Society for the Study of Motivation 2016

Chicago, IL

Program Abstracts

Symposia

Symposium 1: Advancing Issues in Effort & Intensity Research
Co-Chairs: Rex A. Wright (University of North Texas) & Nicolas Silvestrini (University of Geneva)

Recent decades have shown expanded interest in the intensity dimension of motivation – effort. The interest has been driven largely by a theory of motivation intensity advanced by Jack Brehm, especially when the theory has been paired with an active coping hypothesis proffered by Paul Obrist. Obrist's hypothesis posited an intimate link between effort (active coping) and cardiovascular (CV) response. Brehm's theory identifies conditions under which performers should deploy more and less effort – and thus, presumably, be more or less CV responsive. Together, the theory and hypothesis offer key and sometimes counter-intuitive insights. The present symposium will showcase new work that builds on these ideas, focusing on age-related cognitive fatigue, mild cognitive impairment, after effects of pain and behavioral restraint.

Examining the Effects of Control Beliefs on Older Adults' Cognitive Fatigue
Brian T. Smith & Thomas Hess (North Carolina State University)

Older adults have repeatedly been shown to experience increasing levels of fatigue compared to younger adult participants. They report both higher levels of subjective fatigue and increased cardiovascular responsivity in cognitively demanding situations. There are, however, individual differences in how older adults respond to high cognitive demands; some are easily exhausted, while others remain resilient to the effects of cognitive engagement. In our portion of the symposium, we will report on experimental research suggesting that older adults with a low sense of cognitive control may show more vulnerability to the effects of cognitive fatigue.

Ability Influence on Effort-Related Cardiovascular Response: Application to Older Adult Clinic Patients With & Without Mild Cognitive Impairment
Christopher Stewart (Rush University Medical Center), Rex A. Wright (University of North Texas), & H. Randall Griffith (University of Alabama at Birmingham)

We will first consider the manner in which ability should influence effort and associated cardiovascular responses to a relevant performance challenge – concluding that the influence should be multifaceted, depending on the difficulty of the challenge and importance of meeting it. We then will provide sample evidence involving healthy undergraduate participants and describe a recent application to older adults without cognitive impairment and older adults diagnosed with mild cognitive impairment. Participants with and without mild cognitive impairment were presented a version of the Sternberg recognition memory task, with objective difficulty set to be low, moderate and high. As expected, systolic blood pressure responses

for older adults without cognitive impairment rose with difficulty. By contrast, those for patients with mild cognitive impairment were low irrespective of difficulty – with similar results emerging for mean arterial pressure and diastolic blood pressure.

Pain-Related Cognitive Depletion Impacts Effort Mobilization & Performance
Nicolas Silvestrini & Corrado Corradi-Dell'Acqua (University of Geneva)

This study investigated the influence of a painful vs. non-painful task on effort-related cardiac response and performance in a subsequent cognitive task. Pain was anticipated to deplete cognitive resources due to the implication of executive functions in pain regulation. Consequently, we predicted that effort would be stronger after the painful task to compensate for the cognitive depletion induced by pain and that task performance would be lower after the painful task. Results only confirmed our predictions regarding the effect of pain on performance. However, further correlational analyses indicated that effort mobilization was related to pain ratings. A moderate pain led to strong effort whereas a high pain led to low effort. We interpret this finding as suggesting that participants reporting a high pain disengaged from the cognitive task due to stronger pain-related cognitive depletion and in turn decreased motivation to perform the task.

Determinants & Cardiovascular Correlates of Behavioral Restraint
Stephanie D. Agtarap, Christopher Mlynski, Rawan Hammad, Sabrina Blackledge, & Rex A. Wright (University of North Texas)

We describe a new conceptual analysis concerned with determinants and cardiovascular correlates of behavioral restraint and report findings from an experiment designed to test a key implication. Specifically, the experiment was designed to test the implication that restraint intensity and cardiovascular responses associated with it should be determined interactively by the magnitude of the behavioral urge experienced and the perceived importance of resisting it. Study participants were presented a mildly- or strongly evocative violent film clip with instructions to refrain from showing any facial response. Success was made more or less important through coordinated manipulations of outcome expectancy, ego-involvement and social evaluation. As expected, systolic blood pressure responses assessed during the work period were proportional to the evocativeness of the film clip when importance was high, but low regardless of evocativeness when importance was low. Findings support the new analysis and build substantively on evidence previously available for it.

Symposium 2: Interpersonal Processes & Motivation
Chair: Edward Orehek (University of Pittsburgh)

Motivational processes occur in an interpersonal context, whereby goal pursuit influences relationships with people, and relationships with others influence goal pursuit. In the present set of four talks, we explore the intersection of motivational forces and interpersonal processes. Scholer will present research investigating the way in which different motivational lenses influence the way in which relationship success is evaluated. Vohs will present research examining the effect of making decisions on behalf of others. Waytz will present research investigating the motivational attributions made for ingroups as compared to outgroups. Finally, Orehek will present research demonstrating the role of success/failure on important personal goals in

determining individualistic/collectivistic orientations. Together, these talks highlight various perspectives on a burgeoning consideration in the study of motivation, namely its interpersonal nature.

