

Report for the  
**European Association of Work and Organizational Psychology**

**EAWOP Small Group Meeting  
Time and Change in Teams**

**Chemnitz University of Technology  
February 24-26, 2011**

**Organizing Committee**

Christine Gockel, Technische Universität Chemnitz, Deutschland

Bertolt Meyer, Universität Zürich, Schweiz

Franziska Tschan, Université de Neuchâtel, Schweiz

Robert Roe, Maastricht University, Niederlande

**Website**

[www.tu-chemnitz.de/hsw/psychologie/professuren/sozpsy/sgm.php](http://www.tu-chemnitz.de/hsw/psychologie/professuren/sozpsy/sgm.php)

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## Content

Course of the Meeting.....	Page 3
Scientific Results.....	Page 3
Participants.....	Appendix A
Program.....	Appendix B
Abstracts.....	Appendix C

## Course of the Meeting

A total of 26 participants from several European countries, the US, and Australia attended the EAWOP Small Group Meeting *Time and Change in Teams*. Because Franziska Tschan could not attend the meeting, Margarete Boos supported us as part of the organizing committee.

On the first day of the meeting, Jia Li from Maastricht University taught a workshop about the analysis of longitudinal data. It was an eye-opening workshop for most participants because it presented a new way of conceptualizing change in teams and will give participants the opportunity to re-analyze some of their data from a different angle.

The second day started with a keynote presentation about the study of time in teams by Robert Roe from Maastricht University. He explained different ways of studying time and pointed out what to be aware of when preparing and conducting longitudinal studies.

The meeting then continued with individual presentations. Every participant had half an hour to present a study and discuss it with fellow participants. Discussions were generally very lively and supportive. Participants reported that they greatly benefitted from each others' comments. In the evenings, discussions were continued in restaurants in Chemnitz.

Throughout the meeting, the following research assistants assured that everything went smoothly: Anne Brantl, Josefin Karg, Antje Gibson, Iken Gonnermann, and Eileen Weber. The secretary Annerose Koch was a big help in getting all the paperwork done before and during the meeting. A big *thank you* to all of them!

The following three organizations provided generous financial support for the meeting: The Deutsche Forschungsgemeinschaft (DFG), the European Association of Work and Organizational Psychology (EAWOP), and Chemnitz University of Psychology. With this money, we were able to provide three stipends of €500 each to the following participants: Miguel Cameira (University of Porto, Portugal), José Navarro (University of Barcelona, Spain) and Christena Cleveland (St. Catherine University, USA).

## Scientific Results

In order to present studies of time and change in teams to a wider audience, we (i.e., the organizing committee) are currently editing a special issue for the European Journal of Work and Organizational Psychology (EJWOP) about this topic. At the moment, 15 articles are under review (among them, many from our participants). This special issue will appear in 2012. We are also currently writing an article for that same journal about the scientific results of the meeting.

Because participants mentioned the desire to meet again in the future to discuss research in this area, Selma van der Haar from Leiden University, Netherlands and Karin Moser are talking about a follow-up meeting.

My own personal conclusion of the meeting is that this research area is an extremely important one. Longitudinal studies capture what is really going on in teams instead of giving just a “snapshot impression”, which cross-sectional studies present. A deeper understanding of changes in team processes will allow us to better understand the causal interplay of phenomena in teams, to predict changes, to help start desired changes and prevent undesired changes.

What the field needs in the future are changes in the following areas:

a) in theoretical models that specifically integrate change. Thus, we need to get over the traditional thinking of Input-Process-Output models.

b) in methods that help us capture change. We need measures that can be used repeatedly without changing the phenomenon of interest.

c) in statistical methods that help us analyze change more adequately. We need to capture change in order to find antecedents and outcomes of change.

Overall, we need research studies that will be extremely time- and work-consuming, that will be risky because of their reliance on new models, methods, and analyses, but that will – in the end – be worth the effort. To support these efforts, we certainly need appropriate funding in this area.

To me, the main goal of the meeting was to give participants time to present and discuss own research studies. Thus, I believe that every participant benefitted in a unique way from the meeting by receiving detailed and constructive feedback about own research and by being inspired for new studies. Here is what participants took from the meeting:

**Catherine Collins, University of New South Wales, Australia**

“For me, the take-aways were:

(1) The multiple ways in which time is conceptualised. From the opening presentation from Robert Roe which gave a conceptual overview, to thinking about time as an anticipated future of working together (Karin Moser), to different methodologies (chaos, latent growth modelling, within subjects approach in statistics pre-conference gathering). This will stretch my future research in different directions.

(2) Although not yet collaborating with anyone as a result of the conference, I have been connected to different literatures as a result of the conference (eg chaos theory and others) and reading participants' prior work. I am looking to take the next step in collaboration by pulling together a related symposium in other international conferences in 2012/13”

**Selma van der Haar, Leiden University, Netherlands**

“For the empirical study and article we are working on after Chemnitz, Jia Li will be the co-author. We will use a temporal design. I am very excited about it. Jia has given a small workshop at Maastricht University and another PhD student is also inspired by the temporal design (and has great data) and will develop it for her project.”

