

3rd Annual Meeting of the Society for the Study of Motivation (SSM)

The 3rd Annual Meeting of the Society for the Study of Motivation (SSM) will take place May 27, 2010 in the Sheraton Boston Hotel, Boston, MA. It will be held in affiliation with the 22nd Annual Convention of the Association for Psychological Science (APS). The program includes an invited presentation by Charles S. Carver, six symposia, a poster session, and the Annual SSM Business Meeting.

Table of Contents

Program Committee and Presenters	3
Schedule.....	5
Invited Presentation	8
Symposia	9
Poster Schedule	20
Poster Abstracts.....	20
Floor Plan	31
Authors List.....	32

Program Committee and Presenters

Program Committee:

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Veronika Brandstätter (University of Zurich, Switzerland)
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Program Committee Secretary:

Michael Richter (University of Geneva, Switzerland)

Invited Speaker:

Charles S. Carver (University of Miami, USA)

Symposia Speakers:

David Amodio (New York University, USA)
Nicola Baumann (University of Trier, Germany)
Jamil P. Bhanji (University of Texas at Austin, USA)
Veronika Brandstätter (University of Zurich, Switzerland)
Rémi L. Capa (University of Liège, Belgium)
Charles S. Carver (University of Miami, USA)
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Jutta Heckhausen (University of California, Irvine, USA)
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Markus Maier (Stony Brook University, USA)
Markus Quirin (University of Osnabrück, Germany)
Maika Rawolle (Technische Universität München, Germany)
Andreas G. Rösch (Friedrich-Alexander-University Erlangen-Nürnberg, Germany)
Katariina Salmela-Aro (University of Helsinki, Finland)
Steven J. Stanton (Duke University, USA)
Anja Schiepe (Technische Universität München, Germany)
Richard Sorrentino (University of Western Ontario, USA)
Alexandra Strasser (Technische Universität München, Germany)
Jack van Honk (Utrecht University, The Netherlands & University of Cape Town, South Africa)
Carsten Wrosch (Concordia University, Montreal, Canada)

Poster Presenters:

Tamara Ambrona (Universidad Autónoma de Madrid, Spain)
Rachel E. Avery (Goldsmiths, University of London, UK)
Larry C. Bernard (Loyola Marymount University, USA)

Jenny V. Bittner (Jacobs University Bremen, Germany)
Christine Blech (Heidelberg University, Germany)
Kerstin Brinkmann (University of Geneva, Switzerland)
Kyle L. Brouwer (University of Nebraska-Kearney, USA)
Hanna Brycz (University of Gdańsk, Poland)
Julien Bureau (University of Quebec at Montreal, Canada)
Amparo Caballero (Universidad Autónoma de Madrid, Spain)
Christopher P. Cerasoli (State University of New York, USA)
Una Chi (Portland State University, USA)
Birk Hagemeyer (Friedrich-Schiller-University Jena, Germany)
Thomas E. Heinzen (William Paterson University, USA)
David R. Herring (University of Texas at El Paso, USA)
Beverly K. Hogan (University of Alabama at Birmingham, USA)
Alexandra P. Kass (Harvard University, USA)
Sara Konrath (University of Michigan, USA)
Sónia Mestre (University of Oporto, Portugal)
Dolores Muñoz Cáceres (Universidad Autónoma de Madrid, Spain)
Masayo Noda (Kinjyo Gakuin University, Japan)
Luis Oceja (Universidad Autónoma de Madrid, Spain)
Marlies Pinnow (Ruhr-University Bochum, Germany)
Stephen J. Read (University of Southern California, USA)
Daniel Reichman (Tel Aviv University, Israel)
Michael Richter (University of Geneva, Switzerland)
Arne Roets (Ghent University, Belgium)
Ralph E. Schmidt (University of Geneva, Switzerland)
Inge Schweiger Gallo (Universidad Complutense de Madrid, Spain)
Nicolas Silvestrini (University of Geneva, Switzerland)
Luke D. Smillie (Goldsmiths, University of London, UK)
Susanne Steiner (Technische Universität München, Germany)
Jennifer Talevich (University of Southern California, USA)
Jeffrey B. Vancouver (Ohio University, USA)

Schedule

8am – 8:30am

Kent

Opening Remarks

SSM President, Larry C. Bernard (Loyola Marymount University, USA)

8:30am – 10am

Kent

Symposium I - *Emerging directions in implicit motive research.*

Chairs: Maika Rawolle (Technische Universität München, Germany)
Oliver C. Schultheiss (Friedrich-Alexander-University Erlangen-Nürnberg, Germany)

Speakers: Steven J. Stanton (Duke University, USA)
Andreas G. Rösch (Friedrich-Alexander-University Erlangen-Nürnberg, Germany)
Maika Rawolle (Technische Universität München, Germany)
Alexandra Strasser (Technische Universität München, Germany)
Anja Schiepe (Technische Universität München, Germany)

Jefferson

Symposium II - *Neural dynamics of approach and avoidance processes.*

Chairs: Markus Quirin (University of Osnabrück, Germany)
Eddie Harmon-Jones (Texas A&M University, USA)

Speakers: Eddie Harmon-Jones (Texas A&M University, USA)
Markus Quirin (University of Osnabrück, Germany)
Greg Hajcak (Stony Brook University, New York, USA)
Jamil P. Bhanji (University of Texas at Austin, USA)
Jack van Honk (Utrecht University, The Netherlands & University of Cape Town, South Africa)

10am – 10:30am

Break

10:30am – 11:30am

Kent

Invited Address - *Two layers of the mind in the self-regulatory process: Serotonergic function and what impulsive aggression and depression have in common.*

Charles S. Carver (University of Miami, USA)
Introduction by Guido H. E. Gendolla (University of Geneva, Switzerland)

11:30am – 1:30pm

Lunch

1:30pm – 3pm

Kent

Presidential Symposium – *Classical theories in motivational science: The under- and over-appreciated.*

Chair: Larry C. Bernard (Loyola Marymount University, USA)

Speakers: David Amodio (New York University, USA)
Charles S. Carver (University of Miami, USA)
Julius Kuhl (University of Osnabrück, Germany)
Richard Sorrentino (University of Western Ontario, USA)

Jefferson

Symposium III - *Motivation and life-span development.*

Chairs: Claudia M. Haase (University of California, Berkeley, USA)
Katariina Salmela-Aro (University of Helsinki, Finland)

Speakers: Jutta Heckhausen (University of California, Irvine, USA)
Katariina Salmela-Aro (University of Helsinki, Finland)
Carsten Wrosch (Concordia University, Montreal, Canada)
Sebastian Grümer (University of Jena, Germany)
Claudia M. Haase (University of California, Berkeley, USA)

3pm – 3:30pm

Break

3:30pm – 4:30pm

Kent

Annual SSM Business Meeting

4:30pm – 5pm

Break

5pm – 6:30pm

Kent

Symposium IV – *Situational and intrapersonal antecedents of approach/avoidance.*

Chairs: Veronika Brandstätter (University of Zurich, Switzerland)
Nicola Baumann (University of Trier, Germany)

Speakers: Alexandra M. Freund (University of Zurich, Switzerland)
Nicola Baumann (University of Trier, Germany)
Markus Maier (Stony Brook University, USA)
Veronika Brandstätter (University of Zurich, Switzerland)

Jefferson

Symposium V - *Affective engagement—Psychophysiological research on the interaction of affect and motivation viewed from an action phases model.*

Chair: Sylvia D. Kreibig (University of Geneva, Switzerland & Stanford University, USA)

Speakers: Guido H. E. Gendolla (University of Geneva, Switzerland)
Rémi L. Capa (University of Liège, Belgium)
Sylvia D. Kreibig (University of Geneva, Switzerland & Stanford University, USA)
Rainer Düsing (University of Osnabrück, Germany)

6:30pm – 8pm

Commonwealth

Evening Reception - Poster Discussion Period

Cash bar

Invited Presentation

10:30am – 11:30am, Kent

Two layers of the mind in the self-regulatory process: Serotonergic function and what impulsive aggression and depression have in common.

Charles S. Carver (University of Miami, USA)

A family of theories has arisen that assumes two simultaneous modes of processing experience, one basic and reactive, the other more deliberative and planful. This presentation will relate those ideas to the functioning of the serotonergic system. Variation in serotonergic function relates to psychological and behavioral variability of several sorts, including impulsive aggression, borderline personality disorder, and (more surprisingly) depression. Dual-process models suggest a way to conceptualize these associations: Specifically, serotonergic function may influence the balance of influence between the lower-order system that responds quickly to emotions and cues of the moment and the higher-order system that responds reflectively and planfully. Low serotonergic function seems to enhance the influence of the lower-order system, whereas higher serotonergic function seems to enhance the influence of the higher-order system. This hypothesis has a number of implications, both for normal variation in personality and for views of disorder.

Symposia

Presidential Symposium

1:30pm – 3pm, Kent

Classical theories in motivational science: The under- and over-appreciated.

Chair: Larry C. Bernard (Loyola Marymount University, USA)

Speakers: David Amodio (New York University, USA)
Charles S. Carver (University of Miami, USA)
Julius Kuhl (University of Osnabrück, Germany)
Richard Sorrentino (University of Western Ontario, USA)

Symposium I

8:30am – 10am, Kent

Emerging directions in implicit motive research.

