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Hello everyone

Welcome to the 4th issue of EWOP in PRACTICE with papers on the application of Work and Organizational Psychology.

EAWOP is going from strength to strength with an increasing membership and the delivery of another outstanding congress in Maastricht earlier this year. Sadly, I was unable to join you at this congress as I had injured my back in an accident. Thank you for all your good wishes during this difficult time and I am happy to say that I have made a full recovery.

I am pleased to be able to strengthen the editorial team and welcome Salvatore Zappalà, member of the Executive Committee, as the co-editor of this journal.

In this edition we are offering six excellent papers representing a wide range of Work and Organizational Psychology (WOP) practice in Europe. Kate Bonsall, from the UK offers us her paper on knowledge sharing effectiveness that examines group identification, trust and hot-desking. This paper has been in much demand by those interested in new ways of working and we are delighted to be able to offer this material in our journal. This is followed by an excellent reflective piece on leadership using practitioner-academic co-inquiry by Kathy Malloy and Kathryn Waddington from London. Next there are three papers from Poland, a newly elected Constituent member of EAWOP. Barbara Kożusznik introduces these papers and gives us the flavour of the rapid change and innovation that is the characteristic of current work in Poland. Marek Drąg describes a fascinating study about risk-taking, attitudes and evaluation of training delivered to employees to enable them to a new information and communication system; Natalia Pytel continues with a rich description of the attitudes of miners in different hierarchical positions toward innovation in their industry in Poland. The final contribution is a brief description of the “Practitioner Day”, an event especially developed for practitioners, held at the Maastricht Congress. This was organised and led by Constituents from: Germany (the Sektion Wirtschaftspsychologie, and BDP); the Netherlands (NIP); and Belgium (Vocap). Hans Peter Dogge describes the four topics that were examined in the facilitated group-discussion that led to a rich exchange of experiences and communication among participants.

I would like to thank all the authors for their contribution to the journal and look forward to further papers being presented for our next edition we are planning in the New Year. Enjoy these papers and please contact the authors by email to continue discussion. With the author’s permission we will summarise these discussions for you in the next edition of the journal.

This journal is for you and also may be made by you. Think about writing for the journal yourself. The philosophy of the journal is to publish papers about the practice of WOP in Europe. We are interested in articles describing practices, procedures, tools, or even changes in organizational procedures stimulated by changes in national laws. We want to know much
more about professional activities across Europe, thus we are looking also for a contribution from you. Are you an expert in selection? Training? Job stress reduction? Organizational development? Is a successful project that you have lead, or contributed to that you would like to share? Do you want to start a reflexion on the limits of some WOP Psychology practice? Do you want to ask for suggestions on decisions and tools to use in an intervention? Here you can find the right place to present and discuss these types of experiences. A two-three pages contribution is perfectly ok.

The format for the papers is described in the style guide associated with this page. If you would like to discuss your ideas for a contribution or send us an outline we would be happy to comment on this and assist in its preparation.

Best wishes for the coming festive celebrations, enjoy the journal and … do not forget … we look for your contribution.

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Abstract
This study was conducted in a knowledge intensive company to establish key factors contributing to employees’ perceptions of knowledge sharing effectiveness (KSE), and to explore the impact of remote working at both group and company level. Several factors were considered including identification, motivation, hot-desking and client-based working. Analysis of questionnaire data showed that identification with the group was a consistent key predictor of group KSE, and trust that knowledge would be used fairly and appropriately was a consistent key predictor of company KSE. While hot-desking and being client-based had little impact on ratings of KSE, hot-desking had negative implications for group identification.

Introduction
Bassi defines knowledge management as ‘the process of creating, capturing, and using knowledge to enhance organizational performance’ (1997, p.26). This effective knowledge management process is recognised as a key source of innovation and competitive advantage (Nonaka, 1994). Unsurprisingly, an abundance of research has been carried out in the area of knowledge management. Such research has found that explicit knowledge is easier to share (Osterloh & Frey, 2000) and that frequent communication opportunities, particularly face-to-face communication, aids knowledge sharing (e.g. Allen, 1997). However, the importance of the social context of knowledge has only recently begun to be recognised and explored.

Knowledge management in context
Pemberton, Stonehouse and Francis (2003) argue that technological infrastructure needs to be supported with human and cultural infrastructure, leadership and communications that promote the value of knowledge. There has been some research into these factors, but critics argue that gaps remain in relation to motivation (Sveiby & Simons, 2002), commitment (Hislop, 2005) and the role of organizational identity and cohesion (Argote, McEvily & Reagan, 2003). Where organizational identity and cohesion have been researched, it appears to be limited to theoretical rather than empirical research. I will explore some of these factors in more depth to illustrate how they may shape knowledge sharing effectiveness.

Motivation and trust
Sveiby and Simons (2002) claim that motivation to transfer knowledge is more important than process design, office design
and software designed to facilitate knowledge sharing. It is not uncommon for employees to be reluctant to share knowledge (Hislop, 2005) as it is central to their value within a company and may compromise their position if shared (Scott, 1998). Research indicates that interpersonal trust (Nemiro, 2000), concerns over compromising one’s professional status (Morris, 2001), sense of equity (Kim & Mauborgne, 1998), reward and recognition (Ardichvili, Page, & Wentling, 2003) and general organizational culture (Robertson & Swan, 2003) will all affect people’s willingness to share knowledge.

Organizational identity and cohesion

Social network research suggests that having strong ties with others and the ability to develop relationship-specific heuristics and specialised language facilitate the transfer of complex knowledge (Uzzi, 1999). Argote and colleagues (Argote et al., 2003) highlighted that ‘divisions’ within a company such as those between different departments set up organizational boundaries that may affect knowledge transfer; and that the issues of knowledge flow across these boundaries needs to be explored in more depth. Indeed, research has demonstrated that cohesion, defined as ‘an individual’s desire to identify with and be an accepted member of the group’ (Evans & Jarvis, 1984, p.204), and identity are important to employees’ satisfaction and commitment (Fiol & O’Connor, 2005; Haslam, Postmes & Ellemers, 2003) and can improve productivity (Millward & Postmes, 2010).

To date there has been little research into remote working and knowledge sharing (KS), and in 2006 Horowitz, Bravington and Silvis argued that more work in this area is required. Remote working, in its various forms, is becoming more common and the need to be based at a company office, and to have a permanent desk within it, is decreasing. The apparent advantages of these remote arrangements (such as reduced accommodation costs and greater flexibility) have led to a boom in hot-desking and client-based working and the pattern of remote working is likely to continue.

Knowledge sharing practices have been explored in remote and virtual contexts but this research is limited mainly to studies of communication patterns such as language and heuristics mainly with student samples or based on product development samples. Evidence is mixed, with some research suggesting that remote workers may be less effective at sharing information (Hightower & Sayeed, 1995) and other research showing no difference in information exchange between face-to-face and virtual groups (Warkentin, Sayeed, & Hightower, 1997). These differences limit the conclusions that we can draw about KSE implications for hot-desk workers and client-based workers.

The limited amount of research into identity and motivation processes in remote workers (specifically those in remote: Warkentin et al, 1997; partially distributed teams: Huang & Ocker, 2006; or people who hot-desk: Millward, Haslam & Postmes, 2007) suggests that these workers may interact with their colleagues differently and feel less ‘connected’ to their organization. People who hot-desk (described as “hot-deskers”), because they do not have a permanent desk, are less likely to consistently work in close proximity to the same group members, meaning that their sense of belonging to their group may be less stable (Millward & Postmes, 2010). Client-based workers will not work in close proximity to many (if any) members of their group or organisation, and again their sense of belonging may suffer. For example, research with finance
and accounting consultants indicates that hot-deskers may experience reduced physical and psychological salience of their group and company causing them to identify less than employees who are assigned desks (Millward et al., 2007). Given that identity and motivation may be critical to KSE (as outlined above), it is proposed that KS among remote workers may suffer, and so research into these important issues is needed.

The aim of the current study was to explore the role of various variables in ratings of group and company KSE. Based on the findings of previous research, it was predicted that the following would be associated with higher ratings of KSE: engaging in frequent communication (Hypothesis 1); a strong sense of identification with the group / company (Hypothesis 2); and a high motivation to share knowledge (Hypothesis 3). It was expected that identification would mediate the relationship between communication and KSE (Hypothesis 4), and motivation would mediate the relationship between identification and KSE (Hypothesis 5). Finally, it was predicted that that remote working practices would be associated with lower ratings of identification (Hypothesis 6) and KSE (Hypothesis 7).

**Method**
The study was conducted within the consulting division of a large global design and business-consulting company that prides itself on its technical and strategic knowledge (here on referred to as ‘the company’).

The research concentrated on three professional subgroups: group A (management consulting); group B (dealing with communications); and group C (working in project management). A total of 299 staff belonging to these groups who worked from a range of sites across the UK were invited to take part in this study. Each employee had a principal office belonging to the company, but was also required to visit or work from client sites, as necessary. The company offices varied in their design and use of hot-desking. For example, the largest proportion of hot-deskers belonged to group A. The company had recently acquired a smaller business consulting group, the members of which joined group A. This was taken into account in the study using the variable of ‘incorporated company’.

**Questionnaire Sample**
In 2007 a total of 299 on-line questionnaires were distributed to staff belonging to the three sub-groups, and 141 questionnaires were returned, representing a response rate of 47%.

Time working for the company ranged from one month to 36 years four months with a mean of six years and nine months (SD 7.19). Respondents were paid on a range of grades (on a scale from 1=lowest level of seniority to 9=highest level of seniority), the most common being Grade 6 (19.1%), followed by grade 8 (17%) and the least common being grades 1 (2%) and 2 (2.8%) (SD 2.06). A total of 129 respondents worked full-time and five worked part-time. The majority, 86 (61%), had a permanent desk while 48 (34%) were hot-deskers. Twenty-nine respondents (21%) spent the majority of their time at a client site (here on in referred to as ‘client-based’).
measures to assess the factors that were being explored in the current study. Thus, it was necessary to develop measures specifically for this study such as a measure of Knowledge sharing effectiveness. A measure of how easy it was to articulate participant knowledge was also devised. Factor analysis was used to determine the underlying structure of the scales and to confirm that each scale related to a different factor (all scales had a Cronbach’s alpha of 0.7 or higher).

All study variables (KSE, frequency of communication, identification and motivation to share knowledge) were measured in the context of the functional group and the company. Brief details of the scales are provided below:

**Knowledge sharing effectiveness (KSE)**
An adaptation and extension of the employee attitude section of Sveiby and Simmons’ (2002) Collaborative Climate scale. A five-point scale (from strongly disagree to strongly agree), which factored into three subscales: a) General: extent to which current KS practices in the group / company are effective and satisfactory (e.g., “I am satisfied with the quality of knowledge sharing across our group”); b) Personal learning: extent to which the employee has learnt from KS and developed expertise (e.g., “I have learnt a lot from other staff in this group”); and c) Group or company knowledge and ideas: extent to which KS has resulted in developing deeper knowledge, new ideas and solutions at a group and company level (e.g., “combining the knowledge amongst staff has resulted in many new ideas and solutions for the group”).

**Frequency of communication**
This was measured by an extension of a scale previously used by Weisenfeld et al. (1999). A six-point scale (from ‘never’ to ‘very frequently’) indicated the frequency with which various communication methods were used.