Perceiving Relationship Success through a Motivational Lens

Abigail A. Scholer & Kassandra Cortes (University of Waterloo)

Successful social relationships have significant effects on psychological and physical well-being. Past research has tended to emphasize a "one size fits all" framework for thinking about the criteria for relationship success: Successful relationships are secure and offer opportunities for growth. We propose, however, that the relative importance of security and growth as criteria for successful relationships depends on the motivational orientation—regulatory focus (Higgins, 1997)—of the individual. We present five studies examining how an individual's motivational state affects how relationship success is judged and experienced. Across studies, we find evidence that while experiences of growth (fun, adventure, excitement) are critical for perceived success within the promotion motivational system, such experiences are irrelevant for perceived success within the prevention motivational system. Rather, successful relationships for prevention-focused individuals are characterized by the absence of insecurity. Taken together the findings suggest the value of considering fundamental motivational orientations in understanding how relationship success is experienced.

Decision Fatigue is Lessened When People Choose for Others: A New Twist that Depends on Self-Construal

Kathleen D. Vohs (University of Minnesota) & Evan Polman (University of Wisconsin-Madison)

Self-control often becomes less successful after making many decisions. The present work showed that after making decisions for others (vs. the self), people did not show evidence of depletion. They also felt the decision making process was more enjoyable, which statistically accounted for decision fatigue. Our investigation thus replicated a prior finding (that decision making is depleting), moderated it by target of decision (self vs. other), and demonstrated mediation (enjoyment). We further measured chronic focus on self or others (self-construal) and established a full process model that marries prior findings with the current ones: Choosing for others is more enjoyable and less depleting to the extent that decision makers are independent, and less enjoyable and more depleting when decision makers are interdependent. That a mismatch between chronic and state orientation leads to the better outcomes for self-control indicates a special link between self-construal and decision making.

A Motive Attribution Asymmetry in Intergroup Conflict

Adam Waytz (Northwestern University)

Five studies across cultures involving 661 American Democrats and Republicans, 995 Israelis, and 1,266 Palestinians provide previously unidentified evidence of a fundamental bias, what we term the "motive attribution asymmetry," driving seemingly intractable human conflict. These studies show that in political and ethnoreligious intergroup conflict, adversaries tend to attribute their own group's aggression to ingroup love more than outgroup hate and to attribute their outgroup's aggression to outgroup hate more than ingroup love. Study 1 demonstrates that American Democrats and Republicans attribute their own party's involvement in conflict to ingroup love more than outgroup hate but attribute the opposing party's involvement to outgroup hate more than ingroup love. Studies 2 and 3 demonstrate this biased attributional pattern for Israelis and Palestinians evaluating their own group and the opposing group's involvement in the current regional conflict. Study 4 demonstrates in an Israeli population that this bias increases beliefs and

intentions associated with conflict intractability toward Palestinians. Finally, study 5 demonstrates, in the context of American political conflict, that offering Democrats and Republicans financial incentives for accuracy in evaluating the opposing party can mitigate this bias and its consequences. Although people find it difficult to explain their adversaries' actions in terms of love and affiliation, we suggest that recognizing this attributional bias and how to reduce it can contribute to reducing human conflict on a global scale.

Failure Makes Society Seem Fonder: An Inquiry into the Roots of Collectivism

Edward Orehek & Anna Vazeou Nieuwenhuis (University of Pittsburgh), & Arie W. Kruglanski (University of Maryland)

A perennial puzzle in human behavior is persons' connection to groups and their readiness to subordinate their personal needs to general concerns. An essential aspect of human nature is tension between individualistic and collectivistic motives. We crave personal autonomy but also yearn for relatedness to others that constrains individual freedom due to the need to take others into account. Interdependence with others creates a delicate balance with persons' pining for freedom from constraints. That balance is upset by situational challenges that undermine confidence and threaten abject failure. When this happens, we instinctively orient toward others, and become willing to trade our individuality for the soothing comfort of interdependence. Donning a collective identity has an empowering effect; it augments individuals' sense of personal significance and induces the readiness to confront all manner of adversity. In eight studies, we find that experiences of personal failure prompt a shift toward a collectivistic orientation.

Symposium 3: How Motivation Works Across the Brain, Behavior, & Society: An Interdisciplinary Symposium

Co-Chairs: Arie Kruglanski (University of Maryland) & E. Tory Higgins (Columbia University)

Few would disagree these days that understanding how motivation works is essential to understanding human behavior. While motivation represented a central topic for psychology in the mid-20th century, serious motivation research almost came to a halt beginning with the cognitive revolution of the 1970s and 1980s. From the 1990s onwards, however, motivational research has been making a forceful comeback and asserting its place again as a focal topic in psychological science. Importantly, contemporary motivation research has benefited from recent advances in various disciplines including neuroscience, cognitive science and social cognition. The present symposium on motivation is designed to reflect some of those varied contributions to motivation science and to highlight its broad relevance across domains and levels of analysis.

Indeed, the concept of motivation pertains to all scholarly fields with a behavioral interest. Representing these varied approaches to motivation, our distinguished speakers come from fields as diverse as neuroscience, economics, philosophy and, of course, psychology. They will inform us what the concept of motivation means in their respective domains, what motivational issues are central to their research agenda, and how basic motivational constructs are considered from different disciplinary perspectives..