**Margarete Boos, University of Göttingen, Germany**

Mit Jia Li planen wir ein Projekt “Analysis of process data on group coordination in anaesthesia teams”. Mit Selma van der Haar tausche ich mich auch zu dem Thema aus, da sie auch zu Anästhesie-Teams forscht. Mit Thomas Ryser und der Oltener

Gruppe (auch Hartmut Schulze) gibt es Kooperationen zu virtual teams (Veranstaltung gemeinsamer jährlicher Workshops; im Oktober der 4.)”

**Joachim Hüffmeier, University of Münster, Germany**

“Ich habe durch meine Teilnahme in Chemnitz vor allem eine Reihe Ideen dazu bekommen, wie ich meine schon vorhandenen Daten vielleicht angemessener auswerten kann.”

**Jose Navarro, University of Barcelona, Spain**

“We proposed a special issue to the Revista de Psicología Social (an important Spanish journal currently indexed in SSCI) about our topic in Chemnitz, but in a more wide way (Time and Change in SOCIAL PSYCHOLOGY). We have received a good assessment; for this year it won't be possible to do it, but we will have another chance next year.”

**Miguel Cameira, University of Porto, Portugal**

“it was very productive, provided an overview of a wide range of methodologies accounting for time in team applied to a diversity of contexts. Robert and Jia’s workshop was fascinating and I incorporated their method in this year’s syllabus so to increase post-graduate students’ interest on the time approach independently of the field of application. I hope some indirect outputs of the meeting will come from there as well...So, the final balance was quite positive!”

# EAWOP Small Group Meeting Time and Change in Teams (TACIT)

February 24 - 26, 2011

## Sign-up List

<b>Margarete Boos</b> University of Goettingen, Germany	Attended
<b>Elisabeth Brauner</b> Brooklyn College, CUNY, USA	Attended
<b>Michael J. Burtscher</b> University of Zurich, Switzerland	Could not attend
<b>Miguel Cameira</b> University of Porto, Portugal	Attended
<b>Christena Cleveland</b> St. Catherine University, USA	Attended
<b>Catherine G. Collins</b> University of New South Wales, Australia	Attended
<b>Lucie Finez</b> University of Reims, France	Attended
<b>Antonio L. García-Izquierdo</b> University of Oviedo, Spain	Attended
<b>Ana Margarida Graça</b> University of Lisbon, Portugal	Attended
<b>Christine Gockel</b> Chemnitz University of Technology, Germany	Attended
<b>Selma van der Haar</b> Leiden University, Netherlands	Attended
<b>Guido Hertel</b> University of Muenster, Germany	Attended
<b>Joachim Hüffmeier</b> University of Muenster, Germany	Attended
<b>Kevin-Lim Jungbauer</b> Dresden University of Technology, Germany	Attended
<b>Nale Lehmann-Willenbrock</b> Braunschweig University of Technology, Germany	Attended
<b>Jia Li</b> Maastricht University, Netherlands	Attended
<b>Bertolt Meyer</b> University of Zurich, Switzerland	Attended
<b>Karin S. Moser</b> Roehampton University London, UK	Attended
<b>José Navarro</b> University of Barcelona, Spain	Attended

<b>Ana Margarida Passos</b> Lisbon University Institute, Portugal	Attended
<b>Robert Roe</b> Maastricht University, Netherlands	Attended
<b>Kathrin Rosing</b> Leuphana University of Lueneburg, Germany	Attended
<b>Thomas Ryser</b> University of Applied Sciences , Northwestern Switzerland	Attended
<b>Rebecca Schmidt</b> Chemnitz University of Technology, Germany	Attended
<b>Eva-Maria Schulte</b> Braunschweig University of Technology, Germany	Attended
<b>Meir Shemla</b> Dresden University of Technology, Germany	Attended
<b>Alexander Stern</b> University of Goettingen, Germany	Could not attend
<b>Jürgen Wegge</b> Dresden University of Technology, Germany	Attended



## Thursday, February 24

13 – 17h	<b>Statistics Workshop with Jia Li</b> (Room 202)
19h	<b>Opening Dinner</b> at Hotel an der Oper Straße der Nationen 56, 09111 Chemnitz (pay for yourself)

## Friday, February 25

9:00-9:15h	<b>Opening Address: Prof. Dr. Udo Rudolph</b> (Deputy Head of the Department of Psychology) (Room 201)
9:15-10:15h	<b>Keynote 1: Robert Roe</b> (Room 201) <b>Studying Time in Teams: Why and How?</b>
10:15-10:45h	<b>Coffee Break</b>
10:45-12:45h	<p><b>Team Outcomes (Performance) over Time – 1/2</b> (Room 202) Leadership over time: Understanding the role of team leadership on episodic team processes and effectiveness <i>Ana Margarida Graça and Ana Passos</i></p> <p>Process gains of negotiating teams across time and in different tasks <i>Joachim Hüffmeier, Alfred Zerres, Alexander Freund, Klaus Backhaus, and Guido Hertel</i></p> <p>Boosting team process efficacy with coaching and multisource feedback: A growth modeling perspective <i>Catherine G. Collins and S. K. Parker</i></p> <p>Differential effects of membership change induced team crises on team performance: The role of visionary leadership <i>Kevin-Lim Jungbauer, Meir Shemla, and Jürgen Wegge</i></p>
12:45-13:45h	<b>Lunch</b>
13:45-15:15h	<p><b>Team Outcomes (Performance) over Time – 2/2</b> (Room 202) Chaotic team performance: Evidence from professional basketball <i>Pedro J. Ramos-Villagrasa, José Navarro, and Antonio L. García-Izquierdo</i></p> <p>How much group is necessary? Individual learning effects through group interaction <i>Alexander Stern, Thomas Schultze, and Stefan Schulz-Hardt</i></p> <p>Information sharing in work groups in the light of an anticipated future <i>Karin S. Moser and Juliane Kaemmer</i></p>
15:15-15:45h	<b>Coffee Break</b>
	<p><b>Team Outcomes (Performance) over Time (continued)</b> (Room 202) When similarity breeds performance: Social category similarity to trainers in groups with diversity faultlines increases training outcomes over time <i>Marinus van Driel, Bertolt Meyer, Daniel McDonald (presented by B. Meyer)</i></p>