Chairs: Maika Rawolle (Technische Universität München, Germany)
Oliver C. Schultheiss (Friedrich-Alexander-University Erlangen-Nürnberg-Nürnberg, Germany)

This symposium presents emerging perspectives in research on implicit motives, which are defined as enduring preferences for affectively charged incentives and operating on a person's behavior outside her or his conscious awareness. Contributions will focus on biological and behavioral correlates of implicit motives as well as on new perspectives on motivation management, i.e., the preconditions and experiential consequences of the arousal of implicit motives and their alignment with personal goals or actions. More specifically, participants present empirical data on (a) hormonal correlates of implicit motives (Stanton), (b) implicit motives as moderators of the facial expressions of emotion (Rösch & Schultheiss), (c) the role of mental imagination (i.e., visions) for the arousal of implicit motives (Rawolle, Strasser, Schultheiss, & Kehr) as well as (d) for the enhancement of motive-goal congruence (Strasser, Rawolle, Schultheiss, & Kehr), and (e) motive-task congruence as a precursor of flow-experience (Schiepe, Schultheiss, & Kehr).

Is estrogen the biological correlate of power motivation in women?

Steven J. Stanton (Duke University, USA)

Using a male model, past studies tried but failed to link endogenous testosterone to dominance motivation in women. I will present data from two studies that investigated relationships between implicit power motivation (nPower), a preference for having impact and dominance over others, and estrogen in women. Both Stanton & Schultheiss (2007) and Stanton & Edelstein (2009) found that nPower was positively associated with basal estrogen concentrations. The positive correlation between nPower and estrogen was stronger in single women and women not taking oral contraceptives than in the overall sample of women, which suggests that both social and biological factors influence the nature of the association. Stanton & Schultheiss (2007) also demonstrated that women's estrogen responses to a dominance contest were influenced by the interaction of nPower and contest outcome: estrogen increased in power-motivated winners but decreased in power-motivated losers – a pattern that mirrors men's testosterone responses to competition.

How implicit motives are writ large in your face: the case of facial expressions of emotion.

Andreas G. Rösch (Friedrich-Alexander-University Erlangen-Nürnberg-Nürnberg, Germany) & Oliver C. Schultheiss (Friedrich-Alexander-University Erlangen-Nürnberg-Nürnberg, Germany)

Most theories on the function of facial expressions of emotion (FEEs) consider a possible moderation of the encoding of FEEs by various moderators. As previous research has already shown functional relations between FEEs and implicit motives, we hypothesized that motives represent a key moderator of differences in FEEs. To test this hypothesis we elicited six basic emotions in different motive-relevant contexts in 80 participants (senders). In a second step, FEEs' intensities were rated by a sample of 160 perceivers. Senders' implicit motives were assessed with a Picture Story Exercise. Results confirmed our hypothesis. We found a complex pattern of the context-dependent influence of senders' implicit motives on the intensity of their emotional expressions. These differences can be explained based on the interaction between (a) an individual's motive strength, (b) the relevance of the context for their motives and (c) the function of an emotion as a dominance or affiliation signal.

The motivating power of visions: Exploring the mechanisms.

Maika Rawolle (Technische Universität München, Germany), Alexandra Strasser (Technische Universität München, Germany), Oliver C. Schultheiss (Friedrich-Alexander University of Erlangen-Nürnberg-Nürnberg), & Hugo M. Kehr (Technische Universität München, Germany)

Visions are idealized mental images of the future which are assumed to promote motivation. However, the underlying motivational processes have not yet been empirically explored. We hypothesized that visions increase motivation by arousing implicit motives. We present data from two experiments that tested this assumption. Participants were administered visions with motivational content (Study 1: agency, affiliation, and neutral; Study 2: affiliation and power) to arouse specific implicit motives. The resulting motivation was assessed with various indicators (i.e., changes in motive imagery, salivary testosterone, progesterone and alpha-amylase, affective arousal, and cooperation behavior in a prisoner's dilemma). Results confirmed our hypotheses. In both experiments, Visions led to increased motivation in the respective motive domain. In addition, some of these effects were moderated by the strength of the respective implicit motive. In sum, these findings underscore the role of implicit motives in understanding the motivational mechanisms of visions.

New links between motives, visions, and goals.

Alexandra Strasser (Technische Universität München, Germany), Maika Rawolle (Technische Universität München, Germany), Oliver C. Schultheiss (Friedrich-Alexander University Erlangen-Nürnberg-Nürnberg, Germany), & Hugo M. Kehr (Technische Universität München, Germany)

Implicit motives are sensitive to motive-specific picture stimuli. Visions are represented in a picture-like format (Conger, 1999). Hence, we hypothesized that due to their picture-like representational format, visions should be more motive-congruent than personal goals (King, 1995), which tend to be represented in a more language based format. Moreover, we assumed that if a person derives goals from the motive congruent vision (Kirkpatrick & Locke, 1996), it is likely that these vision-derived goals are also motive-congruent just as the underlying visions are from which these goals were derived. To test these hypotheses, we assessed implicit motives with the Picture Story Exercise, explicit motives with the Personality Research Form, personal visions, and three corresponding personal goals with self-report measures in 64 subjects (cf. King, 1995). We found several significant and positive correlations among implicit motives, visions, and goals within the same motive domain. In contrast, no significant correlations emerged between these variables and the person's explicit motives.

The impact of the implicit power motive on flow experience.

Anja Schiepe (Technische Universität München, Germany), Oliver C. Schultheiss (Friedrich-Alexander University, Erlangen-Nürnberg-Nürnberg, Germany), & Hugo Kehr (Technische Universität München, Germany)

According to the compensatory model of work motivation and volition (Kehr, 2004), flow will result when three conditions are required: (1) The task related behavior matches one's implicit motives, (2) no competing explicit motives are aroused and (3) the perceived abilities are sufficient. To examine the relationship between the implicit power motive and flow, 60 male students competed against each other in a dominance challenge contest. The contest outcome - victory or defeat - was experimentally varied. We assumed that men with a high implicit power motive experience more flow after winning a dominance contest than men with a low implicit power motive. After losing a dominance contest men should experience less flow. Results supported the predicted impact of the implicit power motive on flow experience. The findings are consistent with Kehr's (2004) compensatory model.

Symposium II

8:30am – 10am, Jefferson

Neural dynamics of approach and avoidance processes.

Chairs: Markus Quirin (University of Osnabrück, Germany)
Eddie Harmon-Jones (Texas A&M University, USA)

Today researchers are able to investigate neural correlates of approach and avoidance tendencies in a variety of motivational contexts. The present symposium imparts up to-date insights on brain mechanisms of approach or avoidance processes as related to attention, social or achievement-related approach, failure experience, goal value, and decision-making. Harmon-Jones reports on findings suggesting a close link between approach motivation and a narrowing of attention. Next, Quirin presents fMRI data suggesting that activities supported by the explicit achievement motive go along with more effort than actions supported by the implicit achievement motive. Thereafter, Hajcak demonstrates that EEG error-related negativity after failure refers to an affective-motivational rather than to a cognitive reaction alone. Bhanji presents data from an fMRI study showing how concreteness and salience of goals influence neural activity in brain areas relevant to motivation. Not least, van Honk reports on new insights into the role of the amygdala in social motivation.

Approach-motivated positive affect causes a narrowing of attention and other cognitive processes.

Eddie Harmon-Jones (Texas A&M University, USA) & Philip Gable (University of Alabama, USA)

I will review research that has investigated neural correlates of this effect and other research that has tested whether narrowed attention can increase appetitive responses. Specifically, one experiment revealed that stimuli that evoke approach-motivated positive affect also caused greater late positive potentials (from event-related brain potentials), and these late positive potentials predicted more narrowing of attention as assessed by locally biased reactions to Navon stimuli. Another experiment revealed that a manipulated increase in local (or narrow) attention increased selective attention toward appetitive stimuli, as measured by a frontal N1 of the event-related brain potential. These results suggest a tight connection between approach motivation and narrowed attention.

Distinguishing implicit and explicit achievement motives with fMRI.

Markus Quirin (University of Osnabrück, Germany), Alexander Loktyushin (University of Osnabrück, Germany), & Julius Kuhl (University of Osnabrück, Germany)

Actions supported by the implicit achievement motive (AM) typically are effortless and spontaneously initiated. By contrast, actions supported by the explicit AM are typically effortful and planned and thus require self-control. In 20 participants we investigated neural correlates of the two motives using fMRI. Specifically, we used the Personal Values Questionnaire (explicit AM) and the Operant Motive Test (implicit AM) to predict brain activity of participants watching achievement-related as compared to control pictures. The explicit AM predicted activity in the dorsal ACC, whereas the implicit AM predicted activity in the premotor cortex. The findings suggest that individuals with a strong explicit AM need to overcome an initial conflict when engaging in a task (as indicated by dorsal ACC activity), whereas individuals with a strong implicit AM may have a smooth transition to a task that might be facilitated by mirror neuron activity.

Motivation and error-related brain activity.

Greg Hajcak (Stony Brook University, New York, USA)

External signals indicating punishment, nonreward, and novelty are thought to activate the behavioral inhibition system (BIS), and may underlie avoidance motivation. Physiological changes that follow errors suggest that mistakes elicit both orienting and defensive activity—and may also activate the BIS. A growing body of data has focused on the error-related negativity (ERN), an event-related potential (ERP) observed just 50 ms after individuals make mistakes. Although dominant computational models relate variation in the ERN to cognitive functions such as response conflict or the evaluation of outcomes in terms of expectations, we have found that the ERN is sensitive to the importance of errors. In addition, the ERN is increased as a function of individual differences in traits that relate to high BIS, such as anxiety. Overall, we believe that the ERN is a trait-like neural response to errors that relates to defensive motivational engagement during response monitoring.

Neural activity related to distinct approach states is influenced by prepotent and higher-order goals.