Our symposium consists of two sessions. The first addresses the motivated process and the downstream effects of an awakened desire or 'wanting'. What are the ingredients of wanting? How is wanting translated into action?, what intermediate mechanisms come into play? What factors determine whether an action will

be initiated? What decides whether an action will be completed? These are some of the fundamental questions that will be considered in the first session.

The second session addresses motivation in its social context. What motivates individuals to share reality with others? What are the motivational effects of uncertainty? How does motivation drive human economic behavior? How is motivation related to addiction?

We recognize that it is not possible to answer all of these questions in just these two sessions. Nonetheless, it is possible to begin charting the motivational territory that we want to explore and in which we want to make discoveries, while also pinpointing the places where further research is needed. So let us begin!

Part 1: The Motivated Process from Desire to Action

Introduction
Arie Kruglanski

The Rewarded Brain: Interactions Between Motivation and Cognition
Luiz Pessoa (University of Maryland)

In cognitive neuroscience, most frequently, researchers study motivation indirectly such that the expected value of an action is treated as a proxy for motivation. In this context, investigations commonly operationalize motivation in terms of the transient neural responses evoked by incentive cues (typically signaling monetary rewards). Although indirect, this line of research has begun to clarify some of the mechanisms by which reward signals and "motivational state" influence cognitive processing. In particular, performing tasks in a reward context leads to enhancements in specific cognitive processes, including working memory maintenance, attention, and episodic encoding. More generally, this work suggests that a primary consequence of changes in reward motivational value is to increase the coupling and integration between motivational and cognitive brain networks. Thus, although "motivation" and "cognition" are treated as distinct psychological entities, growing evidence indicates that they have non-separable implementations in the brain.

Motivation, Behavioral Activation, and Effort-Related Decision Making: Basic and Translational Neuroscience Approaches
John D. Salamone (University of Connecticut)

Classical definitions of motivation involve both direction and activation. Motivated behavior is directed towards or away from stimuli, while activational aspects of motivation refer to the observation that motivated behavior is characterized by activity, vigor, and exertion of effort in the initiation and maintenance of behavior. Motivation does not refer simply to an internal desire or drive. Rather, it is inextricably linked to action. This view of motivation helps frame the study of the neurobiology of motivation. Separate neural systems direct organisms towards distinct motivational stimuli, however, there is a common circuitry regulating behavioral activation and the exertion of effort across multiple motivational stimuli. Mesolimbic dopamine is a brain system mediating activational aspects of motivation and exertion of effort, which integrates aspects of motivation and motor control functions. Research on the neurobiology of effort has contributed to our understanding of the pathophysiology of neurological and psychiatric disorders involving motivational dysfunction.

Affective neuroscience of wanting and liking
Kent Berridge (University of Michigan)

The psychology motivation is essential to affective neuroscience, because brain generators of motivation can only be understood in terms of their corresponding psychological processes. 'Wanting' (incentive salience) and 'liking' (hedonic impact) are important psychological components of reward. 'Wanting' and 'liking' usually go together but can sometimes become dissociated, and can be mapped separately on to underlying brain mechanisms. However, we should be prepared to be surprised by the nature of psychological processes in motivation, which sometimes turn out to be quite different from what was expected. For example, incentive salience mechanisms for 'wanting' rewards also contribute to an active-coping form of 'fear'.

The Rocky Road from Liking to Action
Arie W. Kruglanski (University of Maryland)

The road from liking (or disliking) something to action designed to attain it requires a number of conditions: First, liking needs to translate into wanting. Second, wanting needs to be joined to a sufficient expectancy to translate into a goal. Third, the goal needs to override other, situationally active objectives. Fourth, a means/task need to be found to pursue the dominant goal. Fifth, the energetic resources required to pursue the goal must be deemed sufficient given the task demands. Implications of this analysis are considered for a broad range of social cognitive phenomena.

Symposium 4: Endurance Performance: The Role of Self-Regulation Processes
Co-chairs: Carla Meijen & Samuele Marcora (University of Kent)

Regulatory processes such as decision-making, pacing strategies, perception of effort, and mental fatigue have been identified as factors that can influence endurance performance, however a gap remains in research examining moderating variables such as perceived effort and motivation. This symposium will discuss the influence of these variables on endurance performance and the potential to inform psychological skills interventions. First, Marcora (University of Kent) will present findings of research examining the influence of perception of effort and potential motivation in endurance performance. Next, focusing on pacing, Micklewright (University of Essex) will discuss the role of dual-process theories in decision-making processes in endurance situations. Following on from this, Meijen (University of Kent) will outline psychological demands that recreational endurance athletes may experience across a range of endurance activities. Finally, Brick (Ulster University) will present their findings of the effects of self-controlled and externally-controlled paced tasks on attentional focus and running performance.

The Limits to Endurance Performance: Mind Over Muscle?
Samuele Marcora (University of Kent)

Traditionally it has been assumed that performance during endurance exercise (e.g., prolonged running) is limited by muscle fatigue. In other words, it has been assumed that humans stop endurance exercise or slow down when their fatigued neuromuscular system is no longer capable of producing the required speed/power despite their maximal voluntary effort (task failure). As a result most research on the factors determining endurance performance has focused on the central and peripheral mechanisms of muscle fatigue. However, in recent years, various lines of evidence suggest that endurance performance is not

limited by muscle fatigue and that a significant neuromuscular and metabolic reserve exists at exhaustion. Instead, endurance exercise seems to be limited by a decision-making process (task disengagement) based on perception of effort and potential motivation as predicted by motivational intensity theory. The applied implications of these findings for how endurance athletes train and prepare for competitions will be discussed.