**Identification**
This was measured using a version of the Perceived Cohesion scale validated by Salisbury and colleagues (Salisbury, Carte, & Chidambaram, 2006) for use in distributed settings. Participants use a five point scale (from ‘strongly disagree’ to ‘strongly agree’) to rate their agreement with various statements (e.g., “I feel that I belong to the group”).

**Motivation to share knowledge**
A scale was designed to measure the potential factors in motivation to share knowledge, as identified from a review of the literature. Factor analysis showed three subscales: need (how important knowledge sharing is for group / company success); expertise (extent to which the employee is concerned that knowledge sharing could compromise their personal expertise); and trust (extent to which the employee trusts that the information they share will not be used inappropriately or unfairly). On each of the scales, all items were asked both in relation to functional group (i.e., their own professional subgroup) and to the company with the word ‘group’ or the company’s name inserted as appropriate.

**Results**
Data from the questionnaire were analysed by measuring correlations, t-tests, regressions and hierarchical regressions. The hierarchical regressions show which factors were most important for effective group KS and company KSE. These findings are presented first, and then the results relating to the significance of the other factors are then presented.
Critical factors for KSE  
Findings indicate that critical factors differ between group KSE, and company KSE.

Group KSE  
For group KSE, a sense of identification with the group was consistently an important factor (supporting Hypothesis 2). The three subscales of the group KSE scale (general, personal learning and group knowledge and ideas) had a small to medium significant, positive correlation with scores on the identification with group scale; with personal learning having the strongest relationship. Sense of identification with the group was the most significant contributor to personal learning and group knowledge and ideas. Other than identification with the group, the three group KSE scales differed with regard to critical factors (see Table 1 below). Partial support was offered for Hypotheses 1 and 3, as communication and motivation to share were factors for some group KSE scales.

Table 1: A summary of the group KSE findings

<table>
<thead>
<tr>
<th>Aspect of group KSE</th>
<th>Key factor</th>
<th>Result</th>
<th>Variance accounted for by variables entered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group-level knowledge sharing (all subscales)</td>
<td>Identification with the group</td>
<td>( r = 0.233, p &lt; 0.01 ) to ( r = 0.464, p &lt; 0.001 )</td>
<td></td>
</tr>
<tr>
<td>KSE sub-scale: General KSE</td>
<td>Functional groups A and C</td>
<td>( \beta = -0.245, p &lt; 0.05 )</td>
<td>31.3%</td>
</tr>
<tr>
<td></td>
<td>Identification with the group</td>
<td>( \beta = 0.199, p &lt; 0.05 )</td>
<td></td>
</tr>
<tr>
<td>KSE sub-scale: Personal learning</td>
<td>Identification with the group</td>
<td>( \beta = 0.400, p &lt; 0.01 )</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Motivation based on group need</td>
<td>( \beta = 0.273, p &lt; 0.05 )</td>
<td></td>
</tr>
<tr>
<td>KSE sub-scale: Group knowledge and ideas</td>
<td>Identification with the group</td>
<td>( \beta = 0.197, p &lt; 0.05 )</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Frequency of group communication</td>
<td>( \beta = 0.178, p &lt; 1 )</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Motivation based on group need</td>
<td>( \beta = 0.157, p &lt; 1 )</td>
<td></td>
</tr>
</tbody>
</table>
Company KSE
For company KSE, the motivation to share knowledge based on trust that knowledge would be used fairly was the most important factor; ‘personal learning’ and ‘company knowledge and ideas’ both had significant correlations with ‘group trust’ motivation ($r=.241, p<.05$ and $r=.286, p<.05$, respectively). These findings support Hypothesis 3.

Table 2: A summary of company-level KSE findings

<table>
<thead>
<tr>
<th>Aspect of group KSE</th>
<th>Key factor</th>
<th>Result</th>
<th>Variance accounted for by variables entered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company-level knowledge sharing (all subscales)</td>
<td>Company trust motivation</td>
<td>(see below)</td>
<td></td>
</tr>
<tr>
<td><strong>Significant unique contributions in hierarchical regressions:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KSE sub-scale: General KSE</td>
<td>Time at client office</td>
<td>($\beta=.322$, $p&lt;.05$)</td>
<td>26.4%</td>
</tr>
<tr>
<td></td>
<td>Company trust motivation</td>
<td>($\beta=.271$, $p&lt;.05$)</td>
<td></td>
</tr>
<tr>
<td>KSE sub-scale: Personal learning</td>
<td>Frequency of communication with other groups</td>
<td>($\beta=.245$, $p&lt;.01$)</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Company trust motivation</td>
<td>($\beta=.202$, $p&lt;.05$)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time at the company</td>
<td>($\beta=.170$, $p&lt;.05$)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Being in functional group C (not belonging to the incorporated company)</td>
<td>($\beta=.168$, $p&lt;.05$)</td>
<td></td>
</tr>
<tr>
<td>KSE sub-scale: Company knowledge and ideas</td>
<td>Frequency of communication with other groups</td>
<td>($\beta=.385$, $p&lt;.01$)</td>
<td>49%</td>
</tr>
<tr>
<td></td>
<td>Company trust motivation</td>
<td>($\beta=.290$, $p&lt;.1$)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time at client office</td>
<td>($\beta=.253$, $p&lt;.05$)</td>
<td></td>
</tr>
</tbody>
</table>
The three company KSE scales differed with regard to key factors (see Table 2). Partial support was offered for Hypothesis 1 and 3, as communication was a factor for some company KSE scales.

The majority of the hot-deskers belonged to the incorporated company. Due to this overlap, the regression was re-run without the ‘incorporated company’ variable to explore the influence on the relative importance of the other variables on company KSE ‘personal learning’ when this variable was removed. The only real difference to the results was that hot-desking now had a significant direct relationship with KSE personal learning (partial support for Hypothesis 7). Thus, in this sample, the influence of the incorporated company and its potential confound with hot-desking may be preventing the true effect of hot-desking from being revealed.

**Mediation model**

There was no support for Hypothesis 4, as there was no evidence that identification mediated a relationship between frequency of face-to-face communication and KSE.

There was some support for Hypothesis 5 - in most instances, there was the expected positive relationship between identification and motivation to share knowledge. A significant correlation was found between identification with the company and company knowledge and ideas KSE (r= .335, p<.01), and a regression indicated a partial mediation effect of motivation ‘company trust’.

**Remote working practices**

Hot-deskers had lower ratings of identification with the group (t (127) =2.17, p<0.05) and with the company (t (127) =1.79, p<.1). However, there was no significant relationship between being client-based and ratings of identification with the group or with the company (partial support for Hypothesis 6).

Compared to those with permanent desks, hot-deskers gave significantly lower ratings of personal learning from company KSE (t (70.8) =1.54, p<.01). A small but significant finding was that client-based employees gave lower ratings on the ‘group knowledge and ideas’ group KSE scale than those based at a company office (t (122) =1.70, p<.1). However, regression analyses showed that once identification for group KS, and motivation based on trust for company KS are taken into account, they override the effect of hot-desking and client-based working on KSE, suggesting that these remote working practices are not a source of concern for KSE. Instead, attention should be focused on identification for group KSE and trust for company KSE.

The results suggest that the ease with which participants could articulate their knowledge had no significant relationship with KSE.

In summary, there was some support for Hypotheses 1, 2 and 3 – that frequent communication, sense of identification and motivation to share knowledge are important factors in some areas knowledge sharing effectiveness. Although frequent communication was important for some forms of KSE, there was no evidence that face-to-face communication was significant for KSE. There was partial support for Hypotheses 5 and 6; in most instances, there was the expected positive relationship between identification and motivation to share knowledge, hot-desking was associated with lower identification but client-based working was not. Support for Hypothesis 7 – that remote working practices influence KSE - was limited once other factors were taken into account. There was no support for Hypothesis 4 -
no evidence that identification mediated a relationship between frequency of face-to-face communication and KSE.

**Discussion**

The findings of this study highlight the need to differentiate between group and company KSE, challenge the findings of some previous KSE studies (that face-to-face communication and ease with which information can be articulated are key factors) and add weight to previous studies on remote working. I have summarised the findings in Figures 1 and 2 below along with recommendations.

**Figure 1: Critical factors and recommendations for group KSE**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Interpretation</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification with the group (all sub-scales)</td>
<td>Having strong ties within the group may help members develop a shared understanding encouraging them to feel more committed and be more productive.</td>
<td>To encourage group KSE, interventions should aim to increase the sense of identification and cohesion with the group. This may be achieved by increasing the salience and attractiveness of the group, making it a desirable group in which people wish to be accepted and belong (Jackson &amp; Smith, 1999), for example by implementing team development interventions (DiMeglio, Lucas &amp; Padula, 2005). Attention should also be paid to developing the features of cohesive relationships that facilitate KS such as heuristics and language.</td>
</tr>
<tr>
<td>Motivation based on group need (for personal learning and group knowledge and ideas)</td>
<td>This implies that people are motivated by the results (perceived improvements in personal and group knowledge) they see from prior effective KS, and the belief that KS will benefit the group motivates people to share knowledge. Alternatively, this relationship between outcomes and motivation could arise because people feel motivated to KS based on group need, anticipating that they will be rewarded for doing so.</td>
<td>The effect of reward and recognition for KS on enhancing motivation to KS has been demonstrated in previous research (e.g., Jarvenpaa &amp; Staples, 2000). These findings imply that organizations could improve KSE within functional groups by communicating examples of the results and benefits of effective KS, and offer some form of reward to employees who demonstrate effective KS.</td>
</tr>
<tr>
<td>Frequency of communication (for group knowledge and ideas)</td>
<td>Previous studies claim that frequent communication allows the opportunity for articulation and internalisation of knowledge which leads to effective knowledge creation and exchange (e.g., Madhavan &amp; Grover, 1998). Moreover, it is possible that frequency of communication is important for group knowledge and ideas (and not satisfaction with group KSE or personal learning) because the more they communicate with the group the more they are aware of the group’s knowledge and ideas. Communication with others is not required for the awareness of one’s own personal learning, or to form an opinion of satisfaction with group KS.</td>
<td>Practical organizational interventions to enhance group KSE could include ensuring that each employee has frequent opportunities to communicate with colleagues by, for example, having information-sharing sessions in group meetings, circulating update emails and news bulletins.</td>
</tr>
</tbody>
</table>
This could be due to the nature of group work meaning that they have a great understanding and awareness of KS practices within the company, and are thus more likely to feel satisfied with them. As a company, it would be worth exploring this in more detail with members of the communications subgroup to see if any lessons can be learnt and applied to members of other subgroups.

| Functional group (membership of the functional subgroup that specialised in communications was also a positive predictor of ratings of general satisfaction with group Ks). | This could be due to the nature of group work meaning that they have a great understanding and awareness of KS practices within the company, and are thus more likely to feel satisfied with them. | As a company, it would be worth exploring this in more detail with members of the communications subgroup to see if any lessons can be learnt and applied to members of other subgroups. |

**Figure 2: Critical factors and recommendations for company KSE**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Interpretation</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation based on trust (for all subscales)</td>
<td>For high ratings of company KSE, it is important that employees feel the knowledge that they share will be used appropriately and fairly.</td>
<td>To improve company KSE, the focus should be on building trust between the groups/departments and as Goh (2002) recommends, making decisions openly, ensuring information is widely available and treating employees fairly.</td>
</tr>
<tr>
<td>Frequency of communication (for company knowledge and ideas, and personal learning).</td>
<td>This may be because personal learning from company KS requires frequent opportunity to interact with company colleagues to learn from them and gain an understanding of their situated knowledge (whereas an understanding of the groups’ situational knowledge already exists).</td>
<td>The same recommendations as listed under the group KSE section above would apply (information sessions, update emails and news bulletins), this time ensuring that communication occurs at across the company, as well as within functional groups.</td>
</tr>
<tr>
<td>Time at client office (for general and company knowledge and ideas).</td>
<td>This suggests while being client-based has no negative implications for personal learning, but that it can take time for the client-based workers to perceive, and feel satisfied with company-level outcomes.</td>
<td>Organizations should aim to accelerate this process by paying particular attention to communicating the success of KS client-based employees.</td>
</tr>
<tr>
<td>Functional group (membership of the recently incorporated company was an important negative predictor for personal learning from company KS).</td>
<td>This may reflect the fact that these employees were relatively new to the larger company and so did not feel that they had yet learned anything from them to share knowledge with the company. Membership of the incorporated company was also associated with lower ratings of motivation based on perceived company need and benefit. In combination, these findings demonstrate that these employees may feel that their knowledge is different to that of the company, it is less useful and beneficial to the company, and in turn, what they can learn from the company is of limited use to their personal learning.</td>
<td>In light of these findings, the company could benefit by doing more to demonstrate the relevance of knowledge sharing to all functional groups.</td>
</tr>
</tbody>
</table>
Other findings and recommendations
The findings of this study suggest that increasing identification may be a way of enhancing ‘company trust’ motivation. This means that in addition to trying to build trust, organizations should also build an image of the company as being an attractive place to work.