<b>15:45-17:15h</b>	<p><b>Adaptation in Rescue Teams</b> (Room 202)</p> <p>The influence of shared situation awareness and team learning processes on team effectiveness in emergency management  <i>Selma Van der Haar, Mien Segers, Piet Van den Bossche, and Karen Jehn</i></p> <p>Adaptive coordination development in anaesthesia teams: a longitudinal study  <i>Martin Riethmüller, E. Fernandez Castelao, Ina Eberhardt, Arnd Timmermann, and Margarete Boos (presented by M. Boos)</i></p>
<b>19:30h</b>	<p><b>Dinner</b> at Ratskeller  Markt 1, 09111 Chemnitz  (pay for yourself)</p>

### Saturday, February 26

<b>9 – 9:30h</b>	<p><b>Important points from yesterday - What I am looking for today:</b>  <b>Margarete Boos</b> (Room 202)</p>
<b>9:30 – 10h</b>	<b>Coffee Break</b>
<b>10-12h</b>	<p><b>Team Processes (Emergent States and Behaviors) over Time – 1/2</b>  (Room 202)</p> <p>Disengagement and reinstatement: Changes in members' identification when reacting to intra-group deviant behavior  <i>Miguel Cameira</i></p> <p>Teammate performance and cardiovascular reactivity: A longitudinal study  <i>Christena Cleveland, Jim Blascovich, and Lucie Finez</i></p> <p>Start with a good laugh: Humor increases cohesion and creative performance in teams  <i>Christine Gockel, Rebecca Schmidt, and Elisabeth Brauner</i></p> <p>Do we complain less when we trust each other? Longitudinal effects of co-worker trust on team meeting communication  <i>Nale Lehmann-Willenbrock and Simone Kauffeld</i></p>
<b>12 – 13h</b>	<b>Lunch</b>
<b>13 – 14:30h</b>	<p><b>Team Processes (Emergent States and Behaviors) over Time – 2/2</b>  (Room 202)</p> <p>The innovation process: A linear succession of phases or chaos?  <i>Kathrin Rosing, Ronald Bledow, Michael Frese, Nataliya Baytalskaya, Johanna Johnson, and James Farr</i></p> <p>Searching for team diversity profiles: How diversity types are combined to produce different team performance paths  <i>Ana Margarida Passos and António Caetano</i></p> <p>Episodic processes in global and virtual teams - An approach to socio-technical scenario development  <i>Thomas Ryser and Hartmut Schulze</i></p>
<b>14:30 – 15h</b>	<b>Summarizing Discussion</b> (Moderation: Bertolt Meyer) (Room 202)
<b>15-15:15h</b>	<b>Closing and Farewell</b> (Room 202)

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# Abstracts of participants

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Friday, February 25

## Keynote Speech

### Studying Time in Teams: Why and How?

**Robert A. Roe**

Maastricht  
University School  
of Business and  
Economics

In this presentation it is argued that researchers have multiple reasons to incorporate time in the study of teams. It gives a better understanding of interactions between team members and team processes, it allows investigating teams' biographies, and it opens the way to new, time-based interventions. But in addition, it is a methodological necessity arising from the misfit between prevailing ways of theorizing (process-based, causal) and research practice (difference based, associational).

Including time in team research is not just a matter of adopting a longitudinal design with two or more measurement moments. Instead, it requires a different way of conceptualizing, hypothesizing, designing the study, gathering data, measuring, analyzing and drawing inferences. In fact, it calls for a "temporal" approach to theorizing and doing research that differs markedly from the "differential" approach that has pervaded social science research to date. After reflecting on the nature of time and temporal phenomena in teams, the two approaches will be contrasted and the main implications of temporalism for team research will be outlined.