Judgement and Decision-Making in Athletic Pacing: Intuition or Hypothetical Thinking?
Dominic Micklewright (University of Essex)

Pacing decisions in endurance athletics are difficult because of complex factors that can change during an event. Most theoretical models of athletic performance and pace emphasise perceived exertion and prior experience as influencing decisions. However, little is known about the attention, information-processing and decision-making mechanisms that lead to pacing decisions. Dual-process theories propose that decision-making is informed by two types of thinking: i) fast-thinking which is pre-attentive, requires little cognitive effort and is intuitive; ii) slow-thinking which involves effortful mental simulation and analytical reasoning of a number of possible scenarios. Dual-process theories offer useful insights about athletic decision-making processes. For instance, as athletes become more experienced it may be that pacing decisions are based more on fast intuitive thinking rather than slow analytical thinking. Several eye-tracking studies will be presented showing the way athletes select and use information to make pacing decisions differs with experience and progression during an event.

Psychological Demands in Endurance Performance: Shared Experiences of Recreational Endurance Athletes
Carla Meijen, Alister McCormick, & Samuele Marcora (University of Kent)

We aimed to identify psychological demands that are commonly experienced by recreational athletes of various endurance sports, distances, and competitive levels away from the competitive environment, preceding an event, or during an event. Four focus groups were held. Inductive thematic analysis resulted in the identification of seven themes; time investment and lifestyle sacrifices; commitment to training sessions; concerns about optimising training; pre-event stressors; exercise sensations; optimising pacing; and remaining focused despite adversity. The potential of designing psychological skills interventions aimed at managing these demands will be discussed, particularly in terms of regulation processes such as emotion control.

Altering Pace Control and Pace Regulation: Attentional Focus Effects During Running
Noel Brick & Mark J. Campbell (University of Limerick), Richard S. Metcalf & Jacqueline L. Mair (Ulster University), & Tadhg E. MacIntyre (University of Limerick)

The primary aim was to investigate the effects of manipulating perception of pace control on attentional focus, physiological, and psychological outcomes. A secondary aim was to determine the reproducibility of self-paced running when regulated by effort perceptions. Twenty endurance runners completed four 3 km time-trials; two self-controlled (SC) pace, one perceived exertion clamped (PE), and one externally-controlled (EC) pace time-trial. Subjects reported a greater focus on relaxing and optimizing running action during EC than SC. Mean heart rate was 2% lower during EC than SC. Increased internal sensory monitoring coincided with elevated effort perceptions in some subjects during EC, and a 10% slower completion time for PE than SC. External control over pacing may facilitate performance when runners engage attentional

strategies conducive to improved running efficiency. Regulating pace based on effort perceptions alone may result in excessive monitoring of bodily sensations and a slower running speed.

Symposium 5: Self-Regulatory Forecasting
Chair: N. Pontus Leander (University of Groningen)

The human capacity for foresight implies that self-regulation is situated not just in the immediate moment but also in beliefs about possible future outcomes. This symposium considers new research and theory on foresight and forecasting of future goals and temptations. The first two talks offer empirical data on the beliefs and biases that shape self-control forecasting and the consequences of such forecasting for self-regulatory success. The third talk offers empirical data on how and when implicit goal cues shape feelings-based beliefs about distant goals. The final talk presents a new Proximity-by-Value Theory of Motivation, which uses psychological distance to explain discounting of value and reduced motivation. Altogether, the talks examine how matters of belief, appraisal, and psychological distance may shape people's trajectories towards upcoming goals or temptations, possibly affecting their strength of motivation or quality of self-regulation.

When Overcoming Temptation is a Matter of Belief
James Y. Shah & Su Hean Park (Duke University)

What beliefs do individuals form about the temptations they face in everyday life and their capacity for overcoming them? Our talk will present work that examines the nature of these beliefs and their impact on self-control. More specifically, we will present three studies exploring how individuals may differ in their beliefs about their capacity to overcome temptations and their strategies for doing so. Our first study examines how beliefs about the benefits of generally avoiding temptations altogether may relate to self-control generally and impact hypothetical dessert choices. Two additional studies will examine how entity and incremental beliefs about one's capacity for avoiding temptations may moderate one's subsequent self-control after having given in to temptation, as again seen in participants' dessert choices. Finally, we will consider the broader implications of the above findings for understanding how individuals' beliefs about temptations may come to moderate their successes and failures in overcoming them.

Regulating Your Future: Planning and Forecasting Self-Control Efforts
Michelle vanDellen & Julie Delose (University of Georgia)

People often plan to exert self-control in the future; but do they think about self-control to be exerted in the future differently than how they think about exerting self-control in the present? If people do think differently about future versus present self-control, how might these beliefs affect their immediate efforts? Or their plans for future goal pursuit? In the present work, we examine forecasts of self-control: how difficult people think self-control tasks will be in the future. We compare these forecasts to their perceptions of completing the same tasks in the present. In general, we find people underestimate how difficult self-control will be in the future, which carries implications for if and how they engage in self-control in the present. We find individual differences, including chronic promotion regulatory focus and trait self-control, to affect perceptions of difficulty. We discuss implications of these findings for successful management of goal pursuit.

