The Influence of System Developers' Creative Style on their Attitudes toward and Assimilation of a Software Process Innovation

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Abstract
This study examined differences among IS developers' creative styles, based on Kirton's Adaption-Innovation theory [34]. Propositions were developed and tested to identify whether IS developers' creative styles were related to their attitudes toward a software process innovation which they had recently adopted (client/server development) and to their overall job satisfaction and performance. Based on Kirton's theory, it was expected that innovative software developers would exhibit more positive attitudes toward client/server development and to report higher levels of job satisfaction following several months of usage. It was also expected that developers' attitudes to the innovation would influence their overall job satisfaction and job performance. The framework was evaluated through a survey of 200 IS developers in two firms that had recently adopted client/server development. The findings supported most of the propositions, however there were some unusual findings regarding the relationship of creative style and job performance.

1. Introduction

One facet of the "four P" model of creativity is person—that is, the set of attributes describing the individual. Although many studies have focused on the person dimension of the model [13], there are still many unresolved issues about the relationship between personal attributes and creative outcomes. For example, one unresolved issue is the question of whether creativity is a state or trait of behavior. While one current focus of research has taken the approach that creativity is a state that can be improved via training and other improvements to the work environment [14, 15], other researchers have suggested that creativity may, in fact, be a personality trait that remains fairly stable over time and is resistant to manipulation [10, 43]. This latter evidence that creative style is an individual trait fits with other accumulated evidence that employees' cognitive style affects their observable problem-solving and decision-making behavior [11, 27]. Creative style has been hypothesized to be related to employees' creative output, in terms of their solutions to business problems [14, 55]. Given this perspective that creative style is a trait, this paper investigates the relationship between individual creative style and employees' ability to assimilate new technologies.

One theory for explaining individual creative style identifies two different styles of creativity, with opposite dimensions labelled as adaptive and innovative [34]. While the person labelled as adaptor exhibits a preference for making incremental improvements to existing routines and processes, the innovator prefers changes that are more radical in nature. Perhaps, in part, due to innovators' greater risk-taking and sensation-seeking behavior, they are less tolerant of fixed work routines and more accepting—even welcoming—of disruptions to the status quo. Foxall & Bhate [21: 196] describe adaptors as:

characterized by order, precision, concern for accuracy of details, conformity, discipline, efficiency and .... [working] within the existing frame-of-reference.

In contrast, Foxall & Bhate [21: 196] characterize innovators are people who:

exhibit a marked preference for tangential thinking, challenging rules and accepted procedures, and breaking with established methods.... The innovator adopts novel perspectives and sources of solution.

These definitions derive from Adaptation-Innovation Theory, one framework developed to explain how and why individuals differ in their creative styles [33, 34]. Despite prior research which has examined the "person" dimension of creativity [13], one practical question remains: what outcomes can be explained or predicted by individual differences in creative style? There has been a paucity of
research demonstrating a causal linkage between differences in IS professionals’ creative styles and outcomes such as their ability to use IT in novel ways or to develop creative system solutions to business problems. Although end users’ creative styles have been shown to influence IT usage [21], such studies have not been replicated with regard to IS professionals’ technology usage and behavior. This paper seeks to show how creative style influences IS employees’ ability to adapt to innovations in system development processes.

Specifically, this paper will examine the implications of creative style for IS professionals’ attitudes toward an innovation, as well as their job satisfaction and performance following their mandatory adoption of client/server development. The results provide interesting and — at times — contradictory implications for the effect of IS employees’ creative style on their ability to assimilate this new technology into their jobs.

1.1. Review of Literature on IT and Creative Style

Only very recently have data been collected to show that certain IT behaviors are related to creative style — such as managers’ and MBA students’ use of software applications [22]. Research has shown that creative style is associated with the extent of computer use — including both the frequency of computer usage and the variety of different software applications used. These results have been replicated among both senior managers and MBA students [21]. In the end user training literature, Sein and colleagues have demonstrated a relationship between end users’ cognitive style, the training method employed, and users’ subsequent performance [8, 52, 53]. The critical insight from such training studies was the fit required between the training method and users’ preferred cognitive style. While such findings have value in explaining how creative style influences novice users’ ability to learn and adopt IT, it is unclear how these findings should apply when examining individual differences among a population of experienced IS professionals. For example, there has been no research examining whether system developers, when confronted with opportunities to adopt or adapt to new technologies will respond differently due to differences in their creative styles. Not only is it unproven whether innovative experienced IS professionals will be more willing to adapt to a new technology (compared to their less innovative peers), but it is unclear what the performance implications of creative style may be.