**Team Outcomes (Performance) over Time – 1/2****Leadership over time: Understanding the role of team leadership on episodic team processes and effectiveness**

**Ana M. Graça**  
ISCTE - Lisbon  
University Institute

**Ana M. Passos**  
ISCTE - Lisbon  
University Institute

This study aims to analyze the role of team leadership in the relationship between team processes and team effectiveness over time. In fact, time has been a neglected issue in team effectiveness literature. However, Marks, Mathieu & Zaccaro, (2001) suggest different processes (transition, action and interpersonal) that can occur within the team in transition and action phases of team tasks, assuming a dynamic and cyclical perspective. The role of leaders is not clear in this model. Morgeson, DeRue & Karam, (2009) sought to evaluate the role of the leader in the different phases, identifying his main functions in each phase. Nevertheless, it is not clear in literature if team leadership, besides directly influencing the processes and effectiveness (Graça & Passos, 2010), is also a modulator or moderator of the relationship between team processes and effectiveness over time. We propose that team leadership from transition and action phases moderates the relationship between the different team processes and effectiveness in the objective performance and satisfaction dimensions over time. Participants of this study consisted of 246 teams (1109 individuals) who participated in a management competition during five weeks. Team size was on average 4 to 5 elements. Participants answered three different surveys during the competition. Results of the multiple regressions analyses showed that transition leadership functions moderated significantly the relationship between interpersonal processes on the first week and team satisfaction in the final week. Additionally, in the third week (middle stage of the competition) team leadership of the action phase moderated significantly the relationship between action processes and satisfaction, and between interpersonal processes and satisfaction. We can conclude that in these teams, team leadership and team processes assume a dynamic character. Implications of these results are discussed.

## Process gains of negotiating teams across time and in different tasks

**Joachim Hüffmeier**

University of Münster

**Alfred Zerres**

University of Münster

**Alexander Freund**

University of Osnabrück

**Klaus Backhaus**

University of Münster

**Guido Hertel**

University of Münster

In many organizations, teams are employed for a variety of tasks because management hopes to leverage process gains in teams, i.e., performance that exceeds what can be expected based on the capabilities of the individual members alone. In negotiations, this hope seems to be warranted because teams have been found to achieve better economic outcomes than negotiating individuals (e.g., Thompson, Peterson, & Brodt, 1996). The related studies, however, have examined teams and individuals only at one point in time so that important questions remain open: Is the reported team advantage stable in subsequent negotiations and with varying negotiation tasks? Do single team members learn from their team experience and are they able to achieve better negotiation outcomes as compared to individuals without team negotiation experience (team-to-individual transfer; cf. Brodbeck & Greitemeyer, 2000)? The current research intends to address these (and further) questions.

We conducted a longitudinal experimental study with three measurement points. The study followed a 3 (inter-team negotiation vs. interindividual negotiation vs. mixed negotiation [inter-team negotiation in Negotiation 1 and interindividual negotiation in Negotiations 2 and 3]) x 3 (Negotiations) experimental design, where the latter factor was a within-subjects factor. Negotiation 1 and 2 were based on an adaptation of an established negotiation task (cf. Thompson et al., 1996). These negotiations were highly similar to each other, while Negotiation 3 was more complex and different from Negotiations 1 and 2 (cf. Moran, Bereby-Meyer, & Bazerman, 2008).

In Negotiation 1, teams achieved significantly better economic outcomes than negotiating individuals, replicating prior results. In Negotiation 2 where participants worked on highly similar negotiation tasks, *the members of half of the teams* negotiated as individuals (cf. Table 1). Again, teams achieved significantly better economic outcomes than individuals, while individuals with team negotiation experience achieved significantly better economic outcomes than individual negotiators without such experience, indicating team-to-individual transfer. Individuals with team negotiation experience were, however, significantly less successful than teams. In Negotiation 3 where participants worked on a considerably different negotiation

task as in Negotiation 1 and 2, this advantage of individuals with team-to-individual transfer disappeared while teams still achieved better joint economic outcomes than both individuals with and without team negotiation experience.

The current study revealed that the advantage of teams compared to individuals in negotiations is stable across time. Moreover, the experience of negotiating as part of a team with another team seems to help individual negotiators to be successful also in later interindividual negotiations. Finally, this team-to-individual transfer was restricted to highly similar negotiations and did not generalize to different types of negotiations.

## **Boosting team process efficacy with coaching and multisource feedback: A growth modeling perspective**

**Catherine G.  
Collins**

University of New  
South Wales

**S. K. Parker**

University of  
Western Australia

There are studies that have tracked the impact of workplace interventions such as coaching (Carson, Tesluk, & Marrone) and multisource feedback (Vecchio & Anderson, 2009) on team effectiveness. However few to date have unpacked how such interventions impact teams over the longer term at different stages of team development (see for an exception Woolley, 1998). In this paper we explore the impact of a popular team intervention – a coach to debrief teams with multisource feedback – on changes in team efficacy across the team lifespan. We choose team efficacy as the outcome since it is important for team viability as well as one of the strongest predictors of team effectiveness (Gully, Incalcaterra, Joshi, & Beaubien, 2002).

Specifically the intervention involved a coach to work with the team using multisource feedback at four transitions points across the team lifespan to identify, set and monitor goals for improving their processes (Locke & Latham, 1990). Ongoing support from the coach was also provided through behavioral modeling, verbal persuasion and guided enactive mastery (Bandura, 1997). Thus we hypothesised that this intervention would boost team process efficacy which is a team's collective beliefs that they can engage in positive team processes. However, we did not expect team outcome efficacy –the team's collective beliefs about their capability to achieve team performance – to alter with the intervention, at least not early in the team lifespan since team processes typically have lagged effects on team performance (Ilgen, Hollenbeck, Johnson, & Jundt, 2005).

