NEW JOB - OLD IDEAS: DOES MOBILITY OF WHITE-COLLAR WORKERS CONTRIBUTE TO THE SPREAD AND DEVELOPMENT OF IDEAS?

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ABSTRACT
Despite an increasing interest in labour mobility as a mechanism for diffusing ideas between organisations, regions and countries, little attention has been directed at the possibilities for new employees to share ideas in their new organisations. This article focuses on how tenure affects perceptions of creative climate in organisations, by assessing perceived creative climate in a random sample of unionised Swedish white-collar workers (n=1303). Our results show that tenure is negatively associated with perceived creative climate for the first few years of employment. This relation is not moderated by the complexity of work. However, more complex work in itself is associated with higher levels of perceived creative climate.

INTRODUCTION
The foundation of all innovative or entrepreneurial ventures is an idea. Labour mobility has been identified as an important mechanism by which ideas diffuse between organisations. However, much of the empirical work is based on patent citations or on measurements of labour mobility in innovative areas or clusters. I.e. the bulk of empirical work is focused on top scientists or just assumes that labour mobility will lead to positive idea and knowledge flows. This assumption might be premature since there are mechanisms by which mobility could be detrimental to corporate entrepreneurship and innovation (c.f. Michie & Sheehan, 2003; Madsen, Mosakowski & Zaheer, 2003). In the human resource field the costs rather than the benefits of labour mobility are commonly highlighted (e.g. Tziner & Birati, 1996) and among practitioners focus is rather on retention than turnover (Bienkowska, 2007).

The extent to which new ideas are developed into new venture ideas, product, service or process innovations is dependent not only on individual factors (c.f. Moneta et al., 2009) but also on institutional and organisational factors such as incentive structures, co-worker and managerial support, risk acceptance, available resources and so forth (e.g. Cummings, 1965; Amabile et al., 1996, Davidsson, Hunter & Klofsten, 2006). Consequently, new ideas brought into an organisation e.g. by new employees (March, 1991), is not sufficient for entrepreneurial and innovative outcomes. As new employees are socialised into their new organisations, it is far from certain that the organisations focus on benefitting from ideas and knowledge brought into the organisation with the new employees (Madsen, Mosakowski & Zaheer, 2003). The possibilities for new employees to suggest and develop ideas are important factors influencing the effects of labour mobility as a mechanism for idea diffusion between organisations.
Despite the importance, little research has been focused on assessing whether the organisational context, in which ideas are conceived and developed, differs between new employees and more established employees. This study assesses the context of idea generation and development for white-collar workers. In particular the relationship between tenure and the perceived creative climate (Cummings, 1965; Amabile et al., 1996; Ekvall, 1996) of white-collar workers is in focus.

The paper is structured as follows: firstly, to position the paper in the debate on the effects of labour mobility on idea diffusion and innovation, we briefly review the literature. Secondly, we discuss creative climate and how it relates to organisations, groups and individuals. Thirdly, we present previous research on creativity, type of work and tenure and present our research questions. Fourthly, we present our methodology; fifthly our results; lastly we discuss the results and the implications for future research.

LABOUR MOBILITY, IDEAS & INNOVATION

Labour mobility can have several meanings, e.g. labour force movement between different regions or more commonly the act of changing workplace (c.f. Bienkowska, 2007). It is the latter of these two examples that has received the most attention in relation to innovation and entrepreneurship, and it is the one we use throughout this paper. By this definition labour mobility is an aggregate measure of employee turnover, which is the term commonly used for organisational level measures. These measures are inversely related to the average employee tenure, i.e. length of employment, which is the measure most commonly used at an individual level.