Faith in Goals: How Implicit Context Cues Foster Beliefs about Distant Goal Attainment
N. Pontus Leander (University of Groningen)

When do people turn to implicit perceptions and "gut feelings" to navigate distant goals? I present empirical evidence to suggest (i) people become increasingly sensitive to goal-relevant primes when their circumstances warrant seeking contextual support and (ii) such cues form the basis for feelings-based beliefs about a goal's attainability. In these studies, students primed with university-related cues reported increased faith in attaining their dream careers, but only when facing obstacles or they otherwise lacked conscious evidence to support goal attainment. Interestingly, participants only reported higher feelings-based beliefs and showed no change in knowledge-based beliefs. The feelings-based beliefs were robust to subsequent obstacles such as news about the bad job market or a manipulation of failure on an academic task. Altogether, these results suggest people turn to implicit perceptions as matter of need and depend on them to boost their faith in a goal's attainability.

A Proximity-by-Value Theory of Motivation and Choice
Nira Liberman (Tel Aviv University)

Construal Level Theory views probability as a dimension of psychological distance, alongside temporal, spatial and social distances, and suggests that all distances have similar psychological effects. Accordingly, I explore the implications of replacing probability in classic Probability-by-Value theories with the more general term psychological proximity. Within the novel Prox-Val theory, I discuss discounting of value over distance and goal gradients. In the Prox-Val model, discounting of value occurs because distance introduces outcome-less states-of-the-world. Consistent with this notion, effects of distance diminish when it fails to introduce such states and when such states already exist in the immediate outcome. I demonstrate effects consistent with this prediction across different distances. According to the Prox-Val model, goal gradients (increase in motivation closer to a goal) occur because distance introduces effort-disruptive forces, alternative goals to pursue, and other ways to achieve the same goal. Their steepness would depend on the strength of these factors.

Symposium 6: How Motivation Works Across the Brain, Behavior, & Society: An Interdisciplinary Symposium
Co-Chairs: Arie Kruglanski (University of Maryland) & E. Tory Higgins (Columbia University)

Part 2: Motivation in its Social Context

Introduction
Tory Higgins

Sharing is Believing
E. Tory Higgins (Columbia University)

The motive to create a shared reality with others is one of the most important goals of communication. Other people's behaviors are often evaluatively ambiguous, challenging perceivers' sense of what is true. By sharing reality through communication, people can reduce their epistemic uncertainty. One specific

mechanism used by communicators to create a shared reality and reduce uncertainty is to tune their messages about a person or group to suit their audience's attitude. This talk will describe research that directly examined how **the need to establish "truth"** and **the need to feel connected** motivates message tuning and creates a shared reality, as revealed in communicators' later remembering what they said rather than what they observed (the "saying-is-believing" effect). The studies show that the saying-is-believing effect occurs when message tuning serves social sharing goals with in-group members but *not* when it serves other goals (e.g., an ulterior goal of getting the audience to reward you) and *not* when the audience is an out-group with whom communicators do not want to share reality—despite the amount of message tuning being as great or even greater in these other non-shared-reality conditions. These findings demonstrate that "sharing is believing" depends on communicators' treating their message as a socially shared truth.

Motivation and the Sense of Understanding
J. D. Trout (Loyola University Chicago)

Philosophical work on motivation is well-intended, but too much of it supplies a maddeningly general and abstract taxonomy, with mere intuition and anecdote as the sole source of evidence. These accounts routinely contain normative dictates that are either unhelpful or mystifying. By contrast, William James treated "that peculiar feeling of inward unrest known as indecision" as a major source of motivation, orienting us toward the effort to understand. Whether described in terms of Loewenstein's curiosity-as-deprivation model, or Kruglanski's vision of the lay epistemic need for cognitive closure, the drive to discharge James's feeling of unease motivates us to learn, and thereby teaches us that learning is rewarded with a sense of understanding, even wonder. By surveying psychological examples of narrative structure drawn from comedy, music, the plane cockpit, and decisions about a good life -- this talk presents, in grand style, theoretical evidence that motivation exploits the same narrative structures that sustain the sense of understanding. Though there is room for philosophers to participate, the best theorizing about motivation comes not from philosophy, but from the foundations of psychology.

Motivation as a Black Box: An Economic Perspective
Kevin Pope

How do economists think about motivation? To a certain extent, they don't. Rather, economists typically estimate the relationship between incentives and behavioral outcomes (e.g. effort) without identifying or parsing out the underlying motivations of the economic agents involved. In this article, I discuss the relative value of this approach as well as its limitations. I also discuss the rise of behavioral economics and how importing a deeper understanding of motivation from other fields (psychology, sociology, etc.) is impacting economic research.