In comparison to those with a permanent desk, hot-deskers gave lower ratings of identification with the group, and slightly lower ratings of identification with the company. If suggestions from previous research are applied, increasing hot-deskers’ sense of control, and the psychological salience of their group and company may help to mitigate this. The results of previous research demonstrate that the feeling of lack of control over their workspace is associated with lower group identification (Lee & Brand, 2005; Knight & Haslam, 2010). If the hot-deskers in the current study felt a lack of control over and flexibility in the design and use of their workspace, this could be one explanation for the findings. However, because perceived control over workspace was not included in this study, this conclusion can only be speculative. The results of Millward’s study (Milward et al., 2007) suggest that as well as physical salience, psychological salience of the group for hot-deskers is also important. If the hot-deskers tend to work on tasks that do not require as much interaction with the group, their group identity may become less salient. In the context of the current study, if the hot-deskers tended to work on tasks involving clients, or other groups, this could explain why their identification with the group was lower than those with permanent desks.

Although the findings indicate that in this instance the hot-desking-identification relationship had limited bearing on KSE, it could have implications for other factors that were not included in this study (such as commitment and performance). The findings reinforce the view that it is important to consult employees regarding the implementation of hot-desking (so that they feel they have some control over it). Organizations should also aim to keep the functional group and company psychologically salient, emphasising how both are relevant to and benefit the role of the employee (highlighting shared goals and interests, for example) and encouraging collaborative working within the group and across the company.

Contrary to Hypotheses 6, client-based employees’ ratings of identification with
the group or the company did not differ from the ratings of other employees. This may be because they do have a sense of control over their workspace, because the group and company remain psychologically salient and/or because communication in most cases was no different to those with permanent desks (and as described above, communication across the company was associated with sense of identification with the company). Alternatively, there could be some bias in the responses given, with people working away from the main office not wanting to indicate low identification levels for fear it might reflect badly on them.

The findings imply that when other factors are considered, neither hot-deskers nor client based workers gave lower ratings of KSE. It is possible that remote working was not particularly detrimental to KSE because these workers are sufficiently familiar with the group and company to avoid KS problems. Indeed, Jackson (1999), from his work on virtual teams, proposes that prior face-to-face meetings may be enough to produce the ‘shared mental models’ that Madhaven & Grover (1998) claim are key to efficient and effective knowledge creation and transfer. However, with regard to ‘current’ face-to-face communication among participants, this was not associated with higher levels of KSE or identification with the group or the company, implying that face-to-face communication is not as important to the sense of KSE or identification as previous research suggests.

Overall, the results highlight the importance of frequent communication (not necessarily face-to-face), sense of identification and motivation to share knowledge in some forms of KSE, and how motivation can mediate the relationship between identification and KSE. The study indicates potential areas for development for organizations aiming to maximise their knowledge sharing practices, as well as identification issues that may be faced by workers who hot-desk.

**Study limitations and future research**

This study was not an exhaustive evaluation of all the determinants of KSE. Additional factors such as leadership (Goh, 2002) or general organizational culture (Robertson & Swan, 2003) may contribute to the effectiveness of KS, and could possibly account for differences in group versus company-level findings. More research is required in the field of identification and motivational processes in KS, and into the effects of remote working practices such as hot-desking to validate the findings of this study. The recent acquisition of a smaller company may have confounded the effect of hot-desking on personal learning from company KS, and so a repeated study in a more stable setting is recommended. Further research should consider the inclusion of objective measurements of KSE, motivation scales relating to conforming to group norms, rewards and recognition and prior KS success, and perceptions of control over workplace.

Future studies exploring working environments and identification could consider additional variables. For example, the inclusion of a measure of identification towards the client organization for client based workers to see if they ‘go native’ and identify more strongly with the client organization than with their employer. Social network analysis could be applied to this area to examine in greater depth the communication patterns of hot-deskers and those based at client sites to give a greater contextual understanding of feelings of identification.
Recommendations made in this study include interventions to build trust, consulting employees regarding the implementation of hot-desking, highlighting the shared goals and interest of groups and the company, developing shared language, and communicating the benefits of knowledge sharing. In future, the impact of interventions designed to improve group identification and company trust upon KSE should be evaluated.

Conclusions
The current study was conducted in response to the changing value of knowledge at work, the increase in remote working practices in an attempt to draw together existing research evidence and propose a model of mediation effects. The research was the first of its kind to compare these processes at a group and company level and to explore the effects of hot-desking on motivation to share knowledge.

As well as highlighting the need to distinguish between different types and levels of KSE, the analyses used in the study enable conclusions to be drawn about important predictors of KSE, highlighting the importance of identification with the group and company trust. In the wealth of literature on KSE this provides a focus for improvement interventions.

References


About the authors

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Abstract
This article is a critical reflection on learning about leadership and putting leadership theory into interprofessional practice. It is based around reflection upon a leadership intervention experienced in practice in a U.K. hospital setting, undertaken as an assignment task for a leadership module. Critical reflection and co-inquiry involves unsettling previously held beliefs and assumptions about learning, practice and disciplinary knowledge. This has meant discarding our traditional ‘practitioner’ and ‘academic’ roles, and re-positioning ourselves as co-authors and editors of our social worlds. The article concludes with reflections upon the role of Work and Organizational Psychologists in interprofessional collaborative working.

In an interestingly coincidental way the action of cutting edge effective leadership mirrors the principles of co-inquiry and honoring learning derived from lived experience, and is open to diverse ways of thinking.
(Yorks, Aprill, La Don, Rees, Hofmann-Pinilla & Ospina, 2007, p.493)

Introductions

Kathy: When I undertook the module Leadership for Practice and Service Delivery I was working as an orthopaedic nurse practitioner in a professional context of acute hospital nursing, and not in my current role/NHS Trust. My role at the time encompassed teaching, supporting and developing ward-based staff to deliver high quality nursing care to patients with musculo-skeletal disorders and injuries. This included the use of evidence-based clinical guidelines and I was working as a clinical leader, an expert nurse and a role model for more junior staff.
Kathryn: I am a Work and Organizational Psychologist and lead the above module; my professional discipline is nursing and I describe myself as a ‘practice-based academic’. My role as Director of Interprofessional Practice Programmes is predominantly about enabling professionals from different backgrounds to learn with from and about each other (Freeth, Hammick, Reeves, Koppel & Barr, 2005), and this includes my own learning. This article draws upon the module assignment task which requires critical reflection and analysis of a leadership situation experienced in practice, and the application of theory to practice. In order to preserve confidentiality some of the details of the leadership situation have deliberately been changed, without altering the key learning points. We have also used the terms ‘they’ and ‘their’ rather than he/she and his/hers to ensure anonymity.

The article is written partly in the first person, as we critically reflect upon our learning about leadership and how to put leadership theory into practice. Italicised narrative is inserted at selected points in the text to illustrate reflexive engagement with theory and experience, and also openness to diverse thinking as advocated by Yorks et al. (2007) in the above introductory quote. The position we adopt is primarily one of practical self-reflexivity, drawing on critical perspectives to: ‘Examine our values and ourselves by exercising critical consciousness... [and] question our core beliefs and our understanding of particular events’ (Cunliffe & Jun, 2005, p. 229; Waddington, 2010a). First we outline approaches to critical reflection and the context of current leadership perspectives within the NHS in the U.K. This is followed by reflection upon an emotionally-charged leadership incident and discussion of the nature of co-inquiry in professional education and practice. We conclude by exploring aspects of interprofessional learning and collaborative practice and the implications for Work and Organizational Psychology.

**Approaches to critical reflection**

As Fook & Gardner (2007) note, the literature in this area is vast, spanning a range of fields and disciplines such as education, professional learning, social theory and management. Citing Cressey’s (2006) concept of ‘productive reflection’ they argue that critical reflection:

> [h]as no central academic core in a singular disciplinary approach but takes a position which crosses accepted academic boundaries. Because of this it is an unsettling concept and the journey leads writers into unfamiliar territories whose correspondence may not at first glance seem obvious (Fook & Gardner, 2007, p.13, emphasis added).

This capacity to unsettle and challenge previously held beliefs and traditional disciplinary boundaries involves a deeper examination of the assumptions upon which thinking, actions and emotions are based. The process of reflection becomes critical when connections are made between assumptions, and the social context in which they occur, as a basis for changed actions. This approach therefore is underpinned by the theoretical traditions of reflective practice, reflexivity, post-modernism and deconstruction, and critical social theory (Fook & Gardner, 2007).

**Reflexivity**

Reflexivity is a complex and contested concept, and space precludes detailed discussion here. In research terms, reflexivity is used to acknowledge the role, influence, subjectivity and visibility of the
researcher. More broadly, reflexive practice is about working with our subjective understandings as a starting point for thinking more critically about the impact of our assumptions, values, and actions on others. However as Alvesson, Hardy & Harley (2008) note, without critical interrogation, reflexivity runs the risk of becoming a pointless exercise with the potential to generate large amounts of uninteresting text.

In this article we have adopted a position of practical reflexivity which enables us to ‘to understand ourselves, our ways of relating to others, and how to participate in our social world (Cunliffe & Easterby-Smith, 2004, p.35-36). In this context, Kathy participates as a leader and learner in a clinical world of nursing, Kathryn participates as a leader and learner in an interprofessional and interdisciplinary world of practice-based academia. However we also exist in other social worlds outside of our work, recognising that reflexivity encompasses the ability to understand how all aspects of ourselves and our contexts influence the way in which we create knowledge (Fook & Gardner, 2007; Waddington, 2010a).

Kathryn: I have grappled with the: ‘Who/what am I?’ question in relation to my role as a practitioner; at times discarding a professional nursing identity, privileging that of psychologist and scientist-practitioner, then returning to a practice-based academic identity via the role of professional educator. I now feel comfortable with my ‘mixed-race’ academic identity which is a creative hybrid of skills, insights, intuitions, knowledge and ideas. I could theorise this in terms of personal, professional and career development and role identity, but choose not to in this reflexive narrative. Rather, I am curious about how much}

easier it seems to transfer and apply disciplinary knowledge and ideas from psychology (and other disciplines) to professional practice than it is to transfer and apply practice-based professional knowledge and ideas to disciplinary practices. In my experience there is a paradox: in theory, theory and practice should relate to each other, but in practice they don’t.

