td>
<td></td>
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<tr>
<td>15</td>
<td>我喜歡尋找新方法，以求有所突破。</td>
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<tr>
<td>16</td>
<td>我常轉換不同的角度看同一件事情。</td>
<td></td>
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<tr>
<td>17</td>
<td>在作出某種選擇後，我總是很容易反悔。</td>
<td></td>
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<tr>
<td>18</td>
<td>即使我從未做過某件事，我也有信心可以做得很好。</td>
<td></td>
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<tr>
<td>19</td>
<td>我常常問“為什麼”。</td>
<td></td>
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<tr>
<td>20</td>
<td>我對於模糊或不確定的事物有強烈的好奇心。</td>
<td></td>
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<tr>
<td>21</td>
<td>我做事很少半途而廢，即使遇到困難也不會放棄。</td>
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<tr>
<td>22.</td>
<td>我寧可保持現在的生活方式不做改變，因為變化不一定能帶來改進。</td>
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<tr>
<td>23.</td>
<td>我積極學習新的事物。</td>
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<td>24.</td>
<td>我不喜歡思考生命的意義。</td>
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<tr>
<td>25.</td>
<td>我很少從別人的角度出發，去了解他們的想法。</td>
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<tr>
<td>26.</td>
<td>如果沒有合適的機緣，一個人很難成為成功的領導者。</td>
<td></td>
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<tr>
<td>27.</td>
<td>我有很多不同的興趣。</td>
<td></td>
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<tr>
<td>28.</td>
<td>受到別人指責或批評後，我會在一段時間內躲避他人。</td>
<td></td>
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<tr>
<td>29.</td>
<td>我很容易受別人的影響而改變決定。</td>
<td></td>
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<tr>
<td>30.</td>
<td>運氣好的人才能得到好工作。</td>
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<tr>
<td>31.</td>
<td>好像沒有人能理解我。</td>
<td></td>
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<tr>
<td>32.</td>
<td>我認爲，一切事物在冥冥之中都早有安排。</td>
<td></td>
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<tr>
<td>33.</td>
<td>我原本想做的事，假如有人認為不值得做，我便會放棄。</td>
<td></td>
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<tr>
<td>34.</td>
<td>我樂意學習一項我以前從未試過的運動。</td>
<td></td>
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<td>35.</td>
<td>我相信姻緣是上天註定的。</td>
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<td>36.</td>
<td>爲了要有改進，冒險創新是免不了的。</td>
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<td>37.</td>
<td>我相信凡事只能靠自己不懈的努力，而不是靠機緣。</td>
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<td>38.</td>
<td>我對自己的能力有相當的信心。</td>
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<tr>
<td>39.</td>
<td>我不喜歡固定的工作，而喜愛有挑戰性的事情。</td>
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<td>40.</td>
<td>我對將來感到沒有信心。</td>
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<tr>
<td>41.</td>
<td>我對許多新事物都有敏銳的觸覺。</td>
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<tr>
<td>42.</td>
<td>我經常放棄正在做的事，因為我覺得自己做不來。</td>
<td></td>
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<tr>
<td>43.</td>
<td>我總是尋找有啓發性的體驗，以刺激我的思考。</td>
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<tr>
<td>44.</td>
<td>我經常給予別人充建設性的意見。</td>
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<td>45.</td>
<td>工作時，我總擔心幹不好。</td>
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<tr>
<td>46.</td>
<td>世事變化莫測，所以做長遠計劃是不明智的。</td>
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<tr>
<td>47.</td>
<td>我經常同時思考多個問題。</td>
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<tr>
<td>48.</td>
<td>很多時候我覺得無法控制發生在我身上的事情。</td>
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<tr>
<td>49.</td>
<td>我的朋友都很尊重我的意見。</td>
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</tbody>
</table>
50. 我覺得自己一無是處。 | 是 | 否
51. 當我要發言時，我的腦海便一片空白，什麼也想不出來。 | 是 | 否
52. 我做事經常猶疑不決，以致喪失機會，招來損失。 | 是 | 否
53. 誰能成爲領導通常要看誰的運氣好。 | 是 | 否
54. 我喜歡與不同類型的人合作。 | 是 | 否
55. 一個人是否成功，靠的是勤奮和才能，而不是機緣。 | 是 | 否
56. 我覺得很難從多個角度思考同一問題。 | 是 | 否
57. 我有興趣去深入了解各地的風俗習慣。 | 是 | 否
58. 如果別人要求我想出一些新的構思，我會感到很困難。 | 是 | 否