Motivation in Human Social Life
Roy F. Baumeister (Florida State University)

Most simply, motivation means wanting something, and motivation is a force that initiates and drives behavior. Cognition and emotion essentially serve motivation, insofar as their evolved purpose is to help the organism get what it wants and needs. Motivation is basic to psychological theory in part because it is directly linked to the basic criteria of evolutionary selection, namely survival and reproduction: People want things that advance those goals. In social psychology, today, motivation is resurgent but has been rather

neglected in favor of heavy study of cognition and, more recently, emotion. Some authors treat motivation as merely a biasing factor that distorts cognitive processes, but motivation is much more pervasive and important than that. Our experience sampling studies indicate that people report having desires about half the time they are awake. Many desires conflict with other goals and must therefore be restrained, especially when one is in the presence of others. Resistance is however undermined by seeing others do what one wants to do. Motivation levels change based on chronic vs. temporary deprivation, alcohol intoxication, ego depletion, and possibilities for satisfaction.

Symposium 7: Passion as a Psychological Construct: Roots & Recent Innovations
Chair: Julie Moeller (Yale University)

Researching passion has a century-long tradition in Psychology, which has recently seen a revival (Vallerand et al., 2003; Moeller & Grassinger, 2014; Cardon et al., 2008). This international symposium brings together distinct separate lines of research that examine passionate motivation, to integrate them in a common framework. The first presentation (Moeller et al.) reviews diverse concepts of passion, explains what they have in common, and describes a scale for assessing facets of passion. The second paper (Chen et al.) presents recent findings about the development of passion for work. The third and fourth presentations (Cardon; Huyghe et al.) address innovations in the research on entrepreneurial passion. The fifth presentation (Hietajärvi et al.) examines intra-individual profiles of adolescents' passion for digital technology activities.

Measuring Facets of Passion: The Commitment and Passion Model.
Julia Moeller (Yale University), Robert Grassinger (University of Augsburg), Zorana Ivcevic (Yale University), & Magdalena Grohman (University of Texas at Dallas)

This presentation gives an overview about the century-long research on passion in Psychology. Based on an extensive literature review (Moeller & Grassinger, 2014), this paper first summarizes the diverse implicit and explicit psychological passion definitions. Then, overlaps and differences between passion and related motivational constructs are discussed. Particularly the construct of sport commitment was found to overlap strongly with passion, therefore the separate research lines on passion and commitment are integrated into a joint framework. Concluding that passion is most often described as a multi-facetted construct, we finally suggest a new scale for assessing specific facets of passion, and discuss recent findings regarding the scale's psychometric properties and validity. For this purpose, recent findings from several studies in Germany, Brazil, and the US are summarized.

Passion For Work
Patricia Chen & Phoebe C. Ellsworth (University of Michigan), & Norbert Schwarz (University of Southern California)

"Passion for work" has become a widespread phrase in popular discourse. Two contradictory lay perspectives have emerged on how passion for work is attained, which we distill into the *fit* and *develop* implicit theories. Fit theorists believe that passion for work is achieved through finding the right fit with a line of work; develop theorists believe that passion is cultivated over time. Four studies examined the

expectations, priorities, and outcomes that characterize these implicit theories. Our results show that these beliefs elicit different motivational patterns, but both can facilitate vocational well-being and success. We extend implicit theory scholarship to the work domain and provide a framework that can fruitfully inform career advising, life coaching, mentorship, and employment policies.

Definitions, Measures, and Findings Concerning Entrepreneurial Passion

Melissa S. Cardon (Pace University, Lubin School of Business)

As the notion of passion for work has gained in prominence in academic research, parallel developments have evolved specific to passion for entrepreneurship. Some scholars have adapted the dualistic model of passion developed by Vallerand and colleagues to the entrepreneurial context, and focused on passion for the profession of entrepreneurship. Others have focused on entrepreneurial passion for specific entrepreneurial roles and sets of activities, such as passion for inventing new products, founding specific firms, or developing already established ventures. Scholars have also begun to examine how venture stakeholders, such as potential investors and employees, are influenced by the perceptions they have concerning the extent of passion of the entrepreneur. In this presentation I briefly review the findings concerning the antecedents and outcomes of passion in entrepreneurship, and identify key opportunities for future research, particularly concerning antecedents of entrepreneurial passion and passion at the team level of analysis.

Unraveling the "passion orchestra" in academia

Annelore Huyghe (Queensland University of Technology), Mirjam Knockaert, (University of Ghent), & Martin Obschonka (Saarland University)

We propose and test a model linking two central parts of researchers' "passion orchestra", namely entrepreneurial and scientific passion, directly and indirectly, to spin-off and start-up intentions. Using a sample of 2,308 researchers from 24 European universities, our findings reveal that higher levels of entrepreneurial passion are associated with both stronger spin-off and start-up intentions. Further, obsessive scientific passion is positively associated with spin-off intentions, but negatively with start-up intentions. Entrepreneurial self-efficacy and affective organizational commitment mediate these effects. Finally and importantly, the two types of passion show characteristic interactions. Obsessive scientific passion moderates the entrepreneurial passion-intentions relationship such that it strengthens spin-off intentions but weakens start-up intentions. Our results highlight that recasting the individual driven by a singular passion to one with a "passion orchestra" provides a more holistic understanding of the new venture creation process. Implications for research and practice are discussed.