Understanding the relationship among creative style and system developers’ satisfaction and performance is important for managing IS professionals. There may exist both similarities and differences in terms of how individual creative style influences technology assimilation among veteran IS professionals compared to novice users.

Implementing new technologies is a substantial challenge, both for the IS managers who oversee implementation within their companies [20, 46], but also for the IS professionals who use them [61]. As the technology platform underlying IS jobs has changed very rapidly from mainframe to distributed, client/server computers over the past few years, IS professionals must also undergo a process of learning and assimilating new technologies. One goal of this paper is to explore whether such differences in creative style explains IS professionals’ assimilation of client/server technology. Specifically, this paper considers the question of whether creative style may explain the attitudes that IS professionals exhibit toward technological innovations which their organizations have adopted (and which they, in turn, have voluntarily adopted), and their ability to assimilate associated changes in their day-to-day work processes.

The remainder of the paper is structured as follows. In Section 2, prior research on to the implementation of software process innovations is reviewed. Section 3 provides background information about Kirton’s Adaptation-Innovation Inventory (KAI) [34], the survey instrument for operationalizing his theory. Section 4 identifies a set of propositions for explaining IS professionals’ creative styles and their attitudes toward client/server development. Section 5 describes the research design and measures, Section 6 presents the results of the study, and Section 7 analyzes the implications of this study for managing IS employees and for future research on creative style.

2. Research on Software Process Innovations

Understanding the adoption of new tools and methods for software development has become an important line of research within the IS community. Technology changes have dramatically impacted the work of IS professionals, and the term software process innovation (SPI) was recently coined to denote “changes to an organization’s process for producing software applications — changes in tools, techniques, procedures or methodologies” [19: 23]. Researchers in the IS community have long studied the implementation issues surrounding such innovations. For example, software process innovations that have been studied include integrated-CASE tools [24, 46], structured development methods [37], and more recently, object-oriented development [20].

Although studies of implementing new software processes have been the focus of IS research for over a decade [36, 62], most studies have focused on macro level variables that influence organizational outcomes — such as the organization’s implementation strategy and the innovation’s features [2, 20]. The role of micro-level differences, such as employee differences which may influence assimilation of software process innovations has been generally overlooked. Despite the call for greater focus on these individual or micro-level factors [60], there
Although recent studies have confirmed such originality, efficiency, and rule-conformity. Each has been identified as a separate, but correlated facet of creativity. There has been little attention to how attributes such as cognitive development, creative style and research on the implementation processes and outcomes of software process innovations.

To date, there has been no overlap between research on creative style and research on the implementation processes and outcomes of software process innovations. Several reasons may exist for this oversight. One reason may be that the theories which explain implementation of software process innovations within firms have typically defined their unit of analysis as the organization or the IS department, and have generally neglected the possibility that differences among IS employees may materially influence a firm’s ability to successfully assimilate such innovations. Another reason for this neglect of employee differences may be that the past decade saw a diminished interest in cognitive style in the IS literature, following an earlier a spirited debate over the importance of cognitive style in designing user interfaces for decision support systems [32, 50, 51, 60]. IS researchers may have mistakenly concluded that understanding individual differences in cognitive or creative style has little to offer research on implementation of IT innovations — and that to focus on cognitive style was “much ado about nothing,” to borrow Huber’s [32] subtitle. Yet if one re-examines the factors that influence end-user IT adoption and usage it is obvious that differences in beliefs and attitudes regarding IT do significantly influence employees’ willingness to adopt and use technology [16, 17, 42]. This latter set of studies has examined differences in employees’ perceptions of IT without considering any underlying personality traits that may shape their perceptions of IT — such as creative style. This research seeks to do so within the context of a sample of experienced software developers who are assimilating a software process innovation, client/server development.

3. Measuring Creative Style

Kirton’s Adaption-Innovation Theory [37] operationalizes creative style by distinguishing individuals who have a stronger preference for frequent and significant change (innovators) from others who prefer minor changes to the status quo (adaptors). Although these terms represent extreme contrasts to each other, all individuals can be scored along a continuum, since the KAI scale is an interval-level scale [30].