The NHS leadership context
Within the NHS there is, and has been for some time, a great emphasis on the need for leadership (DH, 2000; 2008), but there is not always an adequate definition of what this means. For healthcare practitioners the requirements of leadership across professional, clinical and organizational boundaries can appear daunting. The current NHS leadership development agenda has its roots in the NHS Plan (DH, 2000) and the need for leadership to deliver radical change and modernised healthcare services. Evaluation of subsequent leadership development initiatives demonstrated positive change in clinical leadership capability and competence (e.g., Hancock, Campbell, Bignall & Kilgour, 2005). The most recent NHS white paper Equity and Excellence: Liberating the NHS signals arguably the most difficult yet potentially most exciting period of transformation (DH, 2010; Maben & Griffiths, 2008). However, without associated change in organizational and professional cultures to support and embed leadership capability and competence, investing in change at the individual level is potentially a recipe for failure.

Looking back over the last decade, it is evident that sustainable leadership development was elusive, often despite significant financial investment (Waddington, 2010b). The important question then is this: what theories, frameworks and skills
are needed to enable individuals to advance in their role as practitioners, partners and leaders within healthcare?

Leadership and nursing
There are many definitions of what a leader is and what leadership truly means, particularly in the public sector. Within nursing and healthcare organizations Hersey and Blanchard’s (1977, cited in Luna & Jolly, 2008, p. 20-21) situational leadership approach has been viewed as relevant and applicable. Briefly, four leadership styles are identified which effective leaders can adopt, based upon their judgement of the situation, and the followers or people being supervised: a) Directing Leaders: define the roles and tasks of the ‘follower’, and supervise them closely; decisions are made by the leader and announced, so communication is largely one-way; b) Coaching Leaders: still define roles and tasks, but seek ideas and suggestions from the follower; decisions remain the leader’s prerogative, but communication is much more two-way; c) Supporting Leaders: who pass day-to-day decisions, such as task allocation and processes, to the follower; the leader facilitates and takes part in decisions, but control is with the follower; and d) Delegating Leaders: are still involved in decisions and problem-solving, but control is with the follower; the follower decides when and how the leader will be involved.

However, as Alimo-Metcalfe & Alban-Metcalfe (2004; 2006) note, U.S. derived models of heroic/distant leaders are limited in their application to contemporary healthcare practice. They propose instead a research-based model of ‘nearby’ leadership based on day-to-day leadership behaviours elicited from men and women at every organizational level from a range of cultural and ethnic backgrounds. The ‘nearby’ leadership model emphasises valuing of individual difference and working in true partnership, which aligns well with the current drive for interprofessional practice and collaborative working (Waddington, 2010c).

Adoption of a critical approach to leadership is also important because: ‘critical thinking skills are the pre-requisite leadership skills required promoting sustainable emancipatory change within organizations (Western, 2008: p.9; emphasis added).

Kathy: For the purposes of the assignment task I chose to critically reflect on an incident that involved the incorrect use of clinical guidelines. Within the incident I became extremely angry, raising my voice on the open ward area. One of my personal beliefs of leadership is that effective leaders do not ‘lose it’ and as such, I was disappointed with my actions during this incident. I wished to explore this further as I believe that the negative emotions involved during the interaction were harmful and unhelpful to both the other practitioner and me (Goleman, Boyatzis & McKee, 2002). Using a reflexive approach I initially examined styles of leadership and the behaviours and qualities of a leader whilst reflecting on my own behaviour within the interaction with my colleague. Before embarking on the journey of using reflexivity to critically analysis the incident, it was necessary to examine myself as a leader using available leadership assessment tools and frameworks.

Leadership frameworks
The NHS Institute for Innovation and Improvement provides a 360 degree assessment tool for leadership skills and abilities as part of the NHS Leadership Qualities Framework (LQF)(NHS, 2006)
The LQF comprises three clusters: (a) Personal Qualities; (b) Setting Direction; and (c) Delivering the Service. Each quality is broken down into a number of levels which help to identify the key characteristics, attitudes and behaviours required of effective leaders at any level of the service. Unsurprisingly because the NHS is such a large and complex organizational system there is a plethora of frameworks and models describing the skills and behaviours required of leaders.

Such frameworks mark an important transition in the understanding of leadership in healthcare because they have been specifically designed for the NHS, and clearly articulate standards for outstanding leadership in service delivery and patient care. There are, however, two critical points to note. Firstly, it has been argued that such competency frameworks are either too conceptually or methodologically flawed, or too simplistic to be of significant benefit on their own (Alimo-Metcalfe & Alban-Metcalfe, 2006; Bolden, Wood & Gosling, 2006). Secondly, leadership competencies and development programmes are either atheoretical, or grounded uncritically in theoretical perspectives that may not necessarily be wholly relevant to healthcare. For example, Gilmartin & D’Aunno’s (2007) review of 60 empirical research studies concluded that:

[L]eadership is positively and significantly associated with individual work satisfaction, turnover, and performance. Despite these important results, however, we argue that researchers are missing opportunities to develop general leadership theory in the health sector, for example, by (a) examining the role of professionals as leaders and (b) developing understanding of the role of gender in leadership (p. 387).

There is therefore a need to question whether leadership development activities that focus solely on development of leadership competence are ‘fit-for-purpose’. Alimo-Metcalfe, Alban-Metcalfe, Samele, Bradley & Mariathasan (2007) used the Leadership Climate & Change Inventory (LCCI)™ to assess the quality of leadership in a longitudinal study of Mental Health Crisis Resolution Teams in England. The LCCI has two sets of items: those that assess leadership competency and those that assess transformational or engaging leadership behaviours. Their study concluded that leadership competencies alone did not predict effective performance. Rather, an organizational culture of ‘engaging’ leadership was the most significant predictor of organizational performance.

Kathy: I was thinking about my learning about leadership in the context of Alimo-Metcalfe et al.’s (2007) concept of ‘engaging with others’, which includes face-to-face communication and being prepared to modify ideas and decisions after listening. Five trusted colleagues within my multidisciplinary team were asked to give me feedback, based on their assessment of my skills and abilities. Using both reflection and the feedback from colleagues, I was able to understand how others perceive me and react to my behaviours; knowing myself (McNichol & Hamer, 2007).

The results of this initial probing were enlightening and I was genuinely surprised by the responses of my colleagues. I was able to reach the conclusion that my preferred leadership style is one of coaching, a style which is common within ward managers (Kenmore, 2008) and is also a situational leadership style. However, this was certainly not the approach I originally
took in this particular incident. Developing others is very important to me as I feel that this ultimately improves my own performance and that of others (Goleman et al., 2002). I identified that I use degrees of situational leadership depending on the different work situations I find myself in, yet prefer to use all situations as learning points. Leaders who embrace into their practice reflection on their values, actions and thinking tend to detect and correct problems with their own effectiveness (Peck, 2009). Armed with this knowledge, I then began to critically examine the incident in an attempt to better understand my behaviours and actions as a leader.

Critical incident analysis
Using reflexivity as a model for analysis, I critically challenged myself with questions about the interaction. Using the characteristics of critical thinking (Waddington, 2010b), summarised in Figure 1 below, I began to ask difficult questions about myself as a leader within the interaction.

Figure 1: The Characteristics of Critical Thinking

- Having an open-mind: appreciating alternative perspectives, understanding different cultural/professional values to gain insight into self and others
- Being inquisitive: curious and enthusiastic, seeking to know how systems work even if the application or relevance are not immediately apparent
- Truth’ seeking: being courageous about asking difficult questions, and hearing answers, obtaining new/different knowledge and perspectives
- Using critical analysis: appraising verifiable information from multiple sources, application of reason and evidence
- Being systematic: appreciating a focused and rigorous approach to problems at multiple levels of complexity
- Challenging: questioning and unsettling values, assumptions, power bases and ways of thinking
- Self-confidence: trusting one’s own reasoning, skills, insights and judgements

(Source: Waddington, 2010b, p.229)

Kathy. When I had established that the practitioner had not followed the clinical guidelines thus causing a patient to suffer discomfort, my anger had given way to what Goleman (1996) describes as anger which builds on anger. In other word I was angry about being angry, however, using reflection I needed to reappraise the situation and examine the root cause of my anger. Critical thinking and questioning led me to explore what events and what personal actions prior to this could have contributed to the situation. For a period of time prior to the incident, I had been taking the lead in the teaching of correct care and management of patients to whom these particular clinical guidelines applied. My initial anger may well have stemmed from my own feelings of being an ineffective leader (Kellerman, 2004) given the time and effort I had invested into a hospital-wide teaching programme. On speaking with the other practitioner, my angry attack seemed to merely make them defensive. They began to make excuses for their actions and evaded responsibility for the incident; confirming - to me - that they were no longer receptive to me as a leader.
Covey (1989) suggests the lowest form of any communication is characterised by defensiveness and protectiveness; this arises from low trust situations and is not effective as it creates a ‘lose-lose’ situation for everyone. A far more constructive approach as a leader would have been to offer empathy whilst using constructive criticism (Goleman, 1996). Constructive criticism is criticism given in a kindly manner with the goal of improving an area of another’s work.

**Applying theoretical perspectives**

Trait theories argue that leaders share a number of common personality traits and characteristics, and that leadership emerges from these traits. These traits are displayed by born leaders, qualities that you either have or don’t have (McNichol & Hamer, 2007). However, this theory leaves no room to explore whether the skills and qualities of a leader can be learnt or indeed developed. It also underestimates the nature of the task and the followers’ reactions (Kellerman, 2004). Adair (2003) describes the characteristics of a leader as: enthusiasm, integrity, warmth, courage, judgement and tough, but fair. Anger on the other hand is seen as a negative emotion and is viewed as being demoralising for followers and indicative of ‘bad’ leadership (Goleman et al., 2002).

To deny ‘bad’ leadership is misguided and limiting leadership characteristics to ‘good’ leadership is also problematic as many definitions of leadership are value free. While good leadership is desired by many, by looking at and exploring what constitutes bad leadership we can also learn lessons (Kellerman, 2004). For example, by examining the way that some leaders exercise power or use their influence in ways that are detrimental to either the individual or the team, one can enhance ones own practice through processes of reflection and clinical supervision (Hawkins & Shohet, 2006).

Goleman et al. (2002) argue that the defining characteristics of successful leaders are that they have high levels of emotional intelligence (EI) and the ability to work with others and lead change. EI is characterised by high levels of self awareness, self regulation, motivation, empathy and social skill (McNichol & Hamer 2007); notably these are also the characteristics of skilled nursing practice. The actions and behaviour within the incident were not those of an empathic or self regulated leader and were certainly not reflective of my usual coaching style of leadership as identified by my colleagues. Low levels of EI are highly detrimental to leadership (Owen, Hodgson & Gazzard, 2004) and I was left feeling very disappointed that my clinical leadership was affected by my emotional response to the situation.

Kathy: Having recognised my anger and accepted responsibility for it, it was then necessary to understand how to deal with this extreme feeling which could pose a threat to productive relationships in the future. When encountering similar situations again, it is important that I learn to manage my behaviour to be an effective leadership role model and motivate others through difficult situations.