**Method.** A longitudinal, quasi-experimental research design was implemented with executive MBA teams. The sample included 714 individuals in 141 teams. Data was collected over three years. In the first year, there was no intervention (N = 42); this is a non-equivalent control group. The second year the intervention was implemented (N = 46 teams), and in the third year the intervention was implemented with improvements; an executive coach supported the trained alumni coaches (N = 53 teams). Established measures for team efficacy (Collins & Parker, in press) were used.

**Preliminary results & discussion.** Latent growth modelling was used to assess the hypotheses. Results supported the value of the combined coaching and multisource feedback intervention, promoting a positive spiral of development for team process efficacy but not team outcome efficacy. Specifically, team process efficacy demonstrated a positive linear trend over the team lifespan (intercept  $M = 7.72$ ,  $p < .05$ ; slope  $M = 0.08$ ,  $p < .05$ ). There was significant variance in both the initial status ( $\sigma^2 = 0.52$ ,  $p < .05$ ) and slope ( $\sigma^2 = 0.04$ ,  $p < .05$ ), and this variance was predicted by the intervention, both initially ( $\sigma^2 = .27$ ,  $p < .05$ ), and over the team lifespan ( $\sigma^2 = .22$ ,  $p < .05$ ). Interestingly, this study provides evidence that the intervention had the most impact at the beginning of the team lifespan, countering other empirical (Woolley, 1998) and theoretical work (Hackman & Wageman, 2005). Additional analyses will be conducted prior the conference to identify mediational pathways that explain why teams were more positively impacted at the beginning of the team lifespan.

**Differential effects of membership change induced team crises on team performance: The role of visionary leadership****Kevin-Lim  
Jungbauer**Technical  
University of  
Dresden**Meir Shemla**Technical  
University of  
Dresden**Jürgen Wegge**Technical  
University of  
Dresden

Membership change in teams can impact team performance in a multitude of ways. This study examined differentiated effects of membership change in terms of both member entry and member exit that were associated with specific types of team crises, i.e., production blocking and value conflicts, respectively. In a laboratory experiment disguised as an ideas competition for students, seventy-two two-member teams were randomly assigned to these two crisis conditions and a control condition without membership change. Half of the teams were randomly assigned to a visionary leadership intervention, the other half to a laissez-faire leadership intervention. It was hypothesized that team crises as induced by membership change have negative effects on team performance, that this relationship is moderated and mediated by selected variables, and that the negative effects are buffered by visionary leadership behavior. Pending completion of data collection and analysis, results are shown and theoretical and practical implications for leading teams in the workplace discussed.

**Team Outcomes (Performance) over Time – 2/2****Chaotic team performance: Evidence from professional basketball**

**Pedro J. Ramos-Villagrasa**

University of  
Oviedo

**José Navarro**

University of  
Barcelona

**Antonio L. García-Izquierdo**

University of  
Oviedo

Analytic techniques derived from the theory of nonlinear dynamical systems (NDS), developed specifically for the study of complex adaptive systems (CAS), are used here in order to analyse the dynamics of team performance in a specific context: professional basketball. The sample comprised 23 basketball teams whose performance was analysed over a twelve-year period according to two objective measures. The results reveal that all the teams show chaotic dynamics, characteristic of CAS. A relationship was also found between teams showing low-dimensional chaotic dynamics and better performance. Furthermore, the stability of the roster was found to influence team effectiveness, although it was not associated with the emergence of chaotic dynamics in team performance. It is concluded that studying teams as CAS enables fluctuations in team performance to be explained, and that the techniques derived from NDS are useful for this purpose.

**How much group is necessary? Individual learning effects through group interaction****Alexander Stern**Georg-August-  
University  
Goettingen**Thomas Schultze**Georg-August-  
University  
Goettingen**Stefan Schulz-  
Hardt**Georg-August-  
University  
Goettingen

Judgments of groups often have a large impact on our everyday lives. One of the most important findings in previous research is that group judgments are superior to individual judgments which can be for example the effect of individual capability gains. Preliminary evidence that offers a possible explanation of this phenomenon is the so called group-toindividual-transfer, that is, an increase in individual accuracy due to group interaction by acquiring certain skills from the other group members. The main question of this paper is the duration-effect of the group interaction on further individual performance. The laboratory experiment investigates, on the one hand, if a single group interaction is sufficient to achieve a stable group-to-individual-transfer and, on the other hand, if group members benefit from continuing group-interaction. In fact we found evidence for an improvement in group members' performance after a single group interaction and that group members took advantage by continuous group interaction. Whereas people that just interacted once maintained their level of performance people with an ongoing group interaction kept getting better. In summary we can say that one group interaction was sufficient for the occurrence of a group-to-individual-transfer but this transfer was not complete.

## Information sharing in work groups in the light of an anticipated future

**Karin S. Moser**

Roehampton  
University London

**Juliane Kaemmer**

Max-Planck-  
Institute Berlin

From previous work we have reason to assume that perception of both, the situation and interaction partners will affect information sharing behaviour in groups (Gersick, 1988; McGrath, 1991). Although there is agreement that the anticipated time frame of interaction should affect cooperation behaviour in social dilemmas (van Lange & Joireman, 2008) and some studies have shown such effects in repeated play prisoner's dilemmas (Bo, 2005; Chaudhuri et al, 2002), there is no research looking specifically at the effect of an anticipated future on information sharing in work groups. To come closer to real-world work settings, this study aims to examine the effect of an anticipated future on information sharing intentions in a cooperative task. Having a joint future offers the possibility to reward or sanction other's behaviour and to build up one's reputation as a current and future cooperation partner. A joint future should therefore deter people from defecting. Similar to contributing money or tokens in a prisoner's dilemma, sharing knowledge and cooperating in a group can be conceptualized as a mixed-motive situation in a social dilemma. Thus, based on previous findings in social dilemma research, we expect that in general, both, information sharing and cooperation intentions, increase when group members expect future interactions. Moreover, we expect an interaction effect of time with social value orientations in the way that an anticipated future increases cooperation and information sharing particularly for people with a proself orientation, while prosocials should generally be more cooperative but insist on reciprocity in repeated interactions.