The KAI has been extensively validated and has been shown to comprise at least three sub-constructs: originality, efficiency, and rule-conformity. Each has been identified as a separate, but correlated facet of creativity. Although recent studies have confirmed such a three-factor structure [4, 5], other researchers have also suggested the existence of a fourth factor within the KAI labelled preference for change or stability [57]. It is this sub-construct of creative style that would appear to be most closely related to IS employees’ ability to assimilate new technologies.

There are several alternate measures for assessing individual creative style — including the Kolb Learning Styles Inventory (KLSI)[35], the Innovation Style Profile (ISP)[40], and the Creative Problem Solving Profile (CPSP)[3]. Kirton’s KAI scale was selected over these other measures of creative style or cognitive style. In terms of its measurement properties such as construct validity, reliability, and factor stability, the KAI has demonstrated strong measurement properties [7, 23]. In contrast, other measures of cognitive or create style have been questioned as inadequate for certain research purposes. For example, Kolb’s Learning Styles Inventory (KLSI) has been criticized as demonstrating poor reliability and inconsistent factor structure [27] while newer instruments such as the ISP and CPSP are based on only ordinal-level scales, which render them inadequate for performing mathematical operations [31].

4. Propositions to Be Evaluated

Since innovators have a creative style that predisposes them to prefer novel practices (compared to adaptors), they will more likely have positive attitudes to a technological innovation such as client/server development which may change the nature of their work processes.

Proposition 1. Systems developers who are innovators will have more favorable attitudes toward client/server development, compared to adaptors.

Since there are three sets of attitudes toward technological innovations, which have been labelled "core attributes" and have been widely studied [1, 42], a separate proposition is stated for IS employees’ attitudes toward each core attribute of the innovation.

- Proposition 1a. Systems developers who are innovators will have more favorable attitudes toward client/server’s usefulness, compared to adaptors.

- Proposition 1b. Systems developers who are innovators will have more favorable attitudes toward client/server’s ease-of-use, compared to adaptors.

- Proposition 1c. Systems developers who are innovators will have more favorable attitudes toward client/server’s compatibility with the prior technology, compared to adaptors.
Since IS developers will use client/server development on a regular basis in their work, developers' attitudes toward the technology are likely to influence their job satisfaction. This is because developers who enjoy working with client/server development are more likely to report being satisfied with various dimensions of their job, compared to their peers who dislike it.

**Proposition 2.** IS employees' attitudes toward client/server development will be positively related to their job satisfaction.

Separate propositions are stated to show that IS developers' attitudes toward each "core attribute" of the technological innovation are expected to influence their job satisfaction.

**Proposition 2a.** IS employees' attitudes toward client/server's usefulness will be positively related to their job satisfaction.

**Proposition 2b.** IS employees' attitudes toward client/server's ease-of-use will be positively related to their job satisfaction.

**Proposition 2c.** IS employees' attitudes toward client/server's compatibility with the prior technology and approaches for software development will be positively related to their job satisfaction.

Given their more positive attitudes toward client/server’s core attributes, IS developers who are innovators will be more comfortable with using client/server technology and may more readily accept other changes to their day-to-day routines that are triggered by this innovation.

**Proposition 3.** System developers who are innovators will report higher levels of job satisfaction following adoption of client/server development, compared to adaptors.

Although prior research has shown that innovators have a general preference for change, compared to adaptors, there has been little research on the performance implications of such differences in creative style. While it may be possible that innovators perform better when required to adopt a technological innovation, due to their greater "preference for change" [57], there has been no prior research to support such a claim. It may be equally likely that adaptors are better able to assimilate a technical innovation into their standard work routines - due to their greater inclination to rule-conformity and efficiency. Due to the lack of prior research on the job performance implications of creative style, no *a priori* relationship is expected between them. This proposition is stated in null form and will be analyzed in an exploratory manner.

**Proposition 4.** No relationship is expected between IS employees' creative style and their job performance, following adoption of client/server development.

Since the job performance scale used in the study identifies four separate dimensions of IS developers' job performance, then a separate proposition is stated for the relationship between creative style and each dimension of performance:

**Proposition 4a.** No relationship is expected between IS employees' creative style and their *technical/analytical skills*, following adoption of client/server development.