Owen and colleagues (2004) suggest that exposure through life to prejudice affects the ability to treat people as equals. Thus, I began to examine whether I indeed held any particular prejudices regarding the other practitioner. My anger had been intensified on learning that, as an experienced practitioner, they were responsible for the incorrect use of clinical guidelines.
I explored whether I was judgemental in my thoughts that they should have a greater knowledge of how their actions could be detrimental to others, and that they should possess the professional confidence to stand up for their beliefs and knowledge. Following the steps suggested by Owens: (a) recognising the feeling; (b) dealing with prejudices; (c) telling the person their behaviour has evoked anger; and (d) being positive by telling them how they can change their behaviour, I can begin to learn how to change my behaviour when faced with difficult scenarios in the future.

Shadow beliefs are suggested by Cashman (2008) to be deep underlying dynamics that can turn a leader’s strengths into weaknesses. Consequently, the more limited the self understanding, the bigger the shadow cast, while the more conscious the self awareness, the more light a leader brings. By using reflexivity, I was able to acknowledge that my disproportionate emotional response to the nurse may have been the target of a shadow belief.

Situational or contingency theory incorporates using either task orientated or relationship orientated styles of leadership to best suit the situation that the leader is in to obtain the best outcome (Luna & Jolly, 2008). Whilst task orientation is usually one-sided communication, relationship orientated style is very much a two-way process (Handy, 1993). Within the incident, I became too emotionally involved to allow two-way discussion to take place.

Transactional leadership provides direction and rewards positive behaviours, focusing on the personal power between the leader and follower; transactional leadership is very much about the hierarchical position of the leader (McNichol & Hamer, 2007). Whilst this may not always appeal as a style of leadership, it may be useful in an organization as a way to get things done on a day-to-day basis. Leadership is about giving direction, but it must be the right direction and this calls for practical intellectual ability and critical thinking (Western, 2008).

Transformational leadership also focuses on the relationship between leader and follower, but from a position of personal power (McNichol & Hamer, 2007). Leaders adopting this style are able to articulate their vision to others and encourage intelligence and inspiration. This particular style of leadership is suggested as being favourable to the art of nursing, crucial to shaping engaging and challenging professional practice environments.

**Kathy:** The practitioner had stated that whilst they knew it was poor practice to ignore clinical guidelines, they had done this because a doctor had instructed them to do so. They admitted that they had questioned the doctor and had told them that their instructions would be contraindicated in this particular clinical scenario, yet when the doctor insisted that their request be carried out the practitioner did so. I was surprised that an experienced and senior practitioner felt compelled to carry out the task, knowing it was not good practice, simply because they were told to do so. This led me to reflect on the power that the doctor seemingly held over them and led to further reflection on the whole incident.

**Professions, power and emotion**

As Gilmartin & D’Aunno (2007) note, practitioners, managers and leaders in the health sector must deal with powerful professionals, especially physicians, who continue to dominate many aspects of
day-to-day work in healthcare organizations. While professionals of all types may have notoriously ambivalent relationships with each other, medicine is probably the most powerful of all the professions. Powerlessness is often a state of mind related to problems with taking up authority (Obholzer & Roberts, 1994). Some organizations tend to discourage people to ask for help, or some people fear that their bosses will look less favourably on them if they do ask for help, creating isolation and demoralisation of the work force. Senge (2006) suggests that everyone has a propensity to find someone or something outside of ourselves to blame when things go wrong. It is only when focusing on our own position are we able to see how our actions extend beyond the boundary of that position. When those actions have consequences that come back to hurt us, we can misperceive these new problems as externally caused.

Kathy: My initial anger then subsided quickly as I began to empathise with the other practitioner and I found myself in a coaching and supporting role once again. On bringing them to a quiet, private area I began to question why they had felt the need to comply to the doctor’s instructions when equipped with the knowledge for good practice that was provided in the clinical guidelines. At this stage, they became visibly upset and less defensive, apologising profusely, repeating that the doctor had told them to act in contra-indication to clinical guidelines. It was clear that they were extremely upset over their actions, and I found myself switching back into coaching mode. This enabled me to explore why they had felt it necessary to ignore their own professional opinion in favour of the doctor’s instruction. Whilst coaching exemplifies the Emotional Intelligence (EI) competence of developing others, my initial actions were negative towards the other practitioner. A learning point for me is to listen first before reacting, without judgement.

I critically examined my style and behaviour within a leadership intervention to enable a deeper understanding of my ability and skills as a leader. It is clear from the literature and the analysis of the incident that the best style of leadership to adopt is one that suits personality preference allowing people to play to their strengths. What is also clear is that leaders cannot lead unless there is someone who is happy to ‘buy in’ to their particular kind of leadership and people have certain expectations of leaders, recognising ‘good’ and ‘bad’ leadership.

I concluded that whilst losing my temper in the incident was not appropriate behaviour for my leadership style, by using elements of EI, I can learn how to deal more effectively with these situations in the future. A high degree of interpersonal sensitivity is valued in nursing leadership, yet it may also represent a degree of vulnerability. EI offers personal and professional development through learning from experience (Akerjordet & Severinsson, 2008). Using EI to shape my responses to similar situations would certainly fit extremely well and enhance my personally preferred coaching style of leadership.

Learning through a process of co-inquiry
The above analysis of Kathy’s leadership incident illustrates how theoretical leadership perspectives were applied to practice in the professional context of acute hospital nursing. This is a leadership environment that is complex, messy, stressful, uncertain and unstable and which requires new approaches to thinking about learning (Yorks et al., 2007). As McWilliam
(2005) argues, traditional learning habits are useful only when the conditions in which they work are predictable and stable. She goes on to identify seven ‘deadly habits of pedagogical thinking that are ripe for unlearning’ (p. 5): a) The more learning the better; b) Teachers should know more than students; c) Teachers lead, students follow; d) Teachers assess, students are assessed; e) Curriculum must be set in advance; g) The more we know our students the better; and h) Our disciplines can save the world.

Implicit in this list of deadly habits is the compelling notion of ‘teacher’ and ‘student’ as co-creators of value, both mutually involved in assembling and disseminating cultural products. Thus the teacher is: ‘in there doing and failing alongside students, rather than moving like Florence Nightingale from desk to desk or chat room to chat room, watching over her flock, encouraging and monitoring’ (McWilliam, 2005:p. 11, original emphasis).

Kathryn: After re-reading and engaging with - not assessing - Kathy’s learning about leadership I am struck by the way it has encouraged my thinking about co-inquiry, the values we bring to theoretical constructs and the nature of leadership-followership. EI has led to many sweeping and often unsubstantiated claims and debates in the academic literature, yet it was evidently a useful device with which to interrogate and critically reflect upon leadership practice. I am also unlearning some ‘deadly disciplinary habits’ and making new connections. For example the idea of ‘teacher’ and ‘student’ as co-inquirers and co-creators of learning aligns with thinking about leaders and followers as co-creators of meaning. I now find myself questioning the use of ‘service delivery’ in the module title, and reflecting further on interprofessional learning and leadership.

The term ‘service delivery’ is an uncritically adopted term, overused in the public sector. The metaphor of ‘delivery’ when used to characterise professional practice, which is complex, uncertain and unpredictable, is simplistic at best, and fundamentally flawed at worst. The notion of service delivery implies a passive acceptance of what is delivered, how, where, when how often and to what standard and with little scope for the co-creation of value and meaning. Arguably those who lead and those who ‘deliver’ a service should work in a leader-follower partnership, based on sharing information and trust (Hollander, 2009; Wong & Cummings, 2009), which are increasingly important aspects of interprofessional learning and collaborative practice.

Interprofessional learning and collaborative practice

Development of collaborative approaches to practice is now seen as an imperative way of working in many sectors (Freeth et al., 2005; Waddington, 2010c). Furthermore, it is likely to gain momentum as its potential to contribute to efficiency savings is fully appreciated (NAO, 2006). Suter & Deutschlander’s recent (2010) knowledge synthesis of the literature linking educational, practice and organizational interprofessional (IP) interventions to clinical and workplace outcomes is significant. The review concluded that in healthcare there is now sufficient evidence that IP interventions improve workplace quality by creating a collaborative culture and increase job satisfaction by improving provider roles, interprofessional collaboration and quality of care. The overarching aim of IP interventions is to work and learn collaboratively with others in the spirit of co-inquiry, with a commitment to learning and practice development at individual practitioner, profession/disciplinary-wide
levels of analysis. However despite the evident benefits of collaborative practice, the reality, as evidenced by numerous public inquiries into human tragedy and organizational failures, is that practitioners, professions and disciplines often fail to share good practice, information and knowledge about what is ‘really going on’ (e.g. Laming, 2009).

Conclusion and final reflections
We conclude by asking what role of Work and Organizational Psychology might play in the development of future IP interventions and collaborative practice, and also what might it learn from other professions. In the U.K. practitioner psychologists are now regulated by the Health Professions Council (HPC), and by bringing regulation of practice into this arena, psychologists, including Occupational Psychologists, play an important role in interprofessional workforce development. For example, effective and engaged leadership and sustained organizational cultural change are essential for the preparation and creation of an innovative interprofessional workforce (WHO, 2010). Work and Organizational Psychology is a key resource for applied theory and research, with scope for strong collaborative working and co-production of new knowledge.

However the difficulties in working collaboratively are often the result of deep-rooted professional, interpersonal and organizational defences, power struggles, rivalries, resentments and resistance to change. Work and Organizational Psychology is not immune to these difficulties, whilst paradoxically making an important contribution to the theoretical and evidence based understanding of such issues. A case of ‘Physician, heal thyself’ perhaps? This phrase alludes to the ability of physicians to heal sickness in others while sometimes not being able or willing to heal themselves. Work and Organizational Psychology has much to offer, but also potentially much to learn. Our ‘scientist-practitioner’ model when adopted uncritically and un-reflexively may simply replicate the emotions and dynamics of professional/medical power revealed here in the analysis of Kathy’s leadership incident. Nursing and other practice-led healthcare professions work with an interdisciplinary knowledge base which includes, inter-alia, psychology. There is arguably scope for fruitful interprofessional and interdisciplinary learning and research to develop inside these interesting ‘practice-theory’ spaces (see also Waddington, 2010d).

Kathy: It was difficult when critically reflecting on the incident as it had been so highly charged and the emotion involved had left me feeling guilty that I had been a ‘bad’ leader. However it has also allowed me to really question the values and beliefs I held about what leadership is. I am now much more aware of my emotion at work and how they can affect others. I can recognise trigger points in my emotions when I need to step back and take time to question them. In fact, a member of my current multidisciplinary team commented that they felt I was extremely calm when dealing with difficult situations!

I have learnt that ‘leadership’ is not merely a skill that can be taught or learnt. It is also not just a practical element that you can test or assess. Leadership skills and theory can be taught, but it is how the individual uses that information and knowledge which will shape them as a ‘leader’. From experience of leadership comes a deeper knowledge of it. However, unless the individual possesses the skills to use that knowledge, then that too is useless.
Kathryn: Knowledge about leadership, as we know from the literature, embodies knowledge about self. Learning about leadership is a multi-level iterative process which raises interesting challenges and opportunities for practitioner-academic approaches to research. Co-inquiry is just one way of working together inside the ‘practice-theory’ gap. Knowledge transfer in work and organizational psychology can sometimes feel like a one-way street, and as Work and Organizational Psychologists there is also scope for us to learn with, from and about the people who use and apply our theoretical endeavours and research products.