In an experimental study using a student work group scenario, 60 participants were randomly assigned to either a 'with future' or 'no future' condition. Participants were asked to imagine working in pairs on a compulsory task (literature research, writing a term paper, making a presentation) either just once (no future condition) without any requirement for further cooperation later or again with the same partner in the following semester (with future condition). Participants were confronted with either defective or cooperative behaviour of their partner and asked for their reactions. In addition, we measured the value of outcome to participants (importance of achieving a high mark). We hypothesized that in the *with future* condition, prosocials with a high value of outcome would stay cooperative, but insist on partner contributions (tit for tat) to avoid exploitation over a long time. Proselfs would increase cooperation and insist on partner contribution, to build a reputation and avoid exploitation. In the *no future* condition, prosocials with a high value of outcome should stay cooperative as there is no danger of (long term) exploitation, proselfs in contrast should decrease cooperation and profit from their partner or rely on their own competence as there is no need for reputation building. Our results mainly supported these hypotheses.

The current study adds to previous research on repeated prisoner's dilemma games in our understanding of the effects of time perception on cooperation intentions, partner perception and its interaction with individual variables such as social value orientations and importance of performance outcome.

**When similarity breeds performance: Social category similarity to trainers in groups with diversity faultlines increases training outcomes over time**

**Marinus van Driel**

United States Air  
Force Defense  
Equal Opportunity  
Management  
Institute

Training groups of students were split into hypothetical homogeneous subgroups based on their diversity attributes by the faultline algorithm. Multilevel modeling showed increased skill development when students were categorized as belonging to the same subgroups as their trainers and if the split between the subgroups was strong.

**Bertolt Meyer**

University of  
Zurich

**Daniel McDonald**

United States Air  
Force Defense  
Equal Opportunity  
Management  
Institute

**Adaptation in Rescue Teams****Antecedents and consequences of adaptive coordination in healthcare action teams**

<b>Michael Burtscher</b> ETH Zurich	<p>In the present study, we investigated whether adaptive coordination – a team’s ability to change its coordination behaviors in response to changing situational demands – was affected by team members’ work experience. Moreover, we investigated whether adaptive coordination in turn affected team members’ perceived level of workload. Thirty-one two-person anesthesia teams consisting of an anesthesia resident and an anesthesia nurse were videotaped during a simulated anesthesia induction. The scenario was divided into different phases with varying situational demands (e.g., level of taskload, standardization). Prior to the simulation, work experience was assessed using a customized self-report questionnaire. Additionally, participants were asked to rate their teammates’ work experience. Coordination behavior was coded by two organizational psychologists using a structured observation system. After the simulation, NASA-TLX was used to assess subjective workload. Multiple regression analysis revealed that teams in which the teammates were perceived to be less experienced increased their level of explicit action coordination when taskload increased. Furthermore, more adaptive teams perceived the scenario as less temporally demanding. Our findings provide further support for the validity of adaptive coordination.</p>
<b>Michaela Kolbe</b> ETH Zurich	
<b>Johannes Wacker</b> University Hospital Zurich	
<b>Donat R. Spahn</b> University Hospital Zurich	
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### **The influence of shared situation awareness and team learning processes on team effectiveness in emergency management**

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In order to manage emergency incidents, the On Scene Command Team (OSCT) has sequential meetings to make decisions that are expected to contribute to a fast and safe stabilization of the situation. In this study, 200 external raters and 223 team members working in 50 teams participating in an emergency management exercise indicated the accuracy of information shared as more important for team effectiveness than the similarity of situation awareness among team members. The value of the team learning processes (co-)construction and constructive conflict for the development of shared situation awareness and the accuracy of information shared evolve over time. (Co-) construction facilitates both the development of shared situation awareness and the accuracy of the information shared. Constructive conflict is perceived valuable for shared situation awareness, but not for the accuracy of information shared. (Co-) construction becomes less important over time, while the added value of constructive conflict grows. SSA and the accuracy were tested as mediators between the team learning processes and team effectiveness, but no significant mediations were found.

**Adaptive coordination development in anaesthesia teams: a longitudinal study**

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Group coordination plays a crucial role in anaesthesia team performance and patient safety. Even though adaptive coordination to situational requirements has been highlighted by several studies, research dealing with how adaptive coordination develops and is related to patient safety–benefits is still rare. Thus, the aim of this study was to investigate the development of coordination mechanisms and their task-related adaptation in a longitudinal observation of medical simulation-based trainings of final-year students. We recorded six anaesthesia teams during a sequence of four task scenarios, each scenario comprised of a routine and a complication phase. After trained observers rated sub-tasks within each scenario for explicit and implicit coordination, an ANOVA for repeated measures revealed a statistically significant effect of previous scenarios on coordination development in the routine phases. While the amount of explicit coordination decreased, implicit coordination increased, revealing adaptive coordination as a skill developed through repeated group interaction. We conclude that anaesthesia trainings should consider cost- and patient safety-benefits of implicit and explicit coordination and focus on adaptive coordination for effective handling of changing task requirements.