**Proposition 4b.** No relationship is expected between IS employees' creative style and their *business knowledge*, following adoption of client/server development.

**Proposition 4c.** No relationship is expected between IS employees' creative style and their *general work habits and communication skills*, following adoption of client/server development.

**Proposition 4d.** No relationship is expected between IS employees' creative style and their *attitudes to the job*, following adoption of client/server development.

5. **Research Design and Measures**

Respondents were IS employees and IS managers drawn from two large, multi-divisional companies that had recently replaced mainframe systems development with client/server development. All IS employees were software developers (with titles such as programmer or systems analyst) working in IS departments that had migrated to client/server development 6-9 months previously. By virtue of their membership in such an IS department, each respondent had been required to adopt client/server development, rather than voluntarily adopting it for individual use.

Data collection was conducted in three stages. First, 15 field interviews were conducted in each company with IS managers, software developers, IS training professionals and training managers who were responsible for implementing client/server within each firm. Second, a survey was developed and administered to 220 IS developers from the two firms. Each IS developer received a computerized, disk-based survey and was requested to complete and return it by mail. Third, approximately one month after developers returned their version of the survey, the manager of each respondent was mailed a separate disk-based survey and requested to provide an evaluation of skills and job performance for the respondents reporting to them.
5.1. Measures

The IS employee survey asked each respondent to report their attitudes toward client/server development, as well as their satisfaction with their job and work environment. Since it was not expected that creative style would be the sole factor that influences job satisfaction, additional items were included to control for variables that have generally been shown to influence employee job satisfaction. Drawing from prior research on person-environment fit theory [18, 28, 29], which shows that employee job satisfaction is a function of the fit between an employees' interests and the opportunities provided by the job, additional items to capture employees' job needs and interests were also used, as well as the extent to which these needs were met in their job. IS employees were also asked to complete the Kirton Adaption-Innovation Inventory (KAI) to provide a measure of their creative style, using a reduced, 23-item version of the KAI scale [23].

The 20-item "abridged" version of the KAI was used for this study [58], which has been shown to have certain advantage over the conventional, 32-item version. Since research has also suggested the existence of a fourth factor labelled preference for stability or change [57], some additional items (from the 32-item version of the scale) corresponding to this factor were added to the 20-item version to reach a final, 23-item version that was administered to IS professionals.

The manager version of the survey requested each IS manager to provide information regarding the importance of a set of 24 IS job skills for developers who reported to them, as well as performance evaluations for each individual developer on each specific skill [26], and a rating for each developer's overall job performance.

6. Results

Proposition 1. Systems developers who are innovators will have more favorable attitudes toward client/server development, compared to adaptors.

Separate propositions were tested for the relationship between creative style and each of the "core attributes" (usefulness, ease-of-use, and compatibility). Creative style was evaluated as the predictor variable and technology attitudes as the dependent variable. Results are shown in Table 1. The results show that creative style was not related to IS employees' perceptions of any of the core attributes of client/server development. Innovative developers were no more likely to perceive client/server as more useful, easy to use, or compatible with their previous, mainframe-based approach to system development.

Proposition 2. IS employees' attitudes toward client/server development will be positively related to their job satisfaction.

The relationship between IS developers' job satisfaction and specific attitudes toward client/server development was analyzed through linear regression. Results from Table 2 show that developers' job satisfaction was significantly related to all three attributes: client/server's usefulness, ease-of-use and compatibility with prior approaches to software development (p<0.05). Thus, employees who perceived the new client/server technology as useful or easy-to-use were more satisfied in their jobs, as were those developers who perceived it as more compatible with prior approaches to software development.

Proposition 3. System developers who are innovators will report higher levels of job satisfaction following adoption of client/server development, compared to adaptors.

The influence of creative style on job satisfaction was analyzed through multiple regression analysis to identify the specific effect of creative style after other factors that influence job satisfaction had already been taken into account [18, 28]. This table shows the statistical results specific to the multiple regression analysis, for the incremental amount of variance in job satisfaction (the change in Adjusted-R²) explained by adding creative style to the regression equation, after the job fit variables were already included in the regression equation. Table 3 shows that employee's creative style was significant in explaining their job satisfaction following introduction of client/server development. Individual creative style explained a significant additional amount of variance in IS employees' job satisfaction (p < 0.05).