二. 下面 16 句話描述了人們對工作環境的觀感，請在每句話旁圈寫最能代表你感覺的數字。

1 = 從不感到 2 = 有時感到 3 = 經常感到 4 = 時刻感到

<table>
<thead>
<tr>
<th>句子</th>
<th>1</th>
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<th>4</th>
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<tbody>
<tr>
<td>59. 我和我的同事構成了很好的團隊</td>
<td>1</td>
<td>2</td>
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<td>4</td>
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<tr>
<td>60. 我的上司清晰地為我設定總體目標。</td>
<td>1</td>
<td>2</td>
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<td>61. 我與緊密合作的同事之間有充分互信。</td>
<td>1</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>62. 在我的團隊中，各人可以有建設性地質詢各自的想法。</td>
<td>1</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>63. 我的上司的人際關係技巧很差。</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>64. 在我的團隊中，各人對於新構思抱有開放的態度。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>65. 我的上司是一個很好的工作榜樣。</td>
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<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>66. 在我的團隊中，人們願意互相幫助。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>67. 我的上司不善計劃。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>68. 在我的團隊中，擁有不同技能的人可以融合。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>69. 我的上司很支持我的團隊。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>70. 我的團隊對工作很投入。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>71. 我的上司跟我的團隊溝通得不好。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>72. 我的團隊有自由及開放的溝通。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>73. 我的上司對我的團隊充滿信心。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>74. 我的上司對新構想持有開放態度。</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
三．下列因素可能影響你發揮創意。請選出各項因素對你發揮創意的影響。

1 = 能提高創意  2 = 無影響  3 = 有點減低創意  4 = 頗減低創意  5 = 嚴重減低創意

75. 順從 ____  76. 追求穩定 ____  77. 等級觀念 ____  78. 傳統 ____  79. 顧存面子 ____

四．請選出你工作上遇到以下環境/情況的頻率。

1 = 從未遇到  2 = 有時遇到  3 = 經常遇到  4 = 時刻遇到

80. 順從 ____  81. 追求穩定 ____  82. 等級觀念 ____  83. 傳統 ____  84. 顧存面子 ____
第二部份

四. 請列出 報紙 及 刀 的不同用途，愈多愈好。如不夠空格，可在背頁繼續填寫。 請於十分鐘內 完成。

a. 報紙 的用途

21. 
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b. 刀 的用途

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第三部份

五. 請寫個人資料，並於適當的‘☐’中塗上‘✔’。

8 性別:  ☐ 男     ☐ 女

9 年齡:  ☐ 20 或以下 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51 或以上

10 教學程度 (修讀或完成):
   ☐ 中學或以下     ☐ 証書/文憑課程     ☐ 大學學士     ☐ 大學碩士
   ☐ 大學深造證書/文憑     ☐ 其他: ____________

11 婚姻狀況:  ☐ 未婚     ☐ 已婚
   ☐ 已婚並育有子女___名
   ☐ 其他  Other _________

12 服務年期:  ☐ 1-5 ☐ 6-10 ☐ 11-15 ☐ 16-20 ☐ 20-25
   ☐ 26 或以上

13 階級:  ☐ 警員     ☐ 警長或警處警長     ☐ 督察或總督察
   ☐ 警司或以上

14 現所屬崗位的主要工作性質:
   ☐ 行動     ☐ 調查     ☐ 行政     ☐ 資訊科技     ☐ 宣傳
   ☐ 訓練     ☐ 其他: __________