On an aggregate level it has been suggested that labour mobility is positively related to innovation since it facilitates knowledge and idea diffusion (e.g. Kim, Lee, & Marschke, 2006; Power & Lundmark, 2004; Almeida & Kogut, 1999; Saxenian, 1994;). However, on an organisational level results suggest that high employee turnover is detrimental to firms’ innovative outcomes (Michie & Sheehan, 2003). Shifting the focus from innovation to productivity, aggregate empirical findings indicate that national average employee tenure has an inverted U-shaped relation to countries’ productivity per capita (Auer, Berg & Coulibaly, 2005). In contrast, results showing that innovative clusters have higher labour mobility than non-cluster organisations indicate a positive correlation between labour mobility and innovativeness (e.g. Power & Lundmark, 2004). However, the causal relationship might be reversed, i.e. that high innovativeness leads to economic growth, which is positively related to labour mobility (e.g. Israelsson, Stranefors & Tydén, 2003).

Thus, even though empirical findings show that labour mobility is a mechanism for knowledge and idea transfer, we still do not know if the overall effect of labour mobility on innovativeness is positive or negative. In line with the findings of Auer, Berg & Coulibaly (2005) a curvilinear relationship seems plausible, yet we are far from knowing what are optimal levels or even which factors are decisive in identifying this optimum.

One possible moderating factor of the overall effects of labour mobility on innovation is the extent to which new employees can share their knowledge and their ideas in their new organisations. Notwithstanding Agrawal’s, Cockburn’s & McHale’s (2006) study that elegantly assesses knowledge flows from a job changer’s new location to his or her former location, our study is focused on the social environment in the new organisation and the extent to which it allows and encourages the new employee to share and develop ideas. We refer to this environment as the creative climate (c.f. Mathisen & Einarsen, 2004).
CREATIVE CLIMATE, IDEA DEVELOPMENT & INNOVATION

People with new ideas are a necessary but not sufficient condition for innovation (Cummings, 1965; Amabile et al., 1996). Interactions in organisations, teams and groups influence both the collective and individual creative outputs (e.g. Amabile et al., 2005; Mathisen & Einarsen, 2004; Amabile et al., 1996; Ekvall, 1996). In organisational research this influence has been assessed through different measures of the social environment of organisations in relation to creativity or innovation, often referred to as creative climate (c.f. Mathisen & Einarsen, 2004). The literature on organisational climates has much in common with the literature on organisational culture and it is arguable that they study the same phenomenon using different approaches (See Denison, 1996 for a good review). Having stated that, we exclusively use the term climate to refer to organisational social environments and creative climate to refer to social environment of organisations in relation to creativity or innovation.

Although different scholars include different sub-dimensions in creative climate, there are many similarities between measures and conceptions (Mathisen & Einarsen, 2004). The underlying assumption is that certain climates are more conductive to idea generation and development; this is indicated by high scores on the instruments. Commonly used factors included: freedom (i.e. regarding how to perform one’s work), idea support (i.e. support from colleagues and managers for new ideas), risk taking (e.g. organisational tolerance of uncertainty and willingness to forgive failures), challenge (e.g. an emotional involvement in organisational goals), trust (e.g. emotional safety in relationships and low levels of suspicion and intrigue), idea time (i.e. time to think about and develop ideas), sufficient resources (e.g. access to funds, materials and information) (c.f. Ekvall, 1996; Amabile, 1996; Mathisen & Einarsen, 2004).

An area of debate in the literature on climate is the level of analysis, i.e. whether climate is an organisational level, a group level or even an individual level phenomenon. Amabile et al. argue that climate can have relevance on many levels, e.g. project team, department or organisation “as long as the individual respondents perceive themselves to be working within the same environment” (Amabile et al., 1996: 1179). Others have argued for assessing so called collective climates, i.e. identifying groups that share the same view of the climate within an organisation, regardless of their level of interaction (c.f. González-Romá et al., 1999; Patterson, Payne & West, 1996).

Ekvall (1996) claims to measure an organisational attribute through the Creative Climate Questionnaire (CCQ). Perceptions of this attribute may be biased by particular respondents but these biases average out in a larger sample (Ekvall, 1996). In contrast, using the KEYS instrument (Assessing the Climate for Creativity), Amabile et al. (1996: 1157) “focus on individuals' perceptions [of the climate] and the influence of those perceptions on the creativity of their work.” According to this logic people can experience different climates in the same organisation or group.