References


In the face of rapidly changing technology across the globe and increasing expansion of Asian countries, our post-industrial civilisations’ survival depends on making the most of human creativity and the ability to change by linking our economies with our values. In the coming years’ development and economic success will depend considerably more on innovativeness and creativity of science than in the past. Change is inevitable and it is essential to activate creativity and innovation of organizations and workers. Thus, psychological knowledge and skills will play a crucial role in the process of innovation, activation, transfer, implementation and adoption of innovation. Considering a low innovativeness level, Poland in particular should get involved in all of these activities. Elimination of factors limiting innovative activities in Poland embodies one of the most significant objectives of the National Development Plan (2007-2013).

Considering budgetary and non-budgetary expenses designated for research and development activities; the situation in Poland seems to be shaping unfavourably. Psychology offers a number of approaches with both theoretical models and practical solutions that will assist innovation. However, research to date indicates there are a number of psychological barriers to innovation that will need to be overcome. One condition being that psychology should be treated as a partner by other disciplines; and that psychologists themselves, through their expertise and determination, need to participate in supporting and improving innovative processes. One factor weakening the inventiveness of the Polish economy is an underestimation or even a lack of consideration of the role of psychological factors in innovation. Human capital, with their capabilities and restraints must one hand evoke creative abilities of workers, while at the same time promoting and maintaining the adoption and diffusion of new practices.

But, it is often taken for granted that the development of human potential is a key factor influencing innovation organisations. Innovations are both complex and systematic phenomena, and yet, strategies for changes at country, regional and organizational level, often exclude human factors due to the complexity of this picture (Schumpeter, 1960). It is evident that problems concerning the implementation and adoption of innovative processes are underestimated; and do not take advantage of the impact of social and institutional factors on organizational innovativeness. Psychology offers a number of instruments that are underestimated or are simply unknown to educators and managers. For instance: a) the diagnosis of level of creativity; b) methods of creative simulation and tools that can be used to raise group flexibility, openness and tolerance towards a change; and c) methods of stress reduction towards change in the
workplace; which may be widely applied in innovative processes both by psychologists and trained managers.

In the course of history we have observed a prominent role of innovation and discoveries with psychology offering ideas and new scientific discoveries in the field of creation and implementation of innovations. Research indicates blockades and barriers and signals the necessity to introduce new management models and new pro-innovative educational programmes. Nowadays, when organizations are dominated by technology, engineers, economists, management specialists, and lawyers the application of psychological knowledge and skills are in short supply. Therefore, it can be said that the utilisation of knowledge and skills associated with organizational psychology will constitute an innovation in itself. The skills of implementing innovations in consecutive stages are challenges for psychologists. However, we are unable to manage this by ourselves and interdisciplinary efforts and support provided by other specialists, scientists and practitioners are required.

We are in a new era and face the challenge of searching for values, meaning and ideas to enable our world to survive and continue to develop. The time has come for psychologists to take decisions about active participation in supporting and improving innovation in work. Research aiming to understand the innovation process and psychological factors that encourage innovation have been developed within the Institute of Psychology (University of Silesia in Katowice, Poland) and the following articles offer examples of this work.

THE RELATIONSHIP BETWEEN RISK-TAKING, TRAINING EVALUATION AND THE IMPLEMENTATION OF INNOVATION

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Abstract
This paper is about the growing interest in psychological determinants of the implementation of innovation. More precisely, the article deals with relationships between: a) risk-taking tendency (as a personality trait); b) training evaluation; and c) attitudes towards innovation amongst employees who are subjects of change. The results are helpful to build the training system and seeking people to lead change. It can also serve as a starting for a more thorough analyses; allowing better recognition of the factors influencing behaviour in implementing changes. The research was conducted based on the SEKAP computer system.

Introduction
Purpose of the paper is to present research findings that were conducted for the author’s master thesis. They concerned relationships between individual risk-taking tendencies (understood as a personality trait), training evaluation and attitudes towards implementation of innovation (in the SEKAP system).

Implementing changes in the organization requires acquiring new skills and knowledge. Employees’ learning is often introduced in the form of various trainings activities (Adamiec & Kożuszniak, 2000; Łaguna, 2004; Patrick, 2003). Both training and innovation may cause resistance in their subjects. A growing number of researchers (e.g., Łaguna, 2004; Kirkpatrick, 2001) points out the role of opinions and attitudes towards training, and their influence on the learning process as well as the application of acquired skills and knowledge. Not only psychologists, but also economists (e.g., Brilman, 2002) emphasise the role of attitude towards innovation.

Deciding whether an employee is going to assimilate or a decline change is accompanied by a certain level of uncertainty, which Ratajczak (1980) defines as risk. Individuals differ regarding frequency, magnitude and motivation for risk-taking (Studenski, 2004). Individual risk-taking tendency is, according to Studenski, a measurable variable with a normal distribution in the population. The level of risk-taking is related to the perceived risk magnitude and the motivation for risky behaviours. This study examined relationships between employees individual risk-taking tendencies (understood as a personality trait) in seeking connections with their evaluation of the innovation. The aim was to highlight the importance of attitudes towards innovation, individual risk-taking tendency and employees’ attitudes towards the training system that was used to introduce innovation the SEKAP computer system.
The study focused on the particular innovation: the introduction Electronic System of Public Administration Communication (SEKAP). It is being implemented as a part of the Strategy of Development of Informational Society of the Silesian Voivodeship. The project is an innovation dedicated to offices in the Silesian Voivodeship looking place between 2005-2008. The aim of this project was creating and managing a teleinformatic environment to provide public services electronically. Employees went through a system of training (for groups as well as individuals) using the SEKAP system. The study examined: a) the employees' opinions of the training organised by their employer and on the training on the use of the SEKAP system; b) employees' attitudes reading the SEKAP system from when they first heard they were to use it and at the present time; having gone through training and gained experience in working with the system.

Method
Five research questions were put forward looking at whether and how: a) Individual risk-taking tendency is related to attitude towards the SEKAP system? b) Individual risk-taking tendency related to training evaluation? c) Training evaluation is related to attitude towards SEKAP? d) Training evaluation in related to the training evaluation on SEKAP?; e) Initial attitudes towards SEKAP (before its introduction) are related to the same kind of attitudes presented after the introduction of SEKAP and the attitudes presented by participants towards SEKAP system (after implementing changes) and with their opinion on trainings on the SEKAP?

Variables
The variables included in this study were operationalised using three questionnaires. First one of them, The Risky Behaviours Test (Studencki, 2004) was used in order to diagnose individual risk-taking tendency based on the participant’s self-assessed frequency of pursuing risky behaviours as well as their satisfaction of following these behaviours. The questionnaire consists of 25 statements with a Likert-type response scale; revealing good psychometric indicators (r = 0.937).

The other questionnaire tool, used to measure the starting and final attitude towards the SEKAP, was a measure of resistance to innovation by Kożusznik modified by the Author. It consisted of 10 items with a 5-grade semantic differential scale. The third questionnaire, constructed for the purpose of this study, measured individuals’ training evaluation, both in general (A-version) and training on the SEKAP (B-version). It included 22 statements with a Likert-type response scale, concerning four areas: a) the trainer; b) environment and organization; c) content and methods; and d) participant’s benefits. The result range was 88 points. Individuals scoring below 56 points were considered as having a negative evaluation, while those scoring above 76 had a positive evaluation of the training.

Sampling in the study was purposive. The sample consisted of employees of the Marshall Office of the Silesian Voivodeship employed for at least one year. The target sample were clerks who were using the SEKAP system and had taken part in training on its use (1,000 people). 180 people working in chosen units received study questionnaires.

Results
From the 180 distributed questionnaires, 118 were received correctly completed (65.5% response). The sample consisted of 73% of women and 27% men. The majority of participants were aged 30 to 40
years old (53%) and 21 to 29 years old (48%). The majority (96%) were using the SEKAP at work at least a few times per week. Analysis revealed no significant influence of the demographic variables on the study variables. Quantitative analysis methods were applied with all variables revealing a normal response distribution. Correlation was introduced in order to examine relationships between variables; also the analyses included using the t-Student test for independent samples or the Cohran and Cox test.

Preliminary descriptive analysis showed that the majority of participants have positive attitudes to training evaluation (both to specific and general programmes) containing innovative issues. Opinion towards training in SEKAP system was distributed from neutral to positive. Comparing descriptive statistics shows that the majority of participants were more likely to have positive attitudes concerning vocational training than towards training about the SEKAP system. A majority of participants were likely to display a neutral attitude towards the SEKAP system at the moment when they heard about it. However, the distribution of results was strongly scattered; demonstrating a wide range of negative and positive attitudes.

Following training and using the SEKAP system a majority of participants presented neutral or negative attitudes; with a large group of participants reporting extremely negative evaluations. In the majority participants had average tendencies to risk-taking; with a few participants reporting extremely low or very low tendencies to risk-taking.

Pearson’s correlation coefficient was used to examine relationships between study variables. The results of these analyses are shown in Table 1 (below).

### Table 1: Correlation between tendencies of risking, attitudes towards SEKAP, and training evaluations

<table>
<thead>
<tr>
<th>Variables</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>1. Individual tendencies of risk-taking</td>
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<tr>
<td>2. Initial attitude towards SEKAP</td>
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<tr>
<td>3. Currently presented attitude towards SEKAP</td>
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<tr>
<td>4. Evaluation of all training in company</td>
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<td>5. SEKAP training evaluation</td>
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Note: ** Correlation is significant at the .01 level (two tailed)
* Correlation is significant at the .05 level (two tailed)

Training evaluation of general courses containing innovative issues rated positively correlation with training evaluations in SEKAP ($r=.52; p<0.01$). A weak positive correlation ($r=.27; p<0.01$) was seen between tendencies of risk-taking and the initial attitude concerning the SEKAP system (with growing negative attitudes accompanying the rise in tendency of risk-taking).
A weak negative correlation was seen between tendencies for risk-taking and training evaluation of general courses containing innovative issues \( (r=-.24; \ p< 0.05) \) as well as trainings in SEKAP system; \( (r=-.25; \ p< 0.01) \) (high tendency for risk-taking behaviours was accompanied by worse training evaluation).

The initial attitude concerning SEKAP showed a weak positive correlation with the currently presented attitude towards SEKAP \( (r=.29; \ p< 0.01) \).

The training evaluation in the SEKAP system showed a negative correlation with the currently presented attitude towards SEKAP \( (r=-.38; \ p< 0.01) \) (a more positive attitude is accompanied by the better opinion on trainings). Further, a weak negative correlation was detected between the trainings evaluation containing innovative issues and the current attitude towards SEKAP \( (r=-.25; \ p< 0.05) \) (a more positive position is accompanied by the better opinion). No further correlations were discovered.

The mean tests of differences revealed (see Table 2) that employees scoring high in risk-taking tendency were more likely to have a neutral initial attitude concerning changes, while participants with low in risk-taking tendency revealed more positive attitudes. Participants with high in risk-taking tendency were more likely to have less positive training evaluations in comparison to those with a low risk-taking tendency.