**Saturday, February 26****Team Processes (Emergent States and Behaviors) over Time – 1/2****Disengagement and reinstatement: Changes in members' identification when reacting to intra-group deviant behavior**

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Addressing previous claims about the interchangeable use of derogation and disidentification strategies when reacting to intra-group deviance, it is argued in the present paper, that disidentification may substitute derogation but only until the latter is available. In two experiments ( $n = 79$  and  $80$ ), participants read an in-group, or an outgroup, deviant opinion about an issue relevant for their group identity and were either provided with the opportunity to judge the deviant or were not. In-group identification was measured before and after exposure to deviant behavior, and after judgment. The results were generally consistent with the hypothesis, showing that participants first disidentified from the in-group but, if presented the opportunity, they also derogated the deviant, thereby, restoring their initial levels of in-group identification.

**Teammate performance and cardiovascular reactivity: A longitudinal study****Christena  
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This study examined the ways in which team resources affect an individual team member's evaluations of resources and demands. Specifically, teammate performance was manipulated in an attempt to gain insight into the manner in which this variable affects an individual's perceived resources and demands in a competitive, team situation. It was hypothesized that, assuming team identity engagement, the worst performers on teams would perceive to have the most resources available to them, whereas the best performers on teams would perceive to have the least resources available to them. Over the course of four weeks, lab-based triads completed team-building exercises and competed in a round-robin anagram tournament, during which measures of cardiovascular reactivity were collected. Depending on the condition, participants were paired with two confederates who were either inferior or superior performers on the anagram task. Consistent with the hypothesis, the results of the study revealed that the worst performers on teams were greatly threatened (a physiological pattern that indicates relatively low perceived resources). Whereas, the best performers on teams were greatly challenged (a physiological pattern that indicates relatively high perceived resources). Explanations of the observed findings, possible limitations of the research paradigm, and directions for future research are discussed.

**Start with a good laugh: Humor increases cohesion and creative performance in teams****Christine Gockel**Chemnitz  
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Technology**Rebecca Schmidt**Chemnitz  
University of  
Technology**Elisabeth  
Brauner**Brooklyn College  
and the Graduate  
Center, The City  
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York

According to the broaden-and-build theory (Fredrickson, 1998), positive emotions broaden people's thought-action repertoires and help build personal resources such as strong relationships. In this study, we examined humor as a naturally occurring cause for positive mood and tested two propositions of the broaden-and-build theory in the context of groups: Does humor lead to stronger cohesion? Does it lead to better creative performance due to increased positive mood? Twenty-five groups with four members met three times and worked on creative tasks. Data were collected from group members, observers of the interaction, and raters of the creative products. Results showed that humor predicted initial levels but not change in cohesion, that the effects of humor were based on partner and not actor effects, and that humor positively affected creative performance on one tasks. Results for positive mood as mediator were mixed. We discuss other possible mediational pathways between humor and creative performance in groups and point out implications for groups at the workplace.

**Do we complain less when we trust each other?  
Longitudinal effects of co-worker trust on team meeting  
communication**

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Team meetings are aimed at utilizing the creative potential inherent in teams. However, not all team meetings are efficient. Communicative behaviors such as complaining damage the team meeting process and diminish team meeting effectiveness (cf. Kauffeld, 2006). Previous research suggests that trust promotes more functional communication. Co-worker trust in particular yields constructive employee attitudes and increased organizational citizenship behavior (OCB; Ferres, Connell, & Travaglione, 2004; Lavelle, Rupp, & Brockner, 2007). As OCB is promoted by co-worker trust, the question arises whether co-worker trust serves as a buffer against dysfunctional team meeting behaviors such as complaining (i.e., counterproductive behavior). A second question is: Do employees' trust ratings fluctuate or are they relatively stable? A sample of 304 employees was studied over a three-year period. Regular team meetings were videotaped and analyzed with the act4teams coding scheme (e.g., Lehmann-Willenbrock & Kauffeld, 2010a). Results obtained with Mplus show that latent co-worker trust was unidimensional and stable over the three-year period. Moreover, co-worker trust inhibited dysfunctional communicative behaviors over time. Cross-lagged correlations provided hints that the reverse did not apply. Our findings imply that co-worker trust is a rather stable phenomenon and an important resource for making team meetings more efficient.