Since both the CCQ (Ekvall, 1983; 1996) and KEYS (Amabile et al., 1996) measure the climate through questions to people perceiving the assessed climate, the difference between the two is more theoretical than practical. Having said that, one important practical difference is that in the CCQ “the respondent is addressed as an observer of life in the organization”(Ekvall, 1996:108); the approach is “objectivistic” in the sense that there is no “I” or “me” in the questions, whereas KEYS includes both personal and objective items.

Both KEYS and CCQ have been used extensively in previous research (see Mathisen & Einarsen, 2004 for a review). Previous research has confirmed that creative climate as assessed by KEYS and CCQ is positively associated with creative and innovative outcomes, such as patents or expert ratings (Ekvall, 1996; Amabile et al., 1996).
TENURE, TYPE OF WORK & CREATIVITY – OUR RESEARCH QUESTIONS

As a new employee enters an organisation he or she is likely to have some views of organisational practice that are deviant from the organisational code (March, 1991). Consequently the employee socialisation process is a learning opportunity not only for the employee but also for the organisation. During this process the organisation’s creative climate is an important factor influencing the probability that new ideas brought into the organisation with the new employee will be recognised and developed. Thus the creative climate in general and how it is perceived by new employees in particular, influences the efficiency of labour mobility as a mechanism for idea diffusion between organisations.

Theoretically there are a number of ways tenure can be related to perceived creative climate; e.g. a new employee is less likely to have developed social relations with co-workers and managers and as a result they might perceive less support for new ideas from management and co-workers. New employees might use different mental models to established employees and thus face more resistance to their ideas (Dutton & Jackson, 1987). New employees might also be restrained by a lack of knowledge about organisational routines or organisation specific knowledge (Amabile, 1983). On the other hand new employees could be less restrained by habitual ways of solving problems (Ford, 1996) and consequently perceive more opportunity for change. They might also bring ideas from former employees with them into their new organisations (March, 1991), thus attracting more attention and curiosity from management and co-workers.

Because of the possibility of both positive and negative influences of tenure on the likelihood that an employee will engage in innovative processes, Gilson & Shalley (2004) hypothesize a curvilinear relation, with moderate tenure having the highest positive impact; they also find some empirical support for this hypothesis. Tierney & Farmer (2002) found a positive correlation between tenure and creativity, as rated by managers, among blue-collar workers. Interestingly, for the same group they also found a negative correlation between tenure and supervisor support (as rated by the workers); i.e. managers tended to view long term employees as more creative but gave this group less support. However, in the same study tenure was unrelated to these variables for a smaller sample of white-collar workers.

Previous empirical findings suggest that managers perceive a higher innovative climate than non managers and that managers tend to have longer tenure than non managers and thus there could be a positive correlation (but not a causal relationship) between perceived innovative climate and tenure (González-Romá et al., 1999). Patterson, Payne & West, (1996) also assessing collective climate, found no relation between tenure and collective climate membership.

Recent research (Hornsby et al., 2008) show that the number of ideas implemented by managers is affected by the perceived environment for entrepreneurship, assessed through Corporate Entrepreneurship Assessment Instrument – CEAI (Kuratko, Montagno & Hornsby, 1990; Hornsby, Kuratko & Zahra, 2002). Although this instrument does not directly measure creative climate, there are similarities between the dimensions assessed by the instrument and dimensions commonly used by creative climate instruments (e.g. Top management support, work discretion, rewards/reinforcement, time availability c.f. Mathisen & Einarsen, 2004). Hornsby et al. (2008) show that managerial level affects the perceived environment. Furthermore, they show that middle and senior managers, as compared to first-level managers, are more strongly affected by the environment for entrepreneurship.