Jamil P. Bhanji (University of Texas at Austin, USA) & Jennifer S. Beer (University of Texas at Austin, USA)

Decision-makers might approach a food because it satisfies a prepotent (eat something tasty) or a higher-order goal (eat healthily). Little is known about whether distinct types of goals influence neural activity underlying approach states. The current study examines neural systems for approach states based on taste or health value of foods, and how priming distinct goals influences this neural activity. Ventromedial prefrontal cortex (VMPFC) and putamen activity related to taste-based

approach and lateral prefrontal cortex activity related to health-based approach. The salience of prepotent compared to higher-order goals influenced the VMPFC relation to taste-based approach, such that VMPFC activity related to taste-based approach only when taste goals were primed in a decision. Amygdala activity related to both taste-based and health-based approach, depending on whether taste or health goals were primed. The findings demonstrate that the salience of a goal can modulate neural activity underlying distinct approach states.

A new look at the role of the human amygdala in social approach and withdrawal.

Jack van Honk (Utrecht University, The Netherlands, University of Cape Town, South Africa), David Terburg (Utrecht University, The Netherlands), & Barak Morgan (University of Cape Town, South Africa)

An astonishing experiment of Nature is Urbach Wiethe disease (UWD), an extremely rare genetic disorder, which brings bilateral damage to the amygdala. In this presentation, on basis of data from the largest cohort of UWD subjects ever studied, we will attempt to modify some of prevailing ideas about the human amygdala, and its role in the social brain and social motivation. Our data, for instance, point at a critical role for the amygdala in the development of the brain, and especially in the development of the OFC. Thus, the OFC and amygdala cannot easily be discussed as separate brain units involved in motivation and emotion. Moreover, In UWD subjects we show increased trustworthiness, fear hypervigilance in a subliminal design, and improved fear recognition using dynamic faces. In sum, new insights are given into the role of the amygdala in social approach and withdrawal.

Symposium III

1:30pm – 3pm, Jefferson

Motivation and life-span development.

Chairs: Claudia M. Haase (University of California, Berkeley, USA)
Katariina Salmela-Aro (University of Helsinki, Finland)

The symposium presents a conceptual framework and four empirical contributions that address the role of motivation in adaptive life-span development with a focus on well-being as a central adaptation criterion. Heckhausen presents an overview on the motivational theory of life-span development and postulates conditions under which goal engagement and goal disengagement, two fundamental processes of motivation, are adaptive. Salmela-Aro and Tomasik investigate effects of goal disengagement on well-being in a longitudinal study of university newcomers who failed vs. passed an entrance exam. Wrosch and Dunne examine reciprocal associations between older adults' goal adjustment and depressive symptomatology in a longitudinal study. Grümer et al. show when control strategies of goal engagement and disengagement buffer adverse effects of social change on well-being. Haase et al. integrate three theories that address adaptive motivation across the life span and examine associations between motivation and well-being in two studies with younger, middle aged, and older adults.

A motivational theory of life-span development: Conceptual overview.

Jutta Heckhausen (University of California, Irvine, USA)

The Motivational Theory of Life-Span Development integrates the model of optimization in primary and secondary control and the action-phase model of developmental regulation with our original life-span theory of control (Heckhausen & Schulz, 1995; Schulz & Heckhausen, 1996) to present a comprehensive motivational theory of life-span development (Heckhausen, Wrosch, & Schulz, 2010). The theory proposes that individuals strive for primary control of the environment throughout life, but adjust their goals in such striving to their actual control potential at any given time. According to the theory, control strivings are regulated via cycles of optimized goal selection, goal engagement and goal disengagement, each with their uniquely adapted strategies of control. Younger and middle-aged adults have a greater capacity for primary control than older adults. Adverse socioeconomic conditions can severely constrain controllability for certain subpopulations (e.g., in underprivileged regions) and may therefore call for goal disengagement and self-protection, even among younger adults.

Knowing when to let go at the entrance to university: Beneficial effects of compensatory secondary control after failure.

Katariina Salmela-Aro (University of Helsinki, Finland) & Martin J. Tomasik (University of Jena, Germany)

Compensatory secondary control strategies might have beneficial effect after failure when controllability is low. 315 young people were examined a month before and twice after the entrance examination for studying psychology at university on their compensatory control strategies and satisfaction with life. Multi-group structural equation models showed that (1) compensatory secondary control was associated with higher levels of and a steeper increase in satisfaction with life in the group who failed but not for the group who passed and that (2) the slope coefficient was significantly different in the two groups indicating a steeper increase of satisfaction with life in those who failed the exam but at the same time reported higher compensatory secondary control. These results corroborate the congruence theorem of the actionphase model of developmental regulation and show that disengagement from a goal can sometimes be more adaptive than persistent goal striving.

Goal disengagement and depressive symptomatology in older adulthood.

Carsten Wrosch (Concordia University, Montreal, Canada) & Erin Dunne (Concordia University, Montreal, Canada)

This longitudinal study examined the reciprocal associations between older adults' goal adjustment capacities (goal disengagement and goal reengagement) and their depressive symptomatology. We hypothesized that poor goal disengagement would contribute to increases in depressive symptoms over time, and that these increases in depressive symptoms would predict subsequent changes in older adults' goal disengagement capacities. The hypotheses were tested using three waves of data derived from a 4-year longitudinal study of 157 older adults. Results from multiple regression analyses showed that low baseline levels of goal disengagement capacities predicted 2-year increases in depressive symptoms. In addition, these increases in depressive symptoms forecasted subsequent declines in participants' goal disengagement capacities over time. Goal reengagement, by contrast, did not show longitudinal associations with participants' depressive symptoms. These findings suggest that problems with goal disengagement and depressive symptomatology can mutually influence each other and contribute to subsequent motivational and emotional problems.

Subjective well-being in times of social change: The role of coping strategies and control beliefs.

Sebastian Grümer (University of Jena, Germany), Rainer K. Silbereisen (University of Jena, Germany), & Jutta Heckhausen (University of California, Irvine, USA)

Macro-level social change associated with globalization or demographic shift cause new demands at work or in family life. Based on stress-and-coping theories, the study investigated three questions. First, whether work- and family-related demands of social change were perceived as individual stressors and hence were related to lower subjective well-being. Second, whether coping strategies buffered the association between stressful demands and subjective well-being, and third, whether control beliefs were relevant moderators in this coping process. We found, first, that subjective well-being was negatively related to perceived demands in work and family life; second, that coping strategies ameliorate this negative relationship, and third, that the size of such buffering effects varies as a function of control beliefs. Overall, the results support the predictive role of social change, coping strategies and control beliefs for individuals' well-being.

Goal engagement, goal disengagement, and meta-regulation: Integrating three theories of motivation and life-span development.

Claudia M. Haase (University of California, Berkeley, USA), Jutta Heckhausen (University of California, Irvine, USA), & Carsten Wrosch (Concordia University, Montreal, Canada)

We seek to integrate three theories that address adaptive motivation across the life span, the dual-process model of assimilation and accommodation, the motivational theory of lifespan development, and the model of Selection, Optimization, and Compensation. Using data from two studies with young, middle-aged, and older adults, we show, first, that an integrative three-process model comprised of goal engagement, goal disengagement, and meta-regulation fits the data generated by the different theory-based measures of motivation, is equivalent across age groups, and performs better than alternative models. Second, the findings indicate higher goal engagement, goal disengagement, and meta-regulation in older age. Third, the findings demonstrate that higher meta-regulation predicts higher goal engagement and goal disengagement, which both predict higher well-being. We hope that the integrative model facilitates communication among researchers of motivation and life-span development and constructive exchanges with other fields including research on well-being and health.

Symposium IV

5pm – 6:30pm, Kent

Situational and intrapersonal antecedents of approach/avoidance.

Chairs: Veronika Brandstätter (University of Zurich, Switzerland)
Nicola Baumann (University of Trier, Germany)

The distinction between approach and avoidance tendencies is one of the most fundamental and basic distinctions in scientific psychology (Elliot, 2008). In four talks, the present symposium is designed to highlight situational and intrapersonal antecedents of these fundamental motivational tendencies. Freund and Nikitin look at formal characteristics (velocity) of approach/avoidance reactions in response to emotional stimuli. Baumann, Schüler and Brandstätter argue that approach/avoidance tendencies can be primed by numbers as learned symbols of success and failure. Maier scrutinizes mediating mechanisms, modality- and context-specificity in priming of approach/avoidance tendencies by colors. Brandstätter, Schnelle and Knöpfel focus on intrapersonal resources that foster approach motivation in the realm of personal goals. Taken together, the symposium will advance our understanding of approach/avoidance motivation as it integrates work on situational and dispositional constraints and illuminates effects of approach/avoidance tendencies on different levels of analysis (response speed, task performance, goal adoption).

Approaching is faster than avoiding: Support for a positivity effect in motivated behavior.

Alexandra M. Freund (University of Zurich, Switzerland) & Jana Nikitin (University of Zurich, Switzerland)

Three experiments investigated the activation of approach and avoidance motivated behavior by emotional stimuli (happy vs. angry faces). Three alternative hypotheses were contrasted: (i) Negativity hypothesis (faster avoidance than approach reactions), (ii) positivity hypothesis (faster approach than avoidance reactions), (iii) congruence hypothesis (faster approach reactions to positive stimuli and faster avoidance reactions to negative stimuli than vice versa). Studies 1 and 2 ruled out the negativity hypothesis: Using the arm-flexion/arm-tension paradigm, Study 1 revealed faster reactions to happy than to angry faces. Study 2 replicated these results using a modified rt paradigm. Study 3 included an incongruent condition. Whereas the first half of the trials confirmed the congruence hypothesis, the second half supported the positivity hypothesis. In sum: Approach reactions to positive stimuli seem faster than avoidance reactions to negative stimuli. This advantage can be temporarily reduced by an incongruent movement but is recovered by learning. Authors: Alexandra M. Freund (University of Zurich, Switzerland) & Jana Nikitin (University of Zurich, Switzerland)

The effects of numbers on approach/avoidance tendencies.