Relating Passion for ICT Activities with Academic and General Well-Being. A Person-Oriented Approach

L. Hietajärvi (University of Helsinki), J. Moeller (Yale University), H. Tuominen-Soini (University of Helsinki), K. Salmela-Aro (University of Helsinki & University of Jyvaskyla), K. Hakkarainen & K. Lonka (University of Helsinki)

This paper has two aims. First, we aimed to replicate recent findings regarding profiles of harmonious and obsessive passion (Moeller et al., 2015). Therefore, 1247 first year high school students in Finland were asked about their passion for activities relating to digital technology activities, using the dual model passion scale (Vallerand et al., 2003). Groups with distinct profiles of harmonious and obsessive passion were

identified using latent profile analysis (LPA). Second, we examined how these subgroups differed in regard to the specific activities they felt passionate about, and their academic and general well-being. As in recent studies, the findings showed that harmonious and obsessive passion were mostly aligned (meaning both high, or both moderate, or both low), within individuals. In contrast to previous studies, there were also individuals with higher OP than HP in the high passion clusters. Students in this group experienced lower academic and general well-being.

Symposium 8: Alcohol Use: Motivational Consequences, Predictors, & Interventions

Co-Chairs: Gabriele Oettingen (New York University and University of Hamburg) & Peter M. Gollwitzer (New York University and University of Konstanz)

Motivational concepts have been used to predict problematic alcohol use and design interventions for treatment. We present research using methods including facial coding, priming, electroencephalography, and online interventions to explore consequences, predictors, and interventions for alcohol use. As for the consequences, acute alcohol use enhances socio-emotional experiences particularly in extraverted persons and thus may motivate ongoing alcohol consumption (Sayette et al.). Alcohol also fosters prolonged slot machine gambling. Highlighting the low feasibility of winning however, counteracts this effect (Sevincer et al.). We then turn to motivational predictors of chronic consumption. Specifically, alcohol cues are motivationally significant in individuals at risk for alcohol use disorder eliciting craving and attentional processes associated with approach systems (Bartholow). We then discuss the role of drinking motivations for classifying drinking subtypes and staging drinking progression (Sher). Finally, we present mental contrasting with implementation intentions as a cost-effective intervention to reduce problematic drinking (Wittleder et al.).

Extraversion and the Effects of Alcohol on Emotion and Social Bonding during Group Formation

Michael A. Sayette (University of Pittsburgh), Catharine E. Fairbairn (University of Illinois at Urbana Champaign), Kasey G. Creswell (Carnegie Mellon University), & John D. Dimoff (University of Pittsburgh)

We used a group formation paradigm to investigate the socio-emotional effects of alcohol. Social drinkers (N = 720, half female) were assembled into three-person unacquainted groups and given alcohol, placebo, or non-alcohol (control) beverages to consume over 36-min. Social interaction was video-recorded, and facial and speech behaviors were systematically coded (e.g., using the Facial Action Coding System). Alcohol enhanced socio-emotional experience across multiple response systems. This presentation will address these overall findings and then focus on the moderating role of extraversion. Although extraversion has been linked to the development of alcohol use disorder (AUD), it has not moderated alcohol response in prior studies. Results indicated that highextraversion participants reported significantly more mood enhancement from alcohol than did lowextraversion participants. Further, social processes (simultaneous smiling) fully and uniquely accounted for alcohol reward-sensitivity among high-extraversion individuals. Results link extraversion to alcohol-related mood enhancement and highlight the importance of considering social processes in AUD etiology.

Alcohol Myopia and Gambling Behavior

A. Timur Sevincer, Greta Wagner, Rebecca Keim, & Marén Fähnrich (University of Hamburg), & Gabriele Oettingen (New York University and University of Hamburg)

According to alcohol myopia theory, behavior under the influence of alcohol is disproportionally influenced by salient rather than peripheral cues in a situation. We explored whether acute alcohol consumption would increase versus decrease persistence in gambling with a slot machine depending on whether the high desirability of winning or the low chances of winning were made salient by displaying slogans such as "win up to 1000€" or "chances of winning: only 1/1000", respectively, on the slot machine. We found that when low chances were made salient intoxicated (vs. sober) participants gambled less persistently and lost less money. This pattern held true for students (Study 1) and occasional gamblers (Study 2) in the lab. It also held true for bar patrons in the field (Study 3). The findings suggest that highlighting low chances of winning on slot machines is effective in reducing excessive gambling under the influence of alcohol.

Neural Response to Alcohol Cues as a Potential Endophenotype for Alcoholism Risk

Bruce D. Bartholow (University of Missouri and Midwest Alcoholism Research Center)

Considerable research has linked alcohol cue-reactivity—subjective, behavioral and physiological responses elicited in the presence of alcohol—to risk for alcohol use disorder (AUD). Other research has established reduced amplitude of the P300 component of the event-related brain potential (ERP) as an endophenotype for a spectrum of 'externalizing' problems, including AUD. This talk will review a program of research linking increased P300 amplitude elicited by alcohol cues to risk for AUD. Grounded in the Incentive Sensitization Theory of addiction, the primary thesis underlying this work is that alcohol cues are motivationally significant in at-risk individuals, eliciting craving and triggering motivated attentional responses associated with activating underlying approach systems. Data from multiple experiments supporting this general idea will be presented, along with discussion of the broader implications of this work within a nomological network of AUD risk factors and other potential endophenotypes.