Also assessing exclusively managers on creativity, Chusmir & Koberg (1986) found that tenure was negatively correlated with creativity for women. For men, however, no statistically significant correlation was found. More qualitative findings suggest that newly employed commonly are more enthusiastic about their work (Bienkowska, 2007), and that ideas often are applauded but not acted
Thus, there are contradicting results regarding the relation between creativity and tenure. This is true also for the more specific relation between perceived creative climate and tenure. Overall, tenure seems to correlate with increased domain and organisation specific knowledge and with more complex tasks (Tierny & Farmer, 2002; González-Romá et al., 1999); but also with less managerial support (Tierny & Farmer, 2002) and, in some organisations, an initial feeling of support for new ideas that fades when not acted upon (c.f. Amabile, 1996; Westelius & Askenäs, 2004).

Since previous studies predominantly assessed creative climate in convenience samples containing a limited number of organisations with varying average tenure and results regarding the relationship between creative climate and tenure often is presented only through zero order correlations or is even omitted, it is difficult to draw any conclusions from previous empirical research regarding the relationship between perceived creative climate and tenure. Consequently, our first research question (RQ) is:

RQ1: Is there any difference in the perception of the organisational creative climate between newly employed white-collar workers and white-collar workers who have a longer tenure in their present organisations?

We find that differences in type of work can be a parameter that affects both exhibited creativity and perceptions of managerial support; e.g. blue- and white-collar workers have displayed differences in this regard (Tierney & Farmer, 2002). Furthermore, level of responsibility (i.e. managerial level) can affect perceived climates or environments (González-Romá et al., 1999; Hornsby et al., 2008). Consequently, our second research question is:

RQ2: Is there any difference in the perception of the organisational creative climate between white-collar workers with low and high complexity work?

One explanation for the few and ambiguous findings regarding the relationship between tenure and perceived creative climate that exist, could be that the relationship is not linear and thus depending on the distribution of tenures in the sample. Another possible factor could be that the relationship is affected by the level of complexity of work tasks (i.e. type of work or managerial level). Thus our third research question is:

RQ3: Does complexity of work moderate the relationship between tenure and perceived creative climate?

**METHODOLOGY**

This study is based on a large survey conducted by Unionen, Sweden’s largest white-collar workers’ trade union, during the autumn of 2007. The sample was drawn from the membership database of Sif, a white-collar workers trade union, currently merged with HTF, another white-collar workers trade union, into Unionen.

**Sample**

A random sample of 5000 white collar workers across all industries was drawn from the membership database, which contained about 300 000 white-collar workers at 30 000 workplaces in Sweden. An online questionnaire was sent via e-mail to the 5000 respondents, usable responses were obtained from 1303 respondents, corresponding to a response rate of 26%.
Trade union members have been found to exhibit distinctive characteristics with regards to entrepreneurial behaviour in previous studies (e.g. Hyytinen & Ilmakunnas, 2007). Furthermore, trade union recognition has been found to be positively correlated to firm level innovativeness (Michie & Sheehan 2003). However, union membership is very high in Sweden; about 70% of the Swedish labour force are members of a trade union. Furthermore, union membership is much less controversial in a Swedish context as compared to many other countries; e.g. union membership is less of a statement since, historically, much of the public unemployment benefits have been managed by trade unions and collective agreements include also non-union members. Thus, limiting the sample to union members is not as salient a delimitation as it would be in many other countries.

**Measurements**

Our questionnaire assessed creative climate using in total 25 questions with 14 additional questions concerning background variables, e.g. gender, age, education and company size. The part of the questionnaire related to creative climate was developed mainly on basis of CCQ (Ekvall, 1996). The reason for not using CCQ in its entirety was practical; primarily the interest of reaching an acceptable response rate in a web-based study made us limit the number of questions. Our questions also addressed several areas covered by KEYS (Amabile et al., 1996). The used questionnaire thus contained questions related to the following CCQ dimensions: challenge, freedom, idea support, trust, debates, risk taking and idea time, and questions related to the following KEYS areas: challenging work, organisational encouragement, work group support, freedom, sufficient resources, and supervisory encouragement.