Nicola Baumann (University of Trier, Germany), Julia Schüler (University of Zurich, Switzerland), & Veronika Brandstätter (University of Zurich, Switzerland)

Numbers are learned symbols of success and failure. The present research investigated their effects on approach/avoidance tendencies and task performance in two cultures with different learning histories for numbers. Priming numbers associated with success (1 in Germany; 6 in Switzerland) was expected to increase task performance whereas priming numbers associated with failure (6 in Germany; 1 in Switzerland) was expected to reduce task performance. Performance effects were expected to be mediated by activated approach/avoidance tendencies. Consistent with expectations, in Switzerland, priming failure-number 1 (vs. success-number 6 and control-number 7) significantly reduced performance in an anagram task (Study 1) and significantly reduced approach motivation (Study 2). In Germany, the expected reversal of number priming effects on approach motivation and performance was stronger for participants high (vs. low) in

implicit fear of failure (Study 3). The mediational model (fear of failure x number priming -> approach tendencies -> performance) was marginally significant.

Priming of approach and avoidance motivation: Mediation, modality, and context.

Markus Maier (Stony Brook University, USA)

Priming research has a long tradition in Social Psychology. During the last three decades fascinating and ground breaking results have been published in this area. However, in spite of the fascination about priming effects three major weaknesses of motivational priming research can be identified: One is a considerable lack of studies testing for mediation. Another weakness is the disregard of modality in investigating priming effects and therefore a lack of knowledge about the underlying memory representations. The third flaw is the unproved assumption that a priming stimulus has a cross situational objective meaning. On the contrary, recent research indicates that the motivational meaning of a priming stimulus can vary with the situational context in which it is presented. Motivational color research is used as a priming example to address these three major problems in actual priming research.

The adoption of approach versus avoidance goals: The role of goal-relevant resources.

Veronika Brandstätter (University of Zurich, Switzerland), Jessica Schnelle (University of Zurich, Switzerland), & Annina Knöpfel (University of Zurich, Switzerland)

The present research investigated whether the adoption of approach versus avoidance goals is affected by goal-relevant resources. When individuals have few goal-relevant resources, they should prefer avoidance goals, whereas when individuals have many goal-relevant resources, they should adopt approach goals. The individual's outcome expectancy is assumed to mediate this relationship. This hypothesis is supported by the findings of four multi-method studies with student samples. A cross-sectional field study showed a positive relationship between the extent of goal-relevant resources and approach goal adoption. In a longitudinal field study, a high number of resources predicted the increase in personal approach goal adoption over a period of four months, controlling for neuroticism. Two further experiments showed that the manipulation of resources affected approach vs. avoidance task goal adoption, with outcome expectancy mediating the relationship. These findings complement existing findings on dispositional and situational determinants of approach vs. avoidance goal adoption.

Symposium V

5pm – 6:30pm, Jefferson

Affective engagement—Psychophysiological research on the interaction of affect and motivation viewed from an action phases model.

Chair: Sylvia D. Kreibig (University of Geneva, Switzerland & Stanford University, USA)

The present symposium brings together psychophysiological research on the interaction of motivation and affective processes, including generalized positive/negative affect, mood, and emotion. Viewed from an action phases model (Heckhausen & Gollwitzer, 1987), the various presentations fall into a programmatic line of research: Gendolla and Silvestrini open with a demonstration of how affective cues present during the actional phase may influence motivational resource mobilization for task execution. Capa next illustrates that affect stemming from a preactional phase can also affect motivational investment. Kreibig and colleagues then address how postactional evaluations may instigate differential emotions. The action- vs. state-orientation associated with the actional and postactional phases is investigated as an individual difference factor by Düsing and colleagues, who demonstrate different stress responses according to this personality trait. The present symposium is intended to provide a platform for discussing implications of an action phases model for conceptualizing the interaction of motivation and affect.

Priming the heart: Effects of masked stimuli on effort-related cardiovascular response.

Guido H. E. Gendolla (University of Geneva, Switzerland) & Nicolas Silvestrini (University of Geneva, Switzerland)

Previous studies from our laboratory have consistently found that accessible knowledge about task demand and consciously experienced mood states influence effort-related cardiovascular reactivity in the context of task performance (see Gendolla, Brinkmann, & Richter, 2007 for a review). A series of recent experiments shows that task-related cardiovascular reactivity can be systematically influenced by (1) the presentation of masked activation and deactivation cues and (2) primed positive and negative affect. Participants who were exposed to masked low resolution sad faces in the context of cognitive tasks showed stronger sympathetic nervous system discharge to the heart (shorter pre-ejection period, higher systolic blood pressure) than participants who were subconsciously exposed to low resolution smiling faces. Moreover, subliminal exposure to angry faces had the same effects as smiling faces. These studies show that effort mobilization can be influenced unconsciously.

Long-lasting effect of subliminal processes on mental effort.

Rémi L. Capa (University of Liège, Belgium)

We investigated whether activating a goal of daily life, the goal to study for students, through subliminal priming would induce vigorous behavior and persistence toward goal attainment. To address this issue, participants had to perform a dot detection task in which subliminal representation of the goal of studying was directly paired (priming-positive) or not (priming) to a positive word. Participants had to detect dots after these words. Next, students performed a learning task based on their coursework. The priming-positive group showed greater peripheral vasoconstriction—related to task engagement—extending over several minutes. This finding indicates that subliminal priming can induce effortful behavior and perseverance when pursuing a simple goal typical of daily life. Unconscious information might therefore have a long-lasting effect on executive control.

Motivation-based appraisals determine emotion: Psychophysiological effects of self-relevant success and failure.

Sylvia D. Kreibig (University of Geneva, Switzerland & Stanford University, USA), Guido H. E. Gendolla (University of Geneva, Switzerland), & Klaus R. Scherer (University of Geneva, Switzerland)

Appraisal theories (Scherer, 2009) conceptualize emotions as responses to events perceived as relevant to an individual's goals, needs, or values. Goal attainment is predicted to lead to positive emotions, whereas failed goal pursuit will lead to negative emotions. To test predictions that relate emotion to motivation-based appraisals, we studied cardiovascular and electrodermal reactivity during task execution and subsequent performance feedback. In a previous study (Kreibig, Gendolla, & Scherer, in press), we found positive achievement-related feelings and increased sympathetic activation in response to relevant success feedback. We here report on a study where we independently varied perceived outcome relevance (relevant vs. irrelevant) and outcome valence (success vs. failure). Relevant success feedback elicited positive feelings and sympathetic activation. In contrast, relevant failure feedback elicited negative feelings and sympathetic inhibition. Groups of irrelevant success and failure remained relatively unchanged. Our results implicate emotion as an adaptive process in goal engagement and disengagement.

Oxytocin buffers cortisol responses to stress in state-oriented individuals.

Rainer Düsing (University of Osnabrück, Germany), Markus Quirin (University of Osnabrück, Germany), & Julius Kuhl (University of Osnabrück, Germany)

Oxytocin facilitates stress regulation but little is known about individual differences in this effect. The present study investigates whether the effect of intranasal oxytocin on stress-contingent cortisol release differs between action- vs. state-oriented individuals, a measure of individual differences of emotion regulation abilities. In a double-blind study, action- and state-oriented healthy male students were randomly assigned to receive intranasally 24 IU oxytocin or placebo. Cortisol was measured at several times before and after a stressor (public speaking). State-oriented individuals showed a reduced cortisol response to stress after oxytocin but an increased cortisol response after placebo application. The findings will be discussed with respect to developmental processes that may underlie the link between oxytocin release and individual differences in their ability to maintain self-control under demanding conditions.

Poster Schedule

3:30pm – 5pm	Poster assembled (<i>Commonwealth</i>)
5pm – 6:30pm	Posters available for viewing (<i>Commonwealth</i>)
6:30pm – 8pm	Authors present for discussion and questions (<i>Commonwealth</i>)
8pm – 9pm	Dismantle posters

Poster Abstracts

Poster 1

Anticipated emotional profiles and prediction of sexual risk behavior.

Amparo Caballero (Universidad Autónoma de Madrid, Spain), Pilar Carrera (Universidad Autónoma de Madrid, Spain), Dolores Muñoz Cáceres (Universidad Autónoma de Madrid, Spain), & Luis Oceja (Universidad Autónoma de Madrid, Spain)

The theoretical models most widely used for explaining the decision to engage in a particular behavior have been the theory of reasoned behavior (Fishbein & Ajzen, 1975) and its successor, the theory of planned behavior (TPB; Ajzen, 1991). However these theories have provided only moderate levels of explanation for risk behaviors (Conner & Sparks, 2002; Sheeran, 2002). Consequently, researchers have begun to include new factors in this model. In this vein, we tested whether anticipated emotional profiles improve TPB predictions related to behavioral expectation (BE) and behavioral intention (BI), using a sample with moderately high experience of a risk behavior: sex without condom. The results showed that anticipated emotional profiles constitute crucial information for improving predictions from the TPB model (23% vs 38% of BI to engage in the risk behavior, and 16% vs. 34% of BE).

Poster 2

Interactional influence of fatigue and difficulty on cardiovascular response: An obesity simulation utilizing an aerobic exercise challenge.

Beverly K. Hogan (University of Alabama at Birmingham, USA), Jin Joo Shim (University of Alabama at Birmingham, USA), Jessica Duncan (University of Alabama at Birmingham, USA), Christa Faunce (University of Alabama at Birmingham, USA), & Rex A. Wright (University of Alabama at Birmingham, USA)

This study was designed to simulate the effect of obesity on fatigue and its later influence on effort-related cardiovascular responses to an aerobic challenge. Following a 10 minute baseline period, female volunteers walked on a treadmill for 10 minutes while wearing a vest fitted with 5- or 25 pounds of weight. Subsequently, the women mounted a recumbent stationary bicycle and were asked to pedal for 10 minutes with the chance to earn a modest incentive if they attained a low (40 rpm) or high (60 rpm) cycling standard. Thus, the design was a 2 (vest weight: low versus high) x 2 (cycling standard: low versus high) factorial. As expected, analysis of cardiovascular responses during the cycling period indicated interactions for systolic blood pressure and heart rate. Whereas responses were stronger for the high weight group when the standard was low, they were weaker for this group when the standard was high.