**Team Processes (Emergent States and Behaviors) over Time – 2/2****Time effects during sequential group work: Effects of sequence and group size on motivation gains in groups****Marion Wittchen**University of  
Muenster**Bernhard Weber**Otto von Guericke  
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Magdeburg**Guido Hertel**University of  
Muenster

Motivation gains due to social indispensability of the individual contribution occur not only during simultaneous group work (Hertel, Kerr, & Messè, 2000; Weber & Hertel, 2007), but also during sequential group work (Wittchen, Schlereth, & Hertel, 2007). Sequence effects in step level-dilemma situations (e. g., Erev & Rapoport, 1990; Chen, Au, & Komorita, 1996; Au, Chen, & Komorita, 1998) suggest that social indispensability effects during sequential group work should increase with time due to reduced uncertainty. Moreover, these effects should be moderated by group size. At the beginning of sequential group work, perceived uncertainty as to the contribution of other group members should increase with group size. Thus, in early phases of sequential group work, effort should be higher in small than in larger groups. However, the reverse pattern should emerge in later phases of sequential group work because social indispensability should increase in larger groups if role clarity exists. These assumptions were tested in an experimental 2 (Position in time: First versus last) x 2 (group size: Two versus five group members) x 2 (Setting: Group work versus social comparison) Design ( $N = 183$ ; 122 women and 61 men, distributed equally across the experimental conditions) with a computer-supported cognitive task. Results show the expected interaction of position in time and group size on effort during group work. While effort was higher in dyads than in larger groups during early phases of sequential group, the reverse pattern occurred at the end of group work. With respect to the design of sequential and simultaneous group work, these results suggest that larger groups lead to motivation gains due to social indispensability particularly in later phases of group work, whereas establishing smaller sub-groups should foster motivation in the beginning of group work. Moreover, these results help integrate previous assumptions and results as to positive versus negative motivational effects of group size (e. g., Köhler, 1926; Karau & Williams, 1993; Hertel, 2002).

**The innovation process: A linear succession of phases or chaos?****Kathrin Rosing**Leuphana  
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Lueneburg**Ronald Bledow**  
University of Ghent**Michael Frese**  
National University  
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Baytalskaya,****Johanna  
Johnson,****James Farr**Pennsylvania  
State University

In this study, we propose a model of the innovation process that integrates both linear and chaotic frameworks to describe innovation. In our model of linear chaos, we assume that the importance of innovation activities shifts over time, but that all activities have relevance throughout the whole innovation process. Moreover, the pattern of shifting between activities has implications for innovation outcomes. Drawing on data from 113 applied student innovation projects, we used latent class analysis to group projects with similar innovation activity trajectories. Results confirmed that about a third of the teams followed the model of linear chaos and that these teams were superior in novelty of the project outcome. Our findings contribute to the understanding of how innovation processes unfold over time.

**Searching for team diversity profiles: How diversity types are combined to produce different team performance paths**

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This paper explores the extent to which team performance paths over time can be explained by different team diversity profiles. Our starting point was the analysis of 512 teams' performance paths, enrolled in a management challenge, over a five-week period. Using a cluster analysis on objective performance outcomes over time, we identified four different team performance profiles. Three types of team composition variables were found to significantly discriminate between team performance profiles: team size, task experience, and task experience diversity. These findings challenge those of the linear models that have been used to explain team functioning in a synchronic perspective.

## **Episodic processes in global and virtual teams - An approach to socio-technical scenario development**

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In this paper an applied, qualitative study on episodic team processes recurring over time in global and virtual contexts will be presented. The studies conceptual foundation lies in the further development of conceptual frameworks regarding episodic structuring of team processes over time (Marks, Mathieu, & Zaccaro, 2001; McGrath, 1991). In those conceptions episodes are seen as "distinguishable periods of time over which performance accrues and feedback is available". This implies that concrete activities are matched to specific time periods in teams. Marks et al. (2001) distinguish between action episodes during which action is directed towards the accomplishment of the team goals and transition episodes in which interpretation and evaluation becomes necessary to organize or reorganize the task work in a project. Following Gersick's (1988) studies in such transition phases the understanding of team tasks and the understanding of the processes required to achieve the projected goals as well as inherent role distributions change through to the perception of time pressures and accumulated information from within the team or new information from the context of the team. A study on the structuring of communication in global and virtual teams (Maznevski & Chudoba, 2000) showed that effective teams structure their communications in synchronized rhythms of recurring face-to-face meetings. Those meetings were devoted to higher level communication processes for the grounding of complex and equivocal messages for enabling further goal oriented team processes (Daft, Lengel, & Trevino, 1987). Following the studies of Maznevski and Chudoba (2000) the study presented in this paper explores the structuring of communication regarding the complexity of the communication process - defined as the amount of interdependence between the actors and the amount of equivocal information exchanged to differentiate between action and transition episodes in global and virtual teams. Further research questions addressed the specific influences of virtuality and cultural heterogeneity on the structuring of episodic processes in such teams. For allowing an explorative insight into the temporal structuring of team processes 11 teams in three different business cases varying on the contextual factors of geographic dispersion and cultural heterogeneity as well as on the complexity and structure of task were analyzed. The explorative research process was organized through iterative cycles in a multimethod approach (Kleining & Witt, 2000). The methods included retrospective interviews on communication complexity in past projects, the assessment of communication events through a short diary communication form over a predefined period of time and validation interviews and workshops. Results of the study show that independent of the case contexts similar episodic processes could be identified. Depending on task complexity typical oscillations between working episodes and planned as well as unplanned transitions episodes could be identified. Cultural differences played a critical role during transition episodes as well as in the understanding of marking triggers for new episodic processes. A first framework for using episodic team processes for the development of socio-technical scenarios by matching bundles of information and communication technology and the identification of crucial communication competencies will be outlined as a conclusion of the paper.