The instrument used 5 point Likert type items. The items followed the logic of CCQ (Ekvall, 1996) in that there was no “I” or “me” in the items. However, two questions were added apart from the theoretical model. These two questions assessed the individual’s commitment towards idea generation and development, but these two questions were singled out in a principal component analysis (PCA).

The 25 items were subjected to a PCA (Kaiser-Meyer-Olkin Measure value 0.952, Bartlett’s Test of Sphericity was significant). The PCA revealed four components with eigenvalues above 1. However, inspection of the graph revealed a clear break after the second component. The first components explained the bulk of the variance (50%) and all but two items loaded on this component. The first component was labelled Creative Climate (CC). The two questions, relating to individual commitment towards idea generation and development, were the only items that loaded heavily on the second component and not on the first component. These two items were singled out in one component labelled Individual Commitment to Creativity (ICC). In line with suggestions by Mathiesen & Einarsen (2004) we decided to perform the analysis based on one general creative climate construct. Consequently, the results focus on the overall perceived creative climate, i.e. the average of the 23 questions in the creative climate construct. The two items in the ICC are thus omitted from this analysis, since they were singled out both empirically and conceptually. However, the results would not have been substantially different had they been included. Cronbach’s alpha was .735 for the ICC construct and .959 for the overall CC construct. The latter is in line with previous research presenting Cronbach’s alpha for CCQ (Ismail, 2005).

A background variable of specific interest for this study is the ALS classifications (work type classifications for salary statistics). ALS is an assessment of level of complexity of the employees work tasks and the level of responsibility. This measure is based on criteria set by the union. The assessment is made locally at the workplace primarily by representatives for Unionen. By way of exception ALS is set by the employer or by the employee. This information was drawn from Unionen’s membership database and consequently not collected through the questionnaire.

ALS is assessed using a scale from 1 to 6. ALS correlates with, but is not equivalent to, managerial level. The correlation arises from the fact that managerial work usually is more complex than non
managerial work. However, a first level supervisor position might be less complex than a non-managerial highly professionalised position. Managerial positions are found at ALS 2-6 and non-managerial positions are found at ALS 1-5. Thus, only ALS 1 positions are exclusively non-managerial and only ALS 6 positions are exclusively managerial.

Tenure was self-reported using the categories: 1=less than 1 year; 2=1-2 years; 3=2-3 years; 4=3-5 years; 5=5-10 years; and 6=more than 10 years. Education was self-reported using the categories in the Swedish schooling system: 1= basic schooling (9 years); 2=college (2-3 years); 3=post college education shorter than 3 years; post college education 3 years or longer. Organisational size was self-reported using categories based on the number of employees: 1= less than 25; 2=25-49; 3=50-99; 4=100-299; 5=300-499; 6=500-999; 7=1000 or more.

Non-response analysis
As we had quite detailed information about the underlying population through the member register of Unionen, we can make a somewhat informed non-response analysis. Table 1 shows the characteristics we assessed in the non-response analysis.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Population 31/12-2007</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of respondents with ALS 1</td>
<td>5.6%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Proportion of respondents with ALS 2</td>
<td>30.0%</td>
<td>31.8%</td>
</tr>
<tr>
<td>Proportion of respondents with ALS 3</td>
<td>41.2%</td>
<td>40.4%</td>
</tr>
<tr>
<td>Proportion of respondents with ALS 4</td>
<td>19.7%</td>
<td>18.6%</td>
</tr>
<tr>
<td>Proportion of respondents with ALS 5</td>
<td>2.8%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Proportion of respondents with ALS 6</td>
<td>0.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Proportion of women</td>
<td>37.0%</td>
<td>41.0%</td>
</tr>
</tbody>
</table>

Our non-response analysis shows that the sample is fairly representative of the underlying population. The proportion of respondents within the different ALS levels is not significantly different from the population $\chi^2(5, n=1303)=8.53, p=.13$. Not uncommonly, women are somewhat overrepresented in the sample $\chi^2(1, n=1303)=11.0, p=.001$. The average age in the population is 44.7 years which is outside of the 95% confidence interval for the sample (average 42.5 years - lower bound 42, upper bound 43).