Poster 3

Analyzing and managing the motivational conflict provoked by presenting the individual in need as one among others.

Tamara Ambrona (Universidad Autónoma de Madrid, Spain), Luis Oceja (Universidad Autónoma de Madrid, Spain), Belén López-Pérez (Universidad Autónoma de Madrid, Spain), Amparo Caballero (Universidad Autónoma de Madrid, Spain), & Dolores Muñoz Cáceres (Universidad Autónoma de Madrid, Spain)

According to the one-among-others effect, presenting an individual in need together with other individuals with similar needs does not reduce the empathy-induced altruism but it introduces other

prosocial motives that may conflict with it. In two experiments the manipulation of the target in need (i.e., presenting her as either one-individual or one-among-others) did not reduce the empathy felt for the individual. However, results revealed that the one-among-others presentation (a) increased the conflict between wanting to help the individual and being fair with the others (Experiment 1), and (b) decreased the offered aid when the beneficiary of help was the individual but increased it when the beneficiary was a group of individuals (Experiment 2). It is concluded that one-among-others presentation produces a motivational conflict, and that the occurrence of prosocial behavior depends on whether the situation does or does not allow solving such conflict.

Poster 4

Activating the motive of Quixoteism: The transcendent-change orientation.

Luis Oceja (Universidad Autónoma de Madrid, Spain), Sergio Salgado (Universidad Autónoma de Madrid, Spain), & Pilar Carrera (Universidad Autónoma de Madrid, Spain)

We use the term Quixoteism to label a social motive which has the ultimate goal of increasing the welfare of the world. It is proposed that this motive is activated by the transcendental-change orientation: a disposition toward provoking changes that go beyond a specific individual or group. Three studies were conducted to test this proposal. In Study 1, we developed a scale to measure such transcendental-change orientation. Subsequently, in two other studies participants were asked to read an article that described the actual case of a person in need. Results of Study 2 showed that the centrality of the transcendental-change orientation (measured two months earlier) predicted the extent to which the article was interpreted consistently with the ultimate goal of Quixoteism. Results of Study 3 showed that increasing the salience of such orientation increased the likelihood of performing a high cost prosocial behavior.

Poster 5

Differential effects of antecedent- and response-focused implementation intentions on the regulation of disgust.

Inge Schweiger Gallo (Universidad Complutense de Madrid, Spain), Kathleen C. McCulloch (Idaho State University, USA), & Peter M. Gollwitzer (New York University, USA & University of Konstanz, Germany)

As little is known about the effectiveness of different types of implementation intentions on the regulation of emotions, the present studies aimed at disentangling whether different implementation intentions help in down-regulating disgust responses. In Study 1, two antecedent-focused implementation intentions based on attentional deployment and cognitive reappraisal allowed participants to rate disgusting pictures as being less unpleasant than participants in the control condition or the goal intention condition. However, this effectiveness did not extend to feeling less excited after seeing the unpleasant slides. In Study 2, participants with a response-focused implementation intention, which aimed specifically at regulating the intensity of the emotional experience, reported a lower evoked arousal after seeing the disgusting slides, but didn't rate the pictures as being less unpleasant. Thus, implementation intentions were shown to exert differential effects depending on whether they are formulated in terms of regulating one or another emotional dimension.

Poster 6

Congruence of explicit and implicit intimacy motives enhances relationship satisfaction.

Birk Hagemeyer (Friedrich-Schiller-University Jena, Germany) & Franz J. Neyer (Friedrich-Schiller-University Jena, Germany)

Previous research has shown that explicit and implicit motive dispositions are largely independent from each other and that motive congruence (i.e., converging scores on explicit and implicit motive measures) has positive effects on subjective well-being. In a sample of 499 couples, we tested whether the association between motive congruence and well-being also applies to the domain of romantic relationships. The partner-related intimacy motive was assessed with the Operant Motive Test for Partner Relationships (OMT-P; Hagemeyer & Neyer, submitted) on the implicit level and with a self-report questionnaire on the explicit level. Dyadic analyses revealed that both, explicit and implicit intimacy motives, had specific positive actor effects on relationship satisfaction and that high scores on both motives enhanced relationship satisfaction even further. These findings

support the notion that the convergence of two distinct motivational systems (McClelland, Koestner & Weinberger, 1989) contributes to perceived relationship quality as well as to global well-being.

Poster 7

Metacognitive self as a cognitive-motivational device for enhancing goal pursuit.

Hanna Brycz (University of Gdańsk, Poland)

The main aims of this research are to provide a new understanding of metacognition and explore the extent to which metacognition can enhance goal striving. Metacognitive Self serves as a new meaning of self-knowledge as knowledge of one's own biases (Brycz, in press). Individual differences in Metacognitive Self can be measured by the Metacognitive Self Scale (Brycz & Karasiewicz, in press). The Scale concerns 40 particular biased behaviors. It is accurate and reliable. Moreover, three experiments show that metacognition insight in one's own biased behaviors helps people in self-regulation and goal pursuit. In other words, metacognitive self seems to serve as motivational and cognitive regulator of goal (achievements) fulfillment. This individual skill plays its role in combination with other situational factors. It seems plausible that temptations play a crucial role in this process. Activation of temptation engages goal pursuit. A strong metacognitive self and the presence of temptation separately have a positive impact on goal attainment. A question for further investigation is the interplay between these two variables.

Poster 8

Discounting the negative mood impact in dysphoria is possible: Evidence from cardiovascular reactivity.

Kerstin Brinkmann (University of Geneva, Switzerland), Jessica Grept (University of Geneva, Switzerland), & Guido H. E. Gendolla (University of Geneva, Switzerland)

Previous research suggests that dysphoria affects effort mobilization due to a negative-mood impact. The aim of the present experiment was to investigate this possible underlying mechanism. To this end, half of the participants of a 2 (dysphoric vs. nondysphoric) x 2 (cue vs. no-cue) study received a mood-discounting cue before working on a cognitive task without predefined performance standard. Effort mobilization was operationalized as participants' cardiovascular reactivity. Throughout the experiment dysphoric participants reported more negative current mood than nondysphoric participants. Replicating previous research, dysphoric participants had stronger blood pressure reactivity than nondysphoric participants while performing the cognitive task without cue. Importantly, this effect disappeared when participants were made aware of the possibility of mood influences. Results thus demonstrate that, even though current mood is not affected by the cue, dysphorics are able to discount mood's influence in the context of performance-related effort mobilization.

Poster 9

When the conscious and subconscious meet: Negative effects of goal priming on goal commitment after task completion.

Daniel Reichman (Tel Aviv University, Israel), Daniel Heller (Tel Aviv University, Israel), & Yoav Ganzach (Tel Aviv University, Israel)

Recent theoretical and empirical accounts postulate that goal priming should result with reduced motivation after goal completion. In two experiments, people were primed either with neutral or achievement related words (e.g., achieve, succeed, win). Immediately after the prime, people were given a brainstorming task. Upon task completion, participants indicated how committed they were to achieve high standards in the brainstorming task. In both experiments, people in the achievement prime condition reported lower levels of goal commitment. To the best of our knowledge, this is the first time that goal priming is documented to decrease conscious self report measures of motivation after task completion. Implications of these findings to post-fulfillment inhibition, control theory, implicit motivation and the applicability of achievement primes to applied settings are presented.

Poster 10

The value of motivation and quality of life in Portuguese obese.

Sónia Mestre (University of Oporto, Portugal) & José Pais Ribeiro (University of Oporto, Portugal)

The term quality of life is often used in a wide range of situations, and it is particularly important in the study of obese, due to the morbidity often associated to this population. In this study, from a self-determination perspective, we explored the relation between motivation (autonomous vs controlled), quality of life and weight loss. Data were accessed from 90 obese adults at baseline and follow-up (6 months). The results supported the self-determination principles for the continuum among autonomous and controlled motivation. Additionally, quality of life was highly correlated with motivation and weight loss. Moreover, these psychological variables predicted similar weight loss amongst genders, but were more representative in men. Generally, these results show the magnitude and meaning of quality of life and motivation in foresee positive outcomes in the treatment of obese people.

Poster 11

Electrophysiological responses to affective priming with emotional pictures.

David R. Herring (University of Texas at El Paso, USA), Stephen L. Crites (University of Texas at El Paso, USA), Nicholas W. Jackson (University of Texas at El Paso, USA), Jennifer H. Taylor (University of Texas at El Paso, USA), Katherine R. White (University of Texas at El Paso, USA), & Jennifer Gonzales (University of Texas at El Paso, USA)

The objective of the present study was to add to the mixed literature on the physiology underlying the affective priming effect. Previous literature has implicated three event-related potential (ERP) components: the late positive potential (LPP), the lateralized readiness potential (LRP), and the N400. All three components were examined in the current study. Thirty participants were presented pictures pairs from the International Affective Picture System that were either congruent or incongruent. Congruent trials ($M = 767$ ms) were responded to more quickly than incongruent trials ($M = 785$ ms), $p = .027$. Further, affective congruency was observed only for the LPP, $p = .009$, such that incongruent trials displayed a larger peak amplitude ($M = 6.74$ μ V). The current findings are interpreted in line with the hypothesis of motivational significance and support a central priming perspective.

Poster 12

Engagement versus disaffection in the college classroom: Construction and validation of a measurement tool to assess students' motivation to learn.