Table 2: Correlation between tendencies of risking, attitudes towards SEKAP, and training evaluations

<table>
<thead>
<tr>
<th>Group</th>
<th>1. Individual tendencies of risk-taking</th>
<th>2. Initial attitude towards SEKAP</th>
<th>3. Currently presented attitude towards SEKAP</th>
<th>4. Evaluation of all training in company</th>
<th>5. SEKAP training evaluation</th>
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<tbody>
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<td>positive</td>
<td>negative</td>
<td>positive</td>
<td>negative</td>
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<td>high</td>
<td>X</td>
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<td>low</td>
<td>X</td>
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<td></td>
<td>2. Initial attitude towards SEKAP</td>
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<td>positive</td>
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<td>negative</td>
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<td></td>
<td>3. Currently presented attitude towards SEKAP</td>
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<td>positive</td>
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<td>4. Evaluation of all training in company</td>
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<td>low</td>
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<td></td>
<td>5. SEKAP training evaluation</td>
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<tr>
<td>high</td>
<td>X</td>
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<tr>
<td>low</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
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</table>

Note: X- connection revealed using tests differences
Employees scoring low in risk-taking tendency had more positive training evaluations on the SEKAP when compared to those scoring high in this variable. Employees revealing more positive training evaluations on the SEKAP had a more positive attitude concerning SEKAP system than those with less positive training evaluations. However, employees with lower training evaluations containing innovative solutions were more likely to rate the training on the SEKAP system lower. Finally, a relationship between the initial attitude towards the SEKAP and the one they revealed upon completion of the training programme was also confirmed.

Discussion
This study was exploratory in nature but demonstrates the need to pay attention to employees’ attitudes towards innovative solutions before introducing training programmes as well as after their completion. Those employees with negative attitudes toward innovation also tend to have negative opinions about the newly implemented SEKAP system.

Another aspect deserving proper attention are employees’ training evaluations and their assessments of introduced changes. Employees with a negative approach toward training on the new system where likely to have a negative opinion about the whole SEKAP system. Therefore, to enable the new system to be accepted by employees it is essential that the training programme is well conducted and deals with these types of negative opinions.

This study justifies the value of the inclusion of personality traits, such as risk-taking tendency, in studies of innovation implementation. In particular, it is useful to pay attention to persons with the tendency to risk-taking when you form training groups; as these people are more likely to reveal neutral and negative attitudes towards training programmes and the change implementation. Further, this study suggests that those with a low opinion about training programme are likely to have a negative attitude towards whole innovation (SEKAP).

Introducing attitude measurement in advance of training would allow an appreciation of those with negative attitudes to be identified in advance. Additional time and resources could be given to address the needs of these individuals and opportunities could be created enabling leaders of change to influence those with the negative attitudes toward changes.

Relationships in the situation of introducing changes are extremely complex. This study highlights the need for deeper analysis of the links between attitudes concerning innovation and elements of training situations such as personality traits, attitudes and trainings evaluation. Studies such as this may contribute to a better understanding of factors influencing behaviour in situations of innovation introduction.

The finding of this study and the relationships demonstrated may also be helpful in the design of training programmes before the introduction of new ways of working. Innovations such as this may consequently improve the effectiveness of the learning process, the pace of skill development and the acceptance of the use of new technology in the workplace. These are important considerations for organizations that are trying to adapt and develop in the changing world economy.
References


EWOPeSPRACTICE
European Work and Organizational Psychology in Practice
THE ATTITUDES TOWARDS THE INNOVATION AMONG MINERS OF DIFFERENT HIERARCHICAL POSITIONS IN COAL MINE COMPANIES

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Introduction
Making changes in working process is always hard and it is even harder when people are pretending that psychology doesn’t exist. This is a big mistake because psychology is everywhere where people are; even when we think it is just a simple, hard work. This article is about how hard it is to introduce innovation in Polish mining. There are many different reasons of this situation; but it is focused on a specific environment with a tough history and there have mistakes in the past when introducing innovation. Mining, as a “men’s thing” isn’t really concerned about workers’ mental comfort claiming there are more important problems to consider; like money, aggressive market and policy.

Silesians have an unfortunate attitude to change because of the difficult history of their region. In 18th century when the mining industry blossomed Silesia was both part of Prussia and Czechia. Even the French under Napoleon tried to occupy this land. After three Silesian Uprisings the bigger part of Silesia was won back to Poland while another portion belonged to Germany. Between the 20th century World Wars Silesia became autonomous with our own parliament and Treasury, and people finally had their freedom; but sadly this did not last long. After the 2nd World War Silesia was won back by Poland but was controlled by the USSR. After many years being German citizens Silesians had to be real Poles again.

This complicated history proved to Silesians how important coal was; being necessary to every country for transport and the production of military equipment. That was why many countries wanted to have our region and why they fought to control us. Coal was like a treasure and the miners knew it! They knew how extremely important this raw material was; so they didn’t treat mining like usual work, but rather like a kind of mission. It was this attitude that built a characteristic collection of feelings and behaviours known as the Silesian Work Ethic (SWE). The highest values of SWE are: family; work; and religion in that specific order. The main purpose in life for every miner was to guarantee his family a good life, money, a home and a school for their children. These people were usually brought up as Catholics and it was very important for them to live according the rules of the Bible. Silesian miners are very hard-working; they conform to the rules prevailing in the mine, and respect their superiors. They need to behave like this to reduce the high risks and danger associated with their workplace.

Unfortunately many of the events in Polish latest history have changed miners’
attitudes to work for the worse. After the economic transformation in 1989 mining situation deteriorated with many of collieries being closed; leaving only a few open today. A lot of people lost their work, with almost every mining school being liquidated. Polish policy was to drastically reduce coal usage; and little money was invested in the existing mines which became is such bad condition that the government had to vote funds to rescue the organizations. Today, the situation is more settled and the use of coal as an energy source is growing again. However, miners do not believe that novelty can brighten their situation.

The aim of this research was to find out the attitude to innovation among working miners to enable them to adapt to new circumstances. The research questions were: a) Are there differences between attitudes to innovation among miners in different hierarchical positions in coal mines? b) Do miners hold negative attitudes to innovations? c) Do higher-level employees hold positive attitudes to innovation and lower-level employees hold negative attitude to innovation?

**Method**

This study used a questionnaire consisting of 55 items in three sections First part consists of questions specifically designed for this study in order to understand what innovation is in the mining industry. Secondly, 40 items looked at attitude to innovation and change (e.g., “Innovations are necessary in companies”; “Actual innovation can bring a big loss”; “There was training for all employees about innovation”). Participants respond with one of five possible answers: “definitely no”; “no”; “don’t know”; “yes”; “definitely yes”. The third part consists of ten pairs of adjectives (constructed by Elsner, Ekiert, Grabowska & Kożusznik, 1994). Responses are numbered 1-5 and the participant picks the response that is the closest to their feelings. In addition there were three demographic items (age, education, and organizational position).

Responses to non-demographic items are scored into five categories based on the numeric score from the questionnaire (see Figure 1 below). This was based on normative data collected by the author. The lowest score possible to gain was 50 points and the highest was 250.

**Figure 1: Scoring categories for participant responses to questionnaire items**

<table>
<thead>
<tr>
<th>CATEGORY NAME</th>
<th>NUMBER OF POINTS</th>
<th>CHARACTERISTIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRAGGLERS</td>
<td>86 – 109</td>
<td>This is the group characterised by a negative attitude to changes and innovations, it is connected with their own resistance and problems with change. They accept change when they have no other choice.</td>
</tr>
<tr>
<td>LATE MAJORITY</td>
<td>110 – 132</td>
<td>This is the name for people who assimilate changes when others do it and it is successful.</td>
</tr>
<tr>
<td>EARLY MAJORITY</td>
<td>133 – 155</td>
<td>Group of people who show discouragement to innovations but they accept it when others do; they do not need to know if change was successful before.</td>
</tr>
<tr>
<td>EARLY ABSORBING</td>
<td>156 – 178</td>
<td>These people are well-disposed to innovation, absorb it easily, and even help them. They are less enthusiastic than innovators but they are behind them.</td>
</tr>
<tr>
<td>INNOVATORS</td>
<td>179 – 203</td>
<td>This is the group characterised by a great deal of enthusiasm for everything new; they often initiate changes.</td>
</tr>
</tbody>
</table>
The survey was administered to managers who were taking part in training organised by a company. Participants undertook the survey voluntarily and they remained anonymous. The questionnaire was distributed by the researcher's friends and family. Almost everyone who was asked to participate in the research agreed.

Results
The questionnaire was completed by 134 male miners (managers and non-managers) from one mine, aged from 25 to 59 years. Demographic variables are listed in Figure 2 below.

Figure 2: demographic description of study sample

<table>
<thead>
<tr>
<th>Age</th>
<th>The majority of workers were aged between 35 and 50 years.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>48% of participants were people with technical education.</td>
</tr>
<tr>
<td>Position</td>
<td>75% - non-managers</td>
</tr>
<tr>
<td></td>
<td>19% - lower managers</td>
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<tr>
<td></td>
<td>3% - middle managers</td>
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<tr>
<td></td>
<td>3% - higher managers</td>
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</tbody>
</table>

The lowest score gained from the non-demographic items was 86 and the highest was 203; with the median score being 137. A majority of the participants scored between 120 and 140.

Attitude to innovation
Non-managers gained less points than managers; confirming that non-managers had more negative attitudes to innovation than managers (middle managers mean score = 176 with non-managers scoring 132). In emotional scale higher managers and middle managers gained the highest average; with the lowest scores being gained by non-managers. The other two scales showed similar findings. This demonstrates that attitudes to innovation among non-managers are more likely to be negative; their knowledge of change is insufficient and they usually absorb innovations under pressure and with resistance.

Negative attitudes to innovation
The second hypothesis said that all mining workers have negative attitudes to innovation. The assumption was that “stragglers” and “late majority” have negative attitudes, those in the “early majority” category have neutral attitudes, and the “early absorbing” and “innovators” categories have corresponding positive attitudes to innovation. The study showed that 49% of participants have negative attitudes, 25% were neutral in attitude, and 26% held positive attitudes. This confirmed that a majority of all mining workers were likely to have negative attitudes to innovation.

Attitudes to innovation among miners in different hierarchical positions
Questionnaire responses demonstrated that there were more positive attitudes to innovation among managers and when compared to non-managers (see Figure 3 below).
Figure 3 shows that all “stragglers” (a group characterised by a negative attitude to changes and innovations, it is connected with their own resistance and problems with change. They accept change when they have no other choice.) are non-managers demonstrating differences in attitude associated with hierarchical position in the organization.

Attitudes to innovation with age and education
Questionnaire responses demonstrated that attitudes to innovation were less positive as workers’ age means older miners have worse attitude, the reason could be worse coping with changes by older people. However, the strongest correlation was between age and the cognitive scale demonstrating that this negative attitude could be associated with experiences at work and earlier experimentation with change.

No relationship was found between education and attitude to innovation suggesting that having great theoretical knowledge did not improve attitude to innovation.

Discussion and practical implications
The research was conducted to show the importance of understanding how psychology can contribute to the study and development of mining.
Psychologists really care about miners and after every workplace tragedy they have helped workers and their families to cope with Post Traumatic Stress Disorder. While this is helpful, it is not enough; as mining, like every other business area needs psychology to help support its everyday work. Where there are people there is psychology too; even if men do not feel psychologically or mentally fragile.

Every innovation should be carefully planned but to be successful it needs to consider the psychological aspects of the change. Only when workers’ opinions, feeling and attitudes are respected it is possible to make changes without resistance. This study has shown a range of attitudes associated with innovation and if these can be understood and developed they can be highly effective in facilitating change.
What happens at work depends on people attitudes; and happier workers are more likely to be better workers. Therefore understanding worker attitudes should be very important to employers.

This study points to strong correlation between capacity, age and attitude to innovation, and weak one between education level and attitude to innovation. This contravenes the miner’s stereotype of a poorly educated, narrow – minded person who always ready to go on strike, and who is afraid everything that is new and strange. Usually they have rational reasons to be afraid because a lack of awareness will cause fear; and it is a natural behaviour.