Overall no identified groups are heavily over- or underrepresented. This does not exclude the possibility that we might have biases related to perceptions of creative climate, e.g. people with extreme perceptions (positive or negative) being overrepresented in our sample. This, however, would only be a serious problem if it implied e.g. overrepresentation of newly employed people with a more positive or negative view of the creative climate. Of course we cannot exclude this possibility, but we can say that the sample as far as we can judge is fairly representative of the underlying population.

Analysis
The responses were coded and analysed using SPSS. Firstly, RQ1 and RQ2 were addressed using t-tests. A two-way ANOVA was conducted in order to assess a possible interaction effect between Tenure and ALS, i.e. addressing RQ3. The null hypothesis is rejected at a 5% level of significance.

There are a number of factors influencing the rate of labour mobility e.g. business cycles, labour market institutions, age, education and organisational size (Auer, Berg and Coulibaly, 2005; Andersson & Thulin, 2008; Andersson & Tegsjö, 2006; Israelsson, Strannefors, & Tydén, 2003). Age is particularly strongly correlated with labour mobility (Andersson & Thulin, 2008; Topel & Ward, 1992). In a Swedish context every fourth person in the age group 16-24 change jobs a given year whereas the corresponding number for people in the age category 55-64 is every twentieth person (Andersson & Thulin, 2008). Thus, finally, we conducted hierarchical multiple regression to control for age, gender, education and organisational size.
RESULTS

An independent-sample t-test was conducted to compare the creative climate scores for newly employed white-collar workers (tenure shorter than 1 year) and white-collar workers with more than 5 years of tenure. There was a significant difference between newly employed \((n=155, \text{CC mean score}=3.7, SD=0.855)\) and employed with more than 5 years of tenure \((n=765, \text{CC mean score}=3.3, SD=0.828)\), \(t(918)=4.92, p<.0005\) (two-tailed). This difference corresponds to 0.43 standard deviation units (calculated with pooled standard deviations), i.e. a small to medium effect (Cohen, 1988). Since the limit for how long one is newly employed is not absolute we extended the \(t\)-test and included white-collar workers with up to two years of tenure in this category. The statistical significance remained if people with up to two years of employment are included in the newly employed group. However, the size of the difference weakens to 0.34 standard deviation units (tenure shorter than 2 years \(n=268, \text{CC mean score}=3.61, p<.0005\)).

Another independent t-test was conducted to compare people with low complexity work tasks (ALS1) with those who have high complexity work tasks (ALS5 and ALS6). There was a significant difference between employees with low complexity work \((n=86 \text{CC mean score}=3.2, SD=0.975)\) and employed with high complexity work \((n=34, \text{CC mean score}=3.7, SD=0.807, t(118)=2.68, p=.008;\) corresponding to 0.56 standard deviation units, i.e. a medium effect (Cohen, 1988).

In order to assess whether there is an interaction effect between tenure and ALS we conducted a two-way between groups analysis of variance (two-way ANOVA). The subjects were divided into two groups according to their tenure – less than 2 years of tenure in one group and 2 years and more in the other. They were also divided into 6 groups according to their ALS. The interaction effect between tenure and ALS was not significant \(F(5, 1284)=0.235, p=.947\). There was a main effect for both tenure and ALS, \(F(1, 1284)=7.867, p<.005; F(5, 1284)=4.081 p<.001.\) The effect size is small, the corrected model accounts for about 4 percent of the variance.

Thereafter, we controlled for age, gender and dummy coded education and organisational size using hierarchical multiple regression. The control variables were added in the first step. In the second step we included a dummy variable set to one if the person is newly employed (less than two years of tenure) and zero otherwise. Furthermore, we included the ALS variable. Strictly speaking ALS is ordinal, however the variable is close to normally distributed and the relationship with the dependent variable is surprisingly linear (c.f. the discussion in Borgatta & Boernstedt, 1972; Allan, 1976; Knapp, 1990). Preliminary analyses indicated no violation of the assumptions of normality, linearity, homoscedasticity and multicollinearity.