Una Chi (Portland State University, USA), Ellen Skinner (Portland State University, USA), & Thomas Kindermann (Portland State University, USA)

Grounded in Self-determination Theory, this study aimed to design a psychometrically sound measure of college classroom engagement, and to examine its structural and functional similarity to the motivational construct of engagement, which is well-documented as a predictor of school completion and a protective factor against risky behavior during elementary and secondary school. Confirmatory structural analyses suggested four distinguishable components of behavioral and emotional engagement and disaffection. Validation analyses showed the predicted correlations between components of engagement and class performance. Moreover, as posited by SDT, instructor involvement, structure, and autonomy support predicted higher engagement and lower disaffection in class. However, although a sense of autonomy related to all four components of engagement, perceived competence and relatedness did not: relatedness was correlated only with behavioral and competence only with emotional components. Future studies could examine the role of college students' life circumstances in shaping their engagement, and eventual school success and graduation.

Poster 13

Development and validation of a coding manual to measure authoritarian themes in text.

Sara Konrath (University of Michigan, USA), David Winter (University of Rochester Medical School, USA), Alanna Maguire (Michigan State University, USA), & Eileen L. Zurbruggen (University of California, Santa Cruz, USA)

Authoritarians are characterized by obedience to authorities, outgroup prejudice, and conventionality. We have developed and are validating a coding manual to measure

authoritarianism in text. Participants completed the Right Wing Authoritarianism scale, and wrote short stories after seeing pictures (i.e. the Picture Story Exercise, an implicit measure of motives). Those scoring higher in authoritarianism wrote stories that seem too good to be true. For example, in their stories, there are fewer mentions of negativity (e.g. emotions, traits, relationship problems between characters, physical threats, ego threats). Their stories also have themes of high stability, and low change. Finally, their stories are written in two types of narrative extremes. Either they are overly concrete, or they are wildly implausible and fantastical. In contrast, low authoritarians write stories that are realistic, complicated, and have psychological depth. Copies of the coding manual, including validation information, will be available at our presentation.

Poster 14

A neural network model of motivational structure and dynamics.

Stephen J. Read (University of Southern California, USA), Brian M. Monroe (University of Southern California, USA), Aaron L. Brownstein (University of Southern California, USA), Yu Yang (University of Southern California, USA), Gurveen Chopra (University of Southern California, USA), & Lynn C. Miller (University of Southern California, USA)

We present a neural network model that simulates important aspects of the structure and dynamics of human motivation. The model integrates work on the neurobiology of motivation, hierarchical taxonomies of human goals, and an evolutionary analysis of human motives. It is organized in terms of two overarching motivational systems, an approach and an avoidance system, as well as a general disinhibition and constraint system. Each of the two overarching motivational systems influences more specific motives. Motivational strength is modeled in terms of differences in the sensitivities of the two broad motivational systems, the baseline activation of specific motives, and inhibitory strength. The result is a motive-based neural network model of motivation based on research about the structure and neurobiology of human motivation. The model provides an account of motivational dynamics in response to changes in situational context and underlying motivational states.

Poster 15

Toward a comprehensive, empirically-based taxonomy of human goals.

Jennifer Talevich (University of Southern California, USA), Stephen J. Read (University of Southern California, USA), David A. Walsh (University of Southern California, USA), Gurveen Chopra (University of Southern California, USA), & Ravi Iyer (University of Southern California, USA)

We present a hierarchical taxonomy of human goals, based on similarity judgments of 161 goals gleaned from an extensive review of the motivation literature from McDougall to the present. 612 participants sorted the goals into similar groups, using a Flash based interface in a standard web browser. The co-occurrence matrix was cluster analyzed for the entire sample, and for three separate age groups: 18 to 24, 25 to 40 and 41 to 65. The resulting 40-50 clusters were conceptually meaningful and consistent across the groups. At the broadest level were four large clusters concerned with Relatedness or Communal orientation, Competence or Agentic orientation, Morality and Religion, and Self-enchancement / Self-knowledge. Each of the broad clusters divided into more specific goals. The role of this taxonomy in promoting theory development and research is discussed, as is its relationship to other goal organizations and to the Big Five structure of personality.

Poster 16

Motion graphs: Five interacting variables in a coherent visual display.

Thomas E. Heinzen (William Paterson University, USA)

When Herbert Simon was asked, "what constitutes persuasive evidence in science?" he replied, "Big qualitative phenomena that are loud and clear, that you can talk about without statistical tests" (see Baars, 1986, p. 376). The corresponding visual display should provide an intellectual "hit between the eyes" (Young, Lalero-Mora, & Friendly, 2006, p. 5). This presentation uses motion graphs to visualize five interacting variables from deBoer, Bosker, and van der Werf's (2010) study about how teachers' expectations, achievement motivation, parental aspirations, and IQ influence student performance over five years. Hans Rosling (Karolinska Institute; see gapminder.com) developed motion graphs to visualize international public health data; this presentation adapts their

software to psychological phenomenon: Five interacting variables in a coherent visual display. We describe some of the history of multivariate graphs, the strengths, and potential misinterpretations of this emerging capability.

Poster 17

How affective forecasting influences the motivation for learning by the type of students' motivation.

Masayo Noda (Kinjyo Gakuin University, Japan)

The present study tested how affective forecasting influenced motivation for learning by the type of students' motivation. In the experiment, participants were assessed on their motivation for learning, then asked to predict how they would feel if they were to receive positive feedback on a subsequent examination, and finally to respond to the motivation measure once more at the end of experiment. Analyses were performed on motivational type (2) x affective forecasting (2) on motivation for learning. A significant two-way interaction was revealed. While extrinsic motivation was not influenced by affective forecasting for less motivated participants, Identity seeking motivation was highly influenced yielding higher scores. On the other hand, for participants motivated by the recognition of a necessity, Identity seeking motivation yielded higher scores, but extrinsic motivation yielded lower scores. These results showed that the impact of affective forecasting varied on each type of students' motivation.

Poster 18

Differences in the writing motivation of students with specific language impairments.

Kyle L. Brouwer (University of Nebraska-Kearney, USA)

Students with specific language impairments (SLI) have significant difficulty with language despite otherwise typical cognitive ability. Due to the cognitive and linguistic demands of the writing process, students with SLI face unique writing challenges. For this reason, it was hypothesized that these students would report lower levels of perceived writing competence and intrinsic writing motivation. Students in grades 3-5 in 10 schools (35 SLI, 242 non-disabled peers) completed self-report measures designed from a Self-Determination Theory perspective. Multiple regression analyses supported the primary hypotheses. Language ability was a unique predictor of writing motivation after controlling for gender, grade, and spelling ability. The results extend the current understanding of writing motivation in students with SLI as well as the relationship between language ability and writing motivation. These results also will inform future writing interventions designed to improve motivation and writing outcomes of students with SLI.

Poster 19

The differential effect of anticipated emotions for predicting risk behavior.

Dolores Muñoz Cáceres (Universidad Autónoma de Madrid, Spain), Pilar Carrera Levillain (Universidad Autónoma de Madrid, Spain), Amparo Caballero (Universidad Autónoma de Madrid, Spain), & Pei-Chun Shih (Universidad Autónoma de Madrid, Spain)

Risk behaviors are difficult to predict given that they are mostly associated with positive and negative consequences. The high attitudinal ambivalence in behavior explains the low percentages of prediction from deliberative models as Theory of Planned Behavior (TPB) (Conner & Sparks, 2002; Cook & Sheeran, 2004). In this study we test whether anticipated emotional profiles would improve the prediction from TPB in a sample in which we could distinguish different levels of experience (high and low) in the risk behavior (excessive drinking). The results show that, in the low-experience group, anticipated emotional profiles improved the prediction from TPB variables in relation to Behavior Intention -BI- (a moderate increase of 11%; Trafimow, 2004) but emotional profiles do not show a good fit to Behavior Expectations -BE. When participants have a high personal experience in the risk behavior, emotional profiles improve a significant increase on the predictions from the TPB model, in relation to BI and to BE.

Poster 20

Multiple-goal pursuit: Computational modeling approach to theory development and testing.

Jeffrey B. Vancouver (Ohio University, USA), Justin M. Weinhardt (Ohio University, USA), Claudia C. González-Vallejo (Ohio University, USA), Jason L. Harman (Ohio University, USA), & Anastasia Milakovic (Ohio University, USA)

Theories of goals and goal pursuit are plentiful in many areas of psychology (Austin & Vancouver, 1996), particularly in social psychology (Moskowitz & Grant, 2009). However, understanding the predictions that follow from these theories can be challenging because of the dynamics and nonlinearities inherent in goal processes. These problems multiply when trying to understand the processes involved in multiple goal pursuit (Schmidt & DeShon, 2007). One method for determining the validity and predictions of a dynamic theory is to render it computationally and simulate it (Ilgen & Hulin, 2000). This poster presents a computational model of multiple-goal pursuit studied by Louro, Pieters, and Zeelenberg (2007). The model made explicit assumptions critical for the theory to work and to match observations. Discussion focuses on the role of modeling in formalizing theory and in determining research protocols that will lead to different predictions, allowing researchers to test theories rigorously.

Poster 21

Manipulation checks moderate the impact of task difficulty and reward value on effort mobilization.

Michael Richter (University of Geneva, Switzerland)

Recent research suggests that the relationship between task difficulty, task reward, and effort mobilization depends on the task context (Richter & Gendolla, 2007, 2009). The present study aimed to extend this previous research. Participants (N = 112) worked on a memory task in a 2 (manipulation checks: task difficulty vs. task reward) x 2 (reward: low vs. high) x 2 (task difficulty: low vs. high) between-persons design. Before working on the task, one half of the participants rated the monetary reward that they could earn. The other half rated task demand. As predicted, higher reward resulted in higher effort mobilization—assessed as cardiovascular reactivity—when participants had rated task reward before task performance. When participants had rated task demand, effort was a joint function of task difficulty and reward value. These results extend and clarify previous research on the moderating impact of task context on the determinants of effort mobilization.