The recipe for good innovation contains an idea, a proper plan, positive attitudes and steady progress towards change. All of these components involve psychology. An idea is not just a spark to change; but it should include a holistic view for change and its influence is on every single employee. Currently, it is important that we understand how innovation will change work systems and develop workers; and how long it will take to implement an idea. The second phase is to make a plan; and psychology will be invaluable to assist planning to achieve ambitious time schedules, by accommodating workers to new work conditions. The third component it is strictly psychological work. Starting from checking attitudes among workers at the beginning, then improving attitudes to innovating in many ways such as with training or individual coaching. This work never stops because of a fourth phase would achieve steady progress when psychologists evaluate workers and resolve problems related to innovation; and persist in doing this until the innovation is completed.

This topic of research will be more and more important because miners have begun to perceive themselves as a fully-fledged workers and realise they have rights; confirming mining an important area of study.
Abstract
This article was produced as a basis for further discussion from the German Contribution to the 2011 EAWOP conference - Practitioners’ Day and including the results of the Future Workshop of the 7 (Congress for Business Psychology, 2008 of the German Association of Psychologists - Business Psychology Section). This paper examines: trends in work and the business world; resulting questions; required contributions and challenges for Work and Organizational Psychologists and is intended as a basis for further discussion (please contact the corresponding author*).

Introduction
The 15th EAWOP Conference in May 2011 was a great event for all European Work and Organizational Psychologists (WOP). Specifically for practitioners working in the field of WOP a Practitioners’ Day programme was organised by NIP and NSvP (Dutch Foundation for Psychotechnique) which included contributions by the VO-CAP (Association of organisation, consumers and labour psychologists) from Belgium and the Sektion Wirtschaftspsychologie in the German Association of Psychologists (BDP). In this programme the German colleagues organised a world-cafè with four key topics for work and organizational psychologists in Europe: a) Demographic Change; b) Human Potential, c) Company Change and Development, and d) Globalization and Intercultural Work. The Sektion Wirtschaftspsychologie and the Topic Hosts wanted to share the outcomes of the world-cafè with all interested colleagues. The Topic Hosts were:

- **Prof. Jürgen Wegge**, TU Dresden: “Demographic Change”. Wegge is a renowned professor of Work and Organizational Psychology as well as personnel psychology, specialising in motivation, leadership and performance excellence;

- **Rosemarie Bender**, Dipl-Psych.: “Human Potential”. Bender is consulting in the fields of human business, e.g., outsourcing, finding personal strengths and personal application strategies;

- **Dr. Kim-Oliver Tietze**, Dipl.-Psych.: “Company Change and Development”. Tietze is an author and well-known expert in the practical implementation of Peer Group Supervision for change projects and team excellence;

- **Dr. Andreas Klug**, Dipl.-Psych.: “Globalization and Intercultural Work”. Klug is primarily specialised in personnel development systems, potential assessment and international project consulting. He is an expert for psychological testing.
Demographic Change
We cannot allow the waste of human capital (young and old) to continue. Therefore we need:

- Personnel marketing and personnel selection instruments who target all potential available human resources;
- Resources and potentials – not deficits – should be the basis of all activities;
- Young unemployed should be cared for.

Work-Life balance has to be promoted continuously by organizations:

- As WOPs we can and should support flexible working time, home office work, tele-working, dual career options and sabbaticals;
- We should promote the “right behaviour” of supervisors (sharing the lead); re-integration of young mothers, employees who care for family members (nursing) and support organizational offers regarding children’s care/education that cover the complete working day.

Valuable expertise of older workers is an important resource that is often ignored, therefore we need:

- To integrate demographical issues into HRM strategies;
- Support and cooperation between young and old employees;
- Engage older employees as “senior coaches” / mentors for younger employees;
- Promotion of mutual respect and prevention of discrimination

- To make a clear difference between knowledge and skills.

The development of a comprehensive strategy for demographic changes (fit for age). This requires:

- A general change in the perception and evaluation of older employees by supervisors with the goal that supervisors’ see age as a resource (older employees having knowledge, competence, and expertise; are mobile and know how to make things happen);
- A comprehensive assessment of the demographic situation within companies;
- Age-differentiated work design (based on the analyses of individual skills, knowledge and potential developments);
- Age-oriented (sensitive) leadership;
- Qualification (vocational training) for young, low performing employees in order to counteract the problem of missing expert workers;
- Insight that job knowledge (expertise) can be measured and managed (transferred to new job requirements);
- Insight that customers value up to date knowledge and expertise of employees;
- Clever use and management of age-mixed teams;
- Adjustments of training offerings for older employees.
The development of demographically oriented organization culture. To achieve this we need:

- A new “story” of age and aging (and senior customers);
- Better utilisation of human resources of the ageing work force;
- Business to care for the costs of keeping ageing workers fit (not the society);
- Comprehensive management systems to promote work ability (values, work, competences, functional capacities);
- Participation of older employees in all organizational planning/management activities;
- Active fathers and mothers in leadership positions;
- Reduction and reflection on stereotypes of age and gender;
- Equal pay for men and women;
- To update job descriptions and a modern personnel selection system;
- Employer branding that reflects a positive image across ages and gender with attractive working time offers;
- The development and use of professional and effective occupational health interventions.

**Human Potential**

Professional leadership practice is a clear factor of success. In the future, enthusiasm for the company and personality will become more important. This leads to a change in suitable diagnostic instruments. Precision in recruiting will become a matter of personal competence. We have identified the following a critical behaviours in the development of human potential.

Leading roles and behaviour have to realign. In order to do this we need:

- The combined engagement of managers;
- Centering of the fact that job satisfaction and good behaviour are coherent;
- Emphatic and authentic managers as sources of the enterprise culture and with that drivers of motivation and competitiveness;
- Managers who think change management but not without considering the demands on employees;
- A revaluation of team working that exerts more self control, continuous feedback possibilities and appreciation to allow top performance.

Soft facts become “hard facts” and with it decisive success factors

- The acknowledgement that the most important competitive factor for successful enterprises is engagement of employees;
- A stronger consideration of “soft facts” in case of enterprise assessments and in case of the assessment of the attraction of (potential) employers
- A stronger consideration of “soft facts” enabling productivity and profit margins to increase.
The approach and the handling of apprentices and trainees have to change, and in order to do that we need to consider:

- The constitution of an appreciative culture;
- A positive perception of the trainees (achievement and social competence);
- Instructors that are prepared for the "new" generation of trainees (for example providing a feedback culture, appreciation, and support);
- Specific development of the potentials of the trainees.

In these situations the requirements of high quality diagnostics rise further needing:

- Objective procedures to measure and assess the personality of candidates and employees, to foster the importance of the level of personal competence and to control human potential;
- Establishment of international high-class standards in suitable diagnostics (e.g., DIN 33430, ISO);
- Integration and profound methodical education of professional groups;
- Interlocking of theory and practice;
- Consideration of the cultural context of diagnostics and their transferability to other cultures;
- Common understandable language;
- Stronger involvement of procedures to capture/measure intelligence quotients;
- Stronger weighting of generaliseable abilities (e.g., employees ability to change);
- Investigation of conditions for adoption of locally developed instruments and procedures in other cultures; or the requirement of amendment of current instruments to achieve recognised standards of good practice.

Organisational Development / Strategy Development

Protracted planning periods for change belong to the past. Intense competition calls for rapid and successful implementation of change requirements, including intense and efficient communication on all levels. WOPs offer support for organizations to shape adequate ways for change, to systematically implement strategic issues, and to reduce inadequate bureaucracy. With regard to issues such as mixed-age work teams, customer involvement, or employee participation, WOP facilitates the dialogue of diverse stakeholder perspectives, supports the design of suitable concepts, and provides accordant methodical support. In order to support these developments the following concepts are critical.

Entrepreneurial thinking and action can be learned and to encourage this we need:

- The application of psychological findings (e.g., on participation, or dialogue) to support the implementation of strategic issues rapidly and successfully;
- Training and development designed in order to impart evidence-based knowledge about entrepreneurial competencies (e.g., initiative, goal orientation, and self-efficacy).
Successful innovation management requires knowledge and experience of customers, employees, and WOP expertise. In order to promote this we need:

- Methods that are designed to enhance communication between those who are active in innovation processes, and methods that support idea development;

- Free space, suitable culture, and reduced bureaucracy, as well as appropriate incentives and feedback processes to unlock the potential of employees to innovate;

- Enduring, honest, and fair involvement of customers (e.g., attention to and incentives for customers’ ideas).

In services societies, immaterial values also have to be considered when taking entrepreneurial decisions (e.g., regarding enterprise valuation or company transfer). In order to further this aim we need:

- Intellectual capital to be valued.

- Intellectual capital reporting.

Change management processes have to be designed according to relevant up-to-date scientific findings, and should be more sustainable. In order to achieve this we need:

- Systemic view of organizations in order to support service processes by adequate change interventions;

- Consideration of interdisciplinary cooperation in change management processes;

- Interventions which accelerate or decelerate change according to the needs of learning and decision-making processes.

Individual and organisational learning processes have to be reconsidered by:

- Companies taking responsibility for education and lifelong learning of the younger generation;

- Clarification of guidelines and methods that suit best specific problem categories;

- Methods for assessment, feedback, training, and evaluation.

‘Performance’ within the public services has to be redefined and re-evaluated by:

- Employees being involved in the discussion process on performance;

- A wider discussion on objectives and success factors of non-profit organizations.

Science (theory) and practice need closer to collaboration. In order to achieve this we need employees as trainees in scientific organizations, and scientists to put models and constructs into practice.

**Globalisation / Working Interculturally**

It has becomes common to work in other countries and cultures and International production and trade increases. Many companies now set-up subsidiaries and joint ventures in foreign countries. So it is critical to be prepared for intercultural interaction. As WOPs we can support international assignments by:

- Research and transparency regarding the success factors of intercultural as-
assignments of managers and staff;

• Preparing and to providing the preconditions for successful work in different counties and cultures;

• Presenting a realistic picture of the host country with the elimination of stereotypes and prejudices, knowledge about cultural differences as well as differences in leadership styles and leadership cultures;

• Appreciating that western leadership styles do not always work in other countries, and promoting adaptation to local requirements;

• Using the GLOBE leadership study (e.g., Waldman et al., 2006) as a benchmark/map of “good leadership”;

• Appreciating that work outside the host country will affect the whole family unit;

• Developing specific HR-tools such as selection methods and training programmes for expatriates and incoming workers of different cultures that reflect intercultural research results and international assignment success factors.

The development of intercultural competencies is essential. In order to develop these we need to:

• Generally increase the intercultural competence of leaders and managers;

Intercultural topics being part of leadership and management development programmes;

• Training and development should be given before international assignments;

• Intercultural communication and conflict solving competencies require development through:

- knowledge about cultural differences;
- sensitising individuals to the reasons and escalation of intercultural conflicts;
- questioning norms of the own and different cultures;
- patience and modesty;
- definition and training of rules for intercultural interactions.

Diversity becomes a strategic resource and a success factor and should be considered in the composition of teams and staff changes. We should consider:

• Target oriented, strategic management of diversity from a multi-level perspective (individuals, groups, organizations) in order to achieve benefit for the company and to minimise the negative effects of diversity;

• Acceptance of increasingly diverse life plans and cultural backgrounds of staff members;

• Consideration of versatile and diverse compositions of staff in selection and engagement decisions at a management level;

• Consideration of the growing requirements of international and intercultural cooperation.

Reference