The variables entered in step one explained 2.3% of the variance in the dependent variable. However, only education reached significant levels. Step two explained another 2.6% of the variance in creative climate. Consequently, the full model explained 4.9% of the variance \(F(15, 1280)=4.370 p<.0005\). The new model accounted for significantly more of the variance in the dependent variable, \(F\) change \((2, 1280) = 17.277 p<.0005.\) Both the tenure dummy variable and the ALS variable were significant at the highest level \((p<.0005)\) beta = .141 and .112 respectively. Consequently, complexity of work and tenure explains variance over and above what is explained by age, education, gender and organisational size.
Table 2. Non-parametric correlations for the assessed variables response analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Median</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>42.0</td>
<td>42.5</td>
<td>10.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edu¹</td>
<td>3.00</td>
<td>2.71</td>
<td>0.892</td>
<td>-.244**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender²</td>
<td>1.00</td>
<td>0.59</td>
<td>0.493</td>
<td>-.034</td>
<td>.009</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Org size¹</td>
<td>5.00</td>
<td>4.50</td>
<td>2.10</td>
<td>.020</td>
<td>-.009</td>
<td>.034</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure¹</td>
<td>5.00</td>
<td>4.30</td>
<td>1.79</td>
<td>.461**</td>
<td>-.233**</td>
<td>-.015</td>
<td>.213**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALS¹</td>
<td>3.00</td>
<td>2.80</td>
<td>0.93</td>
<td>.100**</td>
<td>.210**</td>
<td>.292**</td>
<td>.101**</td>
<td>.065*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CC</td>
<td>3.48</td>
<td>3.39</td>
<td>0.85</td>
<td>-.038</td>
<td>.085**</td>
<td>.058*</td>
<td>.008</td>
<td>-1.34**</td>
<td>.110**</td>
<td></td>
</tr>
<tr>
<td>ICC</td>
<td>4.50</td>
<td>4.41</td>
<td>0.73</td>
<td>-.002</td>
<td>.091**</td>
<td>.100**</td>
<td>-.071*</td>
<td>-.083**</td>
<td>.135**</td>
<td>.235**</td>
</tr>
</tbody>
</table>

n= 1275-1303; **p< 0.01; *p> 0.05
1 Ordinal variables see measurements for further details – means have no real meaning
2 Nominal variable coded 0=woman 1=man, i.e. mean gives the proportion of men

Table 2 shows the non parametric correlations between the assessed variables. There is neither a statistically significant correlation between age and creative climate nor between organisational size and creative climate. Men perceive a slightly more creative climate than women; however the difference is insignificant when level of responsibility is controlled for. Education and ALS are positively, but weakly, correlated with creative climate.

Figure 1 depicting average perceived creative climate score as a function of tenure, indicates that tenure is adversely related to perceived creative climate among Swedish white-collar workers for the first few years of employment. Figure 2 shows average perceived creative climate score as a function of ALS for newly employed and for long term employees.
DISCUSSION & CONCLUSION

The results show that newly employed white-collar workers perceive a more creative climate than white-collar workers who are well established in their organisations (RQ1). Furthermore, white-collar workers with high complexity work, i.e. professionals or managers, perceive a more creative climate than do white-collar workers with low complexity work (RQ2). These effects are independent of each other in the sense that the average perceived creative climate is higher for newly employed white-collar workers regardless of their level of complexity of work (RQ3).

One major difference between this study and previous research is that this study is based on a random sample of a population of 300 000 unionised white-collar workers, whereas most previous research commonly assesses employees in a convenience sample of organisations. This has implications regarding both the interpretation and the generalisability of the results.