Proposition 4. No relationship is expected between IS employees' creative style and their job performance, following adoption of client/server development.

As expected, there was no direct relationship between managers' ratings of IS employees' overall job performance ratings and their creative styles. Yet, in examining managers' ratings of the 24 specific employee skills, these were found to cluster into four dimensions or facets based on factor analysis using an oblique (non-orthogonal) rotation. The job performance facets are:

1) technical/analytical skills;
2) business knowledge;
3) general work habits / communication skills; and
4) employee attitudes to the job.
Table 1  
Relationship between Creative Style and  
Attitudes toward Client/Server Development

<table>
<thead>
<tr>
<th>Prop. #</th>
<th>Dependent Variable</th>
<th>Beta (Standardized)</th>
<th>T-statistic</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Innovativeness regressed on:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a</td>
<td>Usefulness</td>
<td>-.01302</td>
<td>-0.138</td>
<td>not significant</td>
</tr>
<tr>
<td>1b</td>
<td>Ease-of-use</td>
<td>.04447</td>
<td>0.473</td>
<td>not significant</td>
</tr>
<tr>
<td>1c</td>
<td>Compatibility</td>
<td>-.03974</td>
<td>-0.423</td>
<td>not significant</td>
</tr>
</tbody>
</table>

Table 2  
Job Satisfaction Regressed on Employee Attitudes to Client/Server

<table>
<thead>
<tr>
<th>Prop. #</th>
<th>Construct Tested</th>
<th>Beta (Standardized)</th>
<th>T-statistic</th>
<th>p Value (1-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2a</td>
<td>Usefulness</td>
<td>.2545</td>
<td>2.846</td>
<td>.0026 **</td>
</tr>
<tr>
<td>2b</td>
<td>Ease-of-use</td>
<td>.2691</td>
<td>3.022</td>
<td>.0016 **</td>
</tr>
<tr>
<td>2c</td>
<td>Compatibility</td>
<td>.1771</td>
<td>1.946</td>
<td>.0270 *</td>
</tr>
</tbody>
</table>

Table 3  
Multiple Regression with Job Satisfaction Regressed on Creative Style

<table>
<thead>
<tr>
<th>Prop. #</th>
<th>Construct</th>
<th>R²</th>
<th>F-statistic</th>
<th>Change in R²</th>
<th>Change in F-Statistic</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Innovativeness (KAI) Score</td>
<td>.4620</td>
<td>24.041</td>
<td>.0223</td>
<td>4.639</td>
<td>.0334 *</td>
</tr>
</tbody>
</table>

Legend:  ** p < 0.01   * p < 0.05   + p < 0.10
although employees' creative style had no relationship to overall job performance, more specific relationships were examined to identify whether cognitive style was related to any of the job performance facets. Given the four facets, a separate proposition was evaluated for each:

Proposition 4a. No relationship is expected between IS employees' creative style and their technical/analytical skills, following adoption of client/server development.

Proposition 4b. No relationship is expected between IS employees' creative style and their business knowledge, following adoption of client/server development.

Proposition 4c. No relationship is expected between IS employees' creative style and their general work habits and communication skills, following adoption of client/server development.

Proposition 4d. No relationship is expected between IS employees' creative style and their attitudes to the job, following adoption of client/server development.

These propositions were examined separately, through simple regression analyses. The results of the regression analyses showed that none of the four facets of job performance were related to employees' creative style (at p < 0.05). Although the lack of findings support the above propositions, the relationship between creative style and one performance facet — employees' business knowledge — was found to show a strong trend (p < 0.10), but in the direction that indicates that more innovative IS employees possess less business knowledge compared to their less innovative peers.

On the surface, this finding would appear to suggest that employees with a more innovative creative style learn less about the business or conversely, that employees who gain more business knowledge become less innovative over time. Since both of these implications seem contrary to the core definition of having an innovative creative style (as willingness to learn and embrace change), these findings represent a paradox that bears further examination.