問卷完成，謝謝！
Appendix B  

<table>
<thead>
<tr>
<th>Question (Scale)</th>
<th>Variable (no. of question)</th>
<th>Question Number</th>
<th>Value/Value label</th>
<th>Range of Score</th>
<th>Scale Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1-58 (CPAI)</td>
<td>Novelty (10)</td>
<td>8R, 10, 12, 14, 15, 22R, 23, 39, 43, 58</td>
<td>1 = low novelty 2 = high novelty</td>
<td>10 - 20</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Diversity (Openness) (10)</td>
<td>3, 4, 6R, 7R, 9R, 27, 34, 36, 54, 57</td>
<td>1 = low diversity 2 = high diversity</td>
<td>10 - 20</td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td>Divergent Thinking (10)</td>
<td>11, 16, 19, 20, 24R, 25R, 41, 44, 47, 56R</td>
<td>1 = low divergent thinking 2 = high divergent thinking</td>
<td>10 - 20</td>
<td>Interval</td>
</tr>
<tr>
<td>Question (Scale)</td>
<td>Variable (no. of question)</td>
<td>Question Number</td>
<td>Value/Value label</td>
<td>Range of Score</td>
<td>Scale Nature</td>
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</tbody>
</table>
| Q59-74 KEYS      | Supervisory Encouragement (8) | 60, 63R, 65, 67, 69, 71R, 73, 74 | 1 = Never  
2 = Sometimes  
3 = Often  
4 = Always | 8 - 32 | Interval |
|                  | Workgroup Coherence (8)     | 59, 61, 62, 64, 66, 68, 70, 72 | 1 = Never  
2 = Sometimes  
3 = Often  
4 = Always | 8 - 32 | Interval |
| Q75-79 Obstacle of creativity | Conformity (1) | 75 | 1 = Will increase my creativity  
2 = Have no effect on my creativity  
3 = Cause some hindrance on my creativity  
4 = Quite hinder my creativity  
5 = Seriously hinder my creativity | 1 – 5 | Interval |
<p>|                  | Stability (1)               | 76              |                   |                 |              |
|                  | Hierarchic (1)              | 77              |                   |                 |              |
|                  | Conventionality (1)         | 78              |                   |                 |              |
|                  | Face-consciousness (1)      | 79              |                   |                 |              |</p>
<table>
<thead>
<tr>
<th>Question(Scale)</th>
<th>Variable (no. of question)</th>
<th>Question Number</th>
<th>Value/Value label</th>
<th>Range of Score</th>
<th>Scale Nature</th>
</tr>
</thead>
</table>
| Q80-84 Obstacle found in the organization | Conformity (1) | 80 | 1 = Never  
2 = Sometimes  
3 = Often  
4 = Always | 1 – 4 | Interval |
| | Stability (1) | 81 |
| | Hierarchic (1) | 82 |
| | Conventionality (1) | 83 | |
| | Face-consciousness (1) | 84 | |
| Q85-86 Creative Performance (WKCT) | - Verbal fluency  
- Verbal flexibility  
- Verbal originality | 85, 86 | - Verbal fluency:  
1 point per response  
- Verbal flexibility :  
1 point per response  
- Verbal Originality:  
3 points for unique response,  
2 points for response of less than 2.5% of sample,  
1 point for response of less than 5% of sample | - | Interval |
<table>
<thead>
<tr>
<th>Data</th>
<th>Variable</th>
<th>Question Number</th>
<th>Value/Value label</th>
<th>Range of Score</th>
<th>Scale Nature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Particulars (Part F)</td>
<td>Gender</td>
<td>1</td>
<td>1 = male</td>
<td></td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = female</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>2</td>
<td>1 = 20 or under</td>
<td></td>
<td>Interval</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = 21 – 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = 31 – 40</td>
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<td></td>
</tr>
<tr>
<td></td>
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<td>4 = 41 – 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 = 51 or above</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Education</td>
<td>3</td>
<td>1 = secondary or below</td>
<td></td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = Cert / diploma</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = University graduate</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 = Master degree</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>5 = Postgraduate cert/diploma</td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td>6 = other</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marital status</td>
<td>4</td>
<td>1 = single</td>
<td></td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = married</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = married with children</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>4 = other</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Rank</td>
<td>6</td>
<td>1 = PC</td>
<td></td>
<td>Ordinal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = Sgt/SSgt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 = IP, SIP, CIP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 = Superintendent or above</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Job nature of post</td>
<td>7</td>
<td>1 = operational</td>
<td></td>
<td>Nominal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 = investigation</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3 = administrative</td>
<td></td>
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<td></td>
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<td>4 = publicity</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>5 = information technology</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>6 = training</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7 = other</td>
<td></td>
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</tr>
</tbody>
</table>
### Appendix C

**Response Category in the Wallach & Kogan Creativity Test**

<table>
<thead>
<tr>
<th>A) Response Category of Newspaper</th>
<th>B) Response Category of Knife</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wrapping</td>
<td>1. Break down food</td>
</tr>
<tr>
<td>2. Cleaning</td>
<td>2. Other functions related to food</td>
</tr>
<tr>
<td>3. Informational</td>
<td>3. Weapon</td>
</tr>
<tr>
<td>4. Set fire</td>
<td>4. Display / art-related</td>
</tr>
<tr>
<td>5. Keep warm / cover the body</td>
<td>5. Opener</td>
</tr>
<tr>
<td>6. As a mat</td>
<td>6. For performance purpose</td>
</tr>
<tr>
<td>7. As a fan</td>
<td>7. Sports</td>
</tr>
<tr>
<td>8. Stabilization</td>
<td>8. Symbol</td>
</tr>
<tr>
<td>9. As filling</td>
<td>9. Clothing related</td>
</tr>
<tr>
<td>10. As fertilizer</td>
<td>10. Merchandise</td>
</tr>
<tr>
<td>11. Game</td>
<td>11. Rescue tool</td>
</tr>
<tr>
<td>15. Art</td>
<td>15. Mirror</td>
</tr>
<tr>
<td>16. Pile up as support</td>
<td>16. As a supporting tool</td>
</tr>
<tr>
<td>17. Special effect</td>
<td>17. Stationary</td>
</tr>
<tr>
<td>18. As warning sign in case when vehicle break down</td>
<td>18. Heat transmitter</td>
</tr>
<tr>
<td>19. A mean to obtain periphery gift</td>
<td>19. Props</td>
</tr>
</tbody>
</table>