Since the respondents were randomly chosen from a population of white-collar workers not from a population of organisations, we cannot separate the effects of the respondents’ perceptions and objective aspects of the organisations; i.e. we do not know whether the organisations that the newly employed assess have a more creative climate in some objective sense (c.f. Ekvall, 1996 p. 105). Perhaps people with longer tenure in these organisations would assess these organisations as more creative too.

In short, there are two interpretations of the findings in this study, which are not mutually exclusive. Firstly, creative organisations are more expansive and thus newly employed are predominantly found in organisations with a more creative climate. Secondly, newly employed perceive a more creative climate and this perception fades over time.

There are two possible causal explanations for the second interpretation. Firstly, it can be an indication that organisations are open-minded towards newcomers. Secondly, it can be an indication that new employees often are enthusiastic (Bienkowska, 2007) and harbour new ideas (Power & Lundmark, 2004), this enthusiasm and the new ideas are encouraged but organisational inability to convert ideas into innovations erodes the perception of creative climate over time (c.f. Amabile et al., 1996; Westelius & Askenäs, 2004). Also these two interpretations are not necessarily mutually exclusive but could coexist to varying degrees.

Amabile et al. (1996) argue that it is the perceptions of the climate and the effects these perceptions have on the behaviours of the employees that are relevant. According to this logic the important aspect of this study is that newly employed perceive e.g. management support for ideas and openness for new ideas; and these perceptions makes them more likely to contribute creatively to their organisations. Thus, regardless of whether we put the emphasis on objective organisational attributes or on individual perceptions, newly employed white-collar workers seem more likely to contribute creatively to their organisations than employees with long tenure.

Furthermore, our results show that the level of complexity of work is related to the perceived creative climate. Low levels of perceived creative climate among employees with low to medium complexity of work tasks indicate an unused potential since research has shown that non-experts can contribute (sometimes even more than experts) to creativity and innovation, when encouraged to (c.f. Björkman, 2004; Magnusson, 2003). Burgelman (1983) noted that ideas tend to be generated at low levels in organisations, and unless the entrepreneurs find middle management support, the ventures will not reach the top executives. On the other hand, middle and top-level managers, as compared to first level managers, have been found to be able to make more of e.g. managerial support for entrepreneurial ideas (Hornsby, 2008). According to this line of reasoning, perceptions of the creative climate in the
higher strata of the organisations might have a larger impact on organisational level innovation and entrepreneurship.

Since our study show that the relation between tenure and perceived creative climate is not linear, chances of detecting significant correlations are heavily dependent on the distribution of tenure in the sample. This might explain contradictory results in previous research. The sampling used in this study makes it possible to capture a large enough group of newly employed white-collar workers to statistically compare them to more established employees. However, even so the differences are weak to moderate.

The sampling used in this study makes the results generalisable at least to unionised white-collar workers in Sweden. As we have argued above, the difference between unionised and non-unionised workers is not that important in a Swedish context and thus the results are probably generalisable to white-collar workers in Sweden. Considering the similarities in much of the previous research on creative climate between western countries, one might have some confidence in similar results in other western countries.

The findings in this study should be seen in the larger context of research on the effects of labour mobility on creativity and innovation. Power & Lundmark (2004) showed that labour mobility is higher in innovative clusters than in comparable organisations in the urban economy, indicating a positive relation between labour mobility and innovation. Likewise this study indicates a positive relation between creativity and labour mobility in that newly employed white-collar workers, on average, perceive a more creative climate than do long term employees. Since creativity is an antecedent of innovation this study adds to the growing number of studies indicating a positive relation between labour mobility and innovation.

There are also a couple of implications for future research. The findings in our study could be tested in a longitudinal study where newly employed people are assessed a few times during the course of their employment. Such a study would shed light on the causal relationships underlying the results in this study. More qualitative approaches could also facilitate our understanding of how perceptions of the organisational climate develop over time. Since Michie & Sheehan (2003) find a negative relation between organisational turnover and innovativeness, future research should separate and assess the effects of both inflow and outflow of employees on creativity and innovativeness.

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