While creative style was previously shown to be associated with greater job satisfaction, it is also shown to be negatively related to business knowledge. It is important to recognize that the direction of causality between innovativeness and any job performance facet (such as business knowledge) is equivocal, since it cannot be known whether creative style influences business knowledge, or vice-versa, or whether this is a spurious relationship due to a latent third variable. To investigate further, this paradoxical finding was explored through multiple regression analysis. The possibility of a spurious relationship between business knowledge and creative style was explored by including some additional demographic variables as controls (including employee age and years in the company). Since prior research has shown employee age to be inversely related to innovativeness [45], business knowledge to be directly related to employees' years in the company [26], and age to be directly related to employees' years in the company, then it may be this pattern of relationships which can explain the spurious negative relationship between IS employees' business knowledge and their level of innovativeness.

7. Discussion

The results supported all of the stated propositions, although one unusual findings regarding job performance was identified. These findings are summarized below.

- employees' creative style was unrelated to their attitudes toward client/server development (usefulness, ease-of-use, or compatibility with prior approaches to software development).
- employees' attitudes to client/server development were related to job satisfaction.
- employees' innovativeness was related to their job satisfaction.
- employees' creative style was unrelated to their overall job performance (despite the fact that creative style was related to employees' job satisfaction).
- creative style was negatively related to IS employees' business knowledge, but not statistically significant (p < 0.10). In addition, create style was unrelated to the other three facets of job performance (technical skills, general work habits/communication skills, and job attitudes).

Taken as a whole, the survey findings are interesting — not just because they supported most of this study's propositions but, in part, due to the implicit contradictions between certain findings. If attitudes toward a novel technology influence job satisfaction, which it itself associated with an innovative creative style, why are attitudes toward technology not linked to cognitive style? Why is an innovative creative style positively correlated with job satisfaction, but not with overall job performance? Why is an innovative creative style negatively associated with business knowledge when, by definition, an innovative creative style means
willingness to embrace frequent and significant change, which is exactly what occurs in business and IS departments today? Since contributions to knowledge often occur through surprising or contradictory findings [47, 49], these contradictory findings can serve as grounds for future research on how creative style affects IS employees' attitudes and behavior in the workplace.

This study provides important insights for understanding how having an innovative creative style can be a double-edged sword, in terms of its effect on employee attitudes to technology, compared to its effects on job satisfaction and performance. This research explored the unexpected finding of business knowledge being inversely related to innovativeness through additional multiple regression analysis, leading to the insight that using innovativeness as a measure of employees' creativity captures not only their openness to innovation, but also their expectation for or appetite for change. By definition of innovativeness (and the specific items on the KAI scale), innovative IS employees have a greater need for stimulation which is triggered by change. While higher levels of innovativeness may favorably influence employees' attitudes toward working with new technologies, their preference for novelty among innovative employees may also decrease their likelihood of remaining in the same job over the long run. Since greater business knowledge is associated with longer tenure in the current firm (as well as in the IS profession overall) [26], the shorter job tenure for innovative employees appears to be the latent factor which leads to the observed negative relationship between their creative style and amount of business knowledge. This paradox occurs because such innovative IS employees have a greater appetite for change and are thus more likely to seek new challenges — whether moving to a new IS position in a different business unit within the same firm, transferring from IS to a line business unit, or moving to a new firm altogether.

Analysis of inter-firm differences based on separate analyses of employees from the two field sites (not shown here) further suggests that this paradoxical effect of employee creative style and lower business knowledge is exacerbated in the less innovative, more traditional firm. These inter-firm differences suggest that highly innovative employees in stodgy, less innovative work environments are less satisfied when compared with their adaptive peers in the same firm, or when compared with their innovative peers in a more dynamic, leading-edge firm.

While higher levels of innovativeness may favorably influence some IS employees' attitudes to new technologies, their appetite for change may also decrease their likelihood of remaining in the same job over the long run, and hence may diminish their accumulated business knowledge. Employee innovativeness acts as a double-edged sword: while it predisposes employees to have more positive attitudes toward an innovation, if the organizational context in which they work is not innovative -- but rather bureaucratic -- then innovative employees will be less satisfied over the long run, more likely to leave their job, and thus less likely to accumulate knowledge of their company's business. The implications of these findings for software developers who work in firms that may have introduced a technology process innovation but do not have very innovative work environments (press) are important for IS researchers, developers and managers to understand. There are important relationship between the person, process, and press dimensions of the 4-P framework of creativity [12].

In summary, IS employees' creative style is an important construct for IS managers and researchers to understand. It is important, however, to recognize how the advantages and liabilities of IS employees' creative style may be linked to the larger context of the IS departments or organizations in which these IS developers are located.

8. References