Poster 22

Motivation, cognitive capacity, and information relevance as parameters of human judgment: An interaction analysis.

Arne Roets (Ghent University, Belgium), Alain Van Hiel (Ghent University, Belgium), & Arie Kruglanski (University of Maryland-College Park, USA)

Building upon classic and recent models of judgment, two experimental studies investigated the joint effects of motivation and cognitive capacity. Study 1 revealed an interaction effect between motivation, cognitive capacity and information relevance, demonstrating that information relevance affected judgment change only when both motivation and cognitive capacity were either high or low. Study 2 assessed subjectively perceived information relevance and information sampling quantity as the explaining mechanisms for the interaction. Motivation and cognitive capacity were found to represent the auxiliary factors affecting a person's appreciation of the potential relevance of information. In turn, perceived relevance, but not information quantity, was found to be the proximal determinant for the information's judgmental impact. The effect of motivation and cognitive capacity on judgmental change was fully mediated by perceived information relevance. In the discussion we elaborate on how high motivation can help but also trouble judgment, depending on the decision-maker's cognitive capacity.

Poster 23

Reliability and validity of a new resource allocation measure to assess individual differences in evolved human motivation.

Larry C. Bernard (Loyola Marymount University, USA)

The Assessment of Individual Motives- Questionnaire (AIM-Q) assesses individual differences in the strength of 15 independent, evolved dimensions of human motivation presumed to operate in these social domains: (1) Individual (self-preservation) – Aggression, Environmental Inquisitiveness, Illness Avoidance, Interpersonal Inquisitiveness, and Threat Avoidance; (2) Dyadic (intra- and inter-sexual pairs) – a Sex motive plus different status enhancement strategies that include Appearance, Wealth, Mental, and Physical; (3) Small Group (kin) – Commitment; (4) Large Group (kin and mostly non-kin) – Altruism, Social Exchange, and Legacy; and (5) Very Large Group (overwhelmingly non-kin) – Meaning. A new 199-item questionnaire, AIM1R, is the first to use items based entirely on a resource allocation task consistent with evolutionary theory. Evidence of good reliability and validity, including predictions from motive scores to reported behaviors of social importance, are reported for a sample of N = 789 participants (M Age = 33.9, SD = 26.5; 61% female; 60% White/European-American, 13% Latino/Hispanic, 10% Asian-American, 7% Mixed, 5% African-American, 5% Other).

Poster 24

Do task congruent rewards help to resist the undermining effect?

Susanne Steiner (Technische Universität München, Germany) & Hugo M. Kehr (Technische Universität München, Germany)

If people get rewards for things they enjoy, they may lose their fun: former intrinsic motivation has been displaced through extrinsic motivation. This is known as the undermining effect. Kehr's compensatory model (2004) offers a new explanation for this well-known effect. Based on Kehr's model, we propose that the undermining effect only occurs by selecting rewards which are thematically incongruent with the current activity. Task congruent rewards are in line with affective preferences within the situation and do not activate conflicting cognitive preferences, hence intrinsic motivation will be maintained. Our hypothesis is supported by an experimental study on task congruent rewards. Subjects (N=78) worked on the so called Soma puzzle and got different rewards. A free-choice period followed. We found that in the group getting task congruent rewards the intrinsic motivation was significantly increased compared to the group getting task-incongruent rewards, but not compared to the control group getting no rewards.

Poster 25

Individual differences in event-related-potentials following motivationally relevant stimuli.

Luke D. Smillie (Goldsmiths, University of London, UK), Andrew J. Cooper (Goldsmiths, University of London, UK), & Alan D. Pickering (Goldsmiths, University of London, UK)

Frontal negativity occurring approximately 200-300ms is attenuated following unpredicted reward events and potentiated following unpredicted non-reward events (Potts, Martin, Burton & Montague, 2006). This lends credibility to the view that such activity may reflect dopaminergic reward-prediction-error signaling (Holroyd & Coles, 2002), which is a central process in appetitive motivation (Schultz, 1998). In this study, we examined the influence of a dopamine-relevant personality trait, Extraversion, and gene polymorphism, DRD2/ANKK1, on these event-related-potentials. Frontal negativity was recorded in a sample of 30 students who completed an associative reward-learning paradigm. Mean amplitude over frontal areas was least/most negative following unpredicted reward/non-reward. This difference wave was more pronounced in extraverted participants, and participants carrying at least one copy of the A1 allele of the DRD2/ANKK1 gene. Further, extraversion was significantly higher in A1+ allele carriers. Results have broad relevance to personality and neuroscience research on appetitive motivation.

Poster 26

Induced goal conflicts affect motivation, wellbeing, and strategies in complex problem solving.

Christine Blech (Heidelberg University, Germany) & Joachim Funke (Heidelberg University, Germany)

Managing multiple and conflicting goals is a demand typical to both everyday life and complex coordination tasks. Our approach combines elements from classical motivation psychology (field theory, achievement motivation) and empirical work on conflicts among long-term personal strivings (e.g., Emmons and King) and places them into the context of experimental, cognitive psychology. In Experiment 1 (N = 69), participants dealt with a game-like computer simulation involving a predefined relation among two goals: independent, mutually facilitating, or interfering with one another. As expected, goal conflicts entailed lowered motivation and wellbeing. Participants' understanding of causal effects within the simulation was impaired, too. Behavioral measures of subjects' interventions support the idea of adaptive, self-regulatory processes: reduced action with growing awareness of the goal conflict and balanced goal pursuit. Experiment 2 (N = 42) endorses the hypotheses in an extended problem-solving paradigm of four conflicting goals and supports the results and interpretation.

Poster 27

The affective body: How embodied posture determines emotional experience.

Alexandra P. Kass (Harvard University, USA), Christopher C. Nocera (Harvard University, USA), Allison E. Gaffey (Harvard University, USA), & Wendy Berry Mendes (Harvard University, USA)

We tested the idea that body posture that was either congruent or incongruent with an action tendency of an emotion would influence the emotional experience. Recently, Harmon-Jones and Peterson (2009) found that participants who were supine and then received an insult showed less shifts in left frontal cortical asymmetry than individuals who were upright and insulted, suggesting that body positioning dampened the experience of anger. We examined the full complement of this idea in a 2 (emotion: shame, anger) x 3 (body position: withdraw, neutral, approach) design. All participants completed a math task which was designed to either evoke shame or anger while participants were either positioned in a withdrawal orientation (leaning back, arms crossed in front of chest, chin down), approach orientation (leaning forward, arms out) or naturally. We measured self-report, autonomic nervous system reactivity changes, and behavioral outcomes. Early data suggest that body positioning interacted with the emotion manipulation such that incongruent body positions attenuated physiological responses.

Poster 28

Don't argue with yourself when you want to fall asleep: The links between impulsivity, self-attacking, and insomnia.

Ralph E. Schmidt (University of Geneva, Switzerland), Philippe Gay (University of Geneva, Switzerland), Jean-Marc Gomez (University of Geneva, Switzerland), & Martial Van der Linden (University of Geneva, Switzerland)

The present study explored how people cope with feelings of shame in the wake of impulsive behavior and how their motivational stances toward shame interfere with sleep. A sample of 290 university students completed the UPPS Impulsive Behavior Scale, the Compass of Shame Scale, the Bedtime Counterfactual Processing Questionnaire, and the Insomnia Severity Index. The Compass of Shame Scale assesses the use of four distinct strategies of shame regulation: self-attacking, attacking somebody else, withdrawal, and avoidance. Path analyses revealed that the effect of impulsive urgency on counterfactual processing at bedtime is partly mediated by the use of self-attacking in response to feelings of shame. In accord with previous findings on regret-related insomnia in elderly people (Schmidt, Renaud, & Van der Linden, submitted), these results suggest that self-attacking is particularly pernicious to the process of falling asleep because this motivational stance leads to a rise of counterfactual thoughts and emotions at bedtime.

Poster 29

The influence of achievement motivation on working memory capacity and functioning.

Rachel E. Avery (Goldsmiths, University of London, UK) & Luke D. Smillie (Goldsmiths, University of London, UK)

Research shows that the type of achievement goal adopted in learning contexts results in differential patterns of cognition and action. The current research examined the effects of trait and state achievement goal orientation on short-term memory and working memory. Based upon a 2x2 trait goal framework, study 1 results indicated that high, in comparison to low, performance-approach individuals performed better on both simple and complex span tasks. Low, in comparison to high, mastery-avoidance individuals also performed better on complex but not simple span tasks. No effects for mastery-approach and performance-avoidance were found. In study 2, achievement goals were experimentally induced onto a counterbalanced series of the n-back working memory task. No group differences across 1-back and 2-back were found. After controlling for ability and anxiety, pursuit of a performance-approach goal, in comparison to mastery-approach and no-goal, resulted in poorer 3-back performance. Implications of achievement motivation and working memory links are presented.

Poster 30

Masked action cues directly mobilize mental effort.

Nicolas Silvestrini (University of Geneva, Switzerland) & Guido H. E. Gendolla (University of Geneva, Switzerland)

An experiment examined the hypothesis that masked general action and inaction cues that are unconsciously processed during a cognitive task directly mobilize effort. N = 45 participants were randomly assigned to an action prime, inaction prime, or control condition and performed a Sternberg short term memory task. Effort intensity was operationalized as responses in cardiac pre-ejection period (PEP) during task performance. As expected, exposure to masked action cues resulted in stronger PEP reactivity than exposure to masked inaction cues; reactivity in the control group fell in between. Task performance revealed a corresponding pattern: Reaction times rose from the action via the control to the inaction prime condition. The results show that unconsciously processed action and inaction cues directly influence effort intensity and performance.

Poster 31

The combined influence of implicit and explicit goals on performance outcomes.

Jenny V. Bittner (Jacobs University Bremen, Germany)

Research on conscious goal setting has mainly focused on explicitly activated goals, such as goals of high versus low difficulty (Locke & Latham, 1990; 2002), while research on priming has studied the activation of goals on an implicit level (e.g. Bargh, 2006). The present research integrates both types of goals and investigates the combined influence of high/low explicit goals with implicit goal priming. After a goal priming task, participants were instructed to set explicit goals for a subsequent performance task. In Study 1, performance outcomes were influenced by an interaction between primed goals and participants' explicit goals. Study 2 extended this result to social comparisons and showed again that primed goals had a combined influence with explicit goals on goal pursuit. These results can be explained by motivational and cognitive processes that increased the accessibility of primed goals during goal striving and affected the operation of explicit goals.

Poster 32

Motivation, cognitive ability, and performance: A multiplicative relationship?

Christopher P. Cerasoli (State University of New York, USA) & Michael T. Ford (State University of New York, USA)

Although cognitive ability and motivation each predict job performance, multiplicative models suggest they are more predictive when examined concurrently (Campbell et al., 1990; Meier, 1958). Despite such predictions, the current study contends multiplicative models have not received much empirical support because their measures of motivation fail to account for (a) contextual specificity and (b) intrinsic or extrinsic motivation. Findings indicate that measures of general (but not contextualized) motivation hold substantial incremental validity over cognitive ability. Using both contextualized measures of intrinsic/extrinsic motivation and general motivation, support was not found for a multiplicative model of job performance.

Poster 33

Passion and cheating: The how and when.

Julien Bureau (University of Quebec at Montreal, Canada), Marc-Andre K. Lafreniere (University of Quebec at Montreal, Canada), & Robert J. Vallerand (University of Quebec at Montreal, Canada)

The Dualistic Model of Passion (Vallerand et al., 2003), distinguishes two types of passion: harmonious passion (HP) and obsessive passion (OP). HP is characterized by a voluntary engagement towards the loved activity while OP represents an uncontrollable urge to engage into the activity. Study 1 (N=219) explored the role of passion in cheating behavior in paintball. Using a correlational design, we found that OP was positively related to cheating behavior, while HP was unrelated to it. Using an experimental design, Study 2 (N=151) explored under which circumstances OP would be more likely to lead to cheating. It was hypothesized that experiencing a setback following a success would lead OP to cheating more than when the same setback followed a failure, because people would then be more inclined to protect the self. No differences were expected for HP as a function of conditions. Results supported the hypotheses.

Poster 34

Engaging the self for health: Effects of self-management therapy on the development of self-regulation and inhibitory control in obese adolescents.

Marlies Pinnow (Ruhr-University Bochum, Germany) & Annette Chen-Stute (Bethesda Clinic Oberhausen, Germany)

This study aimed to examine the impact of a three years lasting weight loss program on self-regulation competencies in general and in food-related context. The sample consisted of 30 male and female adolescents (age range: 11-18 years), who participated in a three-year therapy for severe obesity. The assessment of self-regulation competencies proceeded at three different time points (1st – 3rd graduation year). Analyses of covariance were performed to examine if the adolescents also achieved improvements of resistance to temptation, decision making and food-related Stroop interference at the end of therapy along with enhancing their energy-balance regulation. Besides any effect of age and body mass index, adolescents showed significant improvements of executive functions in respect of resistance to temptation and inhibition. Interventions to enhance energy-balance regulation in adolescents may benefit from efforts to encourage executive functions such as encouraging self-regulation and food-related cognitive inhibition.

Floor Plan

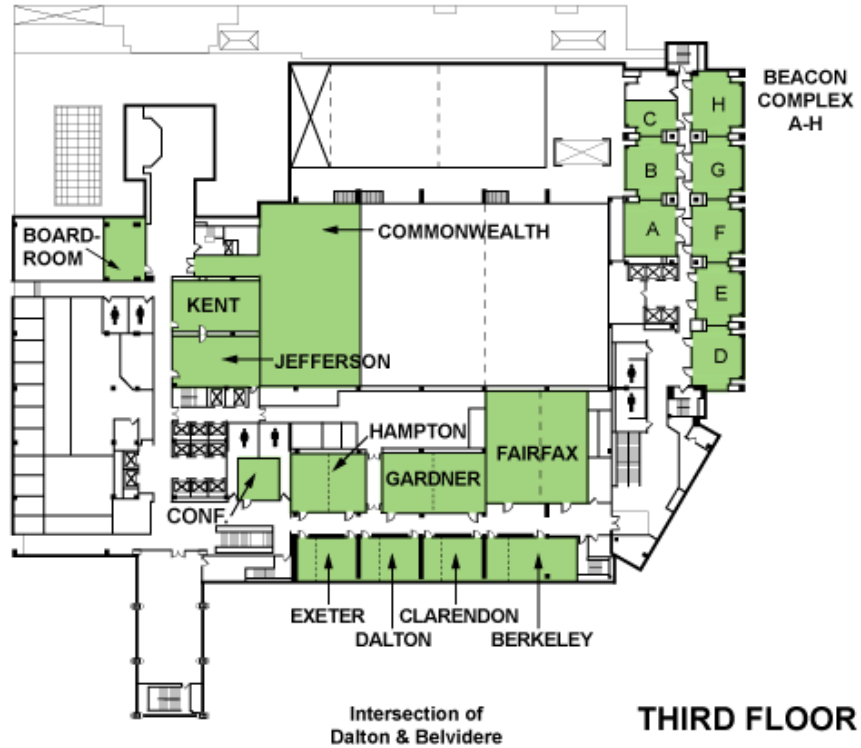
The invited presentation, symposia, poster session, opening remarks, and SSM Annual Business Meeting will take place in the following meeting spaces:

Kent

Jefferson

Commonwealth

All three meeting spaces are located on the third floor of the Sheraton Boston Hotel.



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Authors List

Ambrona, T., 20
Amodio, D., 9
Avery, R. A., 29
Baumann, N., 16
Beer, J. S., 13
Bernard, L. C., 5, 9, 27
Berry Mendes, W., 28
Bhanji, J. P., 13
Bittner, J. V., 29
Blech, C., 28
Brandstätter, V., 16, 17
Brinkmann, K., 22
Brouwer, K. L., 25
Brycz, H., 22
Burea, J., 30
Caballero, A., 20, 25
Capa, R. L., 18
Carrera, P., 20, 21, 25
Carver, C. S., 8, 9
Cerasoli, C. P., 29
Chen-Stute, A., 30
Chi, U., 23
Chopra, G., 24
Cooper, A. J., 27
Crites, S. L., 23
Duncan, J., 20
Dunne, E., 15
Düsing, R., 19
Faunce, C., 20
Ford, M. T., 29
Freund, A. M., 16
Funke, J., 28
Gable, P., 12
Gaffey, A. E., 28
Ganzach, Y., 22
Gay, P., 28
Gendolla, G. H. E., 18, 19,
22, 29
Gollwitzer, P. M., 21
Gomez, J.-M., 28
Gonzales, J., 23
González-Vallejo, C. C., 26
Grept, J., 22
Grüner, S., 15
Haase, C. M., 14, 15
Hagemeyer, B., 21
Hajcak, G., 13
Harman, J. L., 26
Harmon-Jones, E., 12
Heckhausen, J., 14, 15
Heinzen, T. E., 24
Heller, D., 22
Herring, D. R., 23
Hogan, B. K., 20
Iyer, R., 24
Jackson, N. W., 23
Kass, A. P., 28
Kehr, H. M., 11, 27
Kindermann, T., 23
Knöpfel, A., 17
Konrath, S., 23
Kreibig, S. D., 18, 19
Kruglanski, A., 26
Kuhl, J., 9, 12, 19
Lafreniere, M.-A. K., 30
Loktyushin, A., 12
López-Pérez, B., 20
Maguire, A., 23
Maier, M., 17
McCulloch, K. C., 21
Mestre, S., 23
Milakovic, A., 26
Miller, L. C., 24
Monroe, B. M., 24
Morgan, B., 13
Muñoz Cáceres, D., 20, 25
Neyer, F. J., 21
Nikitin, J., 16
Nocera, C. C., 28
Noda, M., 25
Oceja, L., 20, 21
Pickering, A. D., 27
Pinnow, M., 30
Quirin, M., 12, 19
Rawolle, M., 10, 11
Read, S. J., 24
Reichman, D., 22
Ribeiro, J. P., 23
Richter, M., 26
Roets, A., 26
Rösch, A. G., 10
Salgado, S., 21
Salmela-Aro, K., 14
Scherer, K. R., 19
Schiepe, A., 11
Schmidt, R. E., 28
Schnelle, J., 17
Schüler, J., 16
Schultheiss, O. C., 10, 11
Schweiger Gallo, I., 21
Shih, P.-C., 25
Shim, J. J., 20
Silbereisen, R. K., 15
Silvestrini, N., 18, 29
Skinner, E., 23
Smillie, L. D., 27, 29
Sorrentino, R., 9
Stanton, S. J., 10
Steiner, S., 27
Strasser, A., 11
Talevich, J., 24
Taylor, J. H., 23
Terburg, D., 13
Tomasik, M. J., 14
Tomasik, M. J., 14
Vallerand, R. J., 30
Van der Linden, M., 28
Van Hiel, A., 26
Van Honk, J., 13
Vancouver, J. B., 26
Walsh, D. A., 24
Weinhardt, J. M., 26
White, K. R., 23
Winter, D., 23
Wright, R. A., 20
Wrosch, C., 15
Yang, Y., 24
Zurbriggen, E. L., 23