The Role of Drinking Motivations in Classifying Drinkers and Marking the Progression of Alcohol Involvement

Kenneth Sher (University of Missouri)

I provide an overview of research on drinking motivations, their importance in predicting consumption and alcohol-related problems, and the extent to which they index meaningful types of drinkers and gauge the progression of pathological drinking. Drawing from the larger literature and my own prospective research, we critically evaluate the utility of viewing drinking subtypes based on profiles of drinking motives, and the extent we can use drinking motivations to chart endophenotypic aspects of more problematic drinking. Our own findings conflict with the thesis that drinkers can be readily classified into drinking "types" (e.g., those who drink to cope and those who drink to get high) and suggest that such typologies are likely an artifact of analytic approach. However, the relative mix of drinking motivations is useful for predicting later drinking and show promise for staging drinking progression. We conclude that that drinking motivation is a fundamental construct for characterizing drinking.

Reducing Alcohol Consumption: Mental Contrasting with Implementation Intentions (MCII)
Sandra Wittleder (University of Hamburg), Gabriele Oettingen (New York University and University of Hamburg), Peter M. Gollwitzer (New York University and University of Konstanz), Andreas Kappes (University of Oxford), & Jon Morgenstern (North Shore Long Island Jewish Health System)

The intervention of Mental Contrasting with Implementation Intentions (MCII) has been successful in improving health behaviors. Here, we examined if MCII can be administered online to reduce alcohol consumption. Participants (N = 365) either learned MCII or worked on math problems (control condition). Learning MCII (vs. control) increased commitment to reduce drinking directly after the intervention and readiness to change drinking one month later. Over the course of one month MCII (vs. control) helped to decrease number of drinks per week, drinking days per week, binge-drinking days per week, and drinks per drinking day. Increased commitment to reduce drinking and higher readiness to change drinking mediated the effects of MCII on drinking reduction. The reported findings indicate that a brief online MCII intervention can have powerful effects on drinking reduction and might offer a cost-effective path towards reaching an important public health goal

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Symposium 9: Unpacking the Motivational Toolkit: Factors that Influence the Pursuit of Personal and Interpersonal Goals
Co-chairs: Tali Kleiman (The Hebrew University of Jerusalem) & Shana Cole (Rutgers University)

The successful attainment of goals is a multi-determined process. In this symposium, we peek inside the motivational "toolkit" to explore processes that influence the way people think about, evaluate, and perceive information related to their goals. Cole and Fujita explore factors related to personal goals. Cole suggests perceptual judgments of goal proximity increase feasibility appraisals and prompt goal-directed action. Fujita suggests verbal stimuli evoke high-level construals, which has implications for self-control preferences. Kleiman and Fishbach explore factors related to interpersonal goals. Kleiman suggests that considering alternatives makes people feel closer to outgroup members and further from ingroup members. Fishbach suggests that interpersonal closeness between group members increases the emphasis on joint benefits and maximizing the payoff for the group as a whole. Taken together, our work expands the motivational toolkit and spans the attainment of both personal and interpersonal goals.

Near and Nothing To It: Perceived Proximity Increases Feasibility and Promotes Goal-Directed Action
Shana Cole (Rutgers University) and Emily Balcetis (New York University)

When people experience challenges during goal pursuit, what factors help them to mobilize effort toward meeting their goals? Across multiple studies, we explore the role of perceptual judgments of goal proximity in increasing appraisals of goal feasibility and promoting goal-directed action. Moreover, we test one social cognitive strategy—attentional narrowing—aimed at shifting perceptions of proximity. Adopting a narrow focus of attention, compared to looking more broadly around the environment, leads participants to perceive a target as physically closer. Moreover, perceiving a finish line as close leads to feelings that meeting the goal is feasible and increases goal-directed efforts. We explore moderators including physical fitness and goal importance and discuss implications of proximity judgments and attentional strategies for

the regulation of action in regards to health and fitness goals. For individuals experiencing difficulty mobilizing, keeping their "eyes on the prize" may be an effective self-regulatory strategy.

On How Words Versus Pictures Expand and Contract Regulatory Scope: A Construal Level Perspective
Kentaro Fujita (The Ohio State University)

What impact might verbal versus visual presentation of stimuli have on self-regulation and motivation? We describe the results of a series of experiments that demonstrate that whereas words activate high-level construal (processing that highlights central, goal-relevant features of events), pictures activate low-level construal (processing that highlights idiosyncratic, peripheral features). Given extensive research suggesting that high-level (vs. low-level) construal expands (vs. contracts) people's mental horizons (e.g., Liberman & Trope, 2014), we predicted that words (vs. pictures) should facilitate greater self-control. Indeed, we find that changing the presentation format of stimuli from pictures to words facilitates thinking about temptations (i.e., desserts) more negatively among those concerned with dieting. These studies highlight the role that verbal versus visual stimuli play in broadening versus contracting people's regulatory scope, and suggest a novel "nudge" for improving self-regulation.

Go This Way or That Way? How Intra-Personal Conflicts Impact Perceptions in an Inter-Group Domain
Tali Kleiman (The Hebrew University of Jerusalem) and Chadly Stern (New York University)

Internal conflicts (e.g, pitting professional success against personal life) are often viewed as unpleasant, and their negative consequences have received much research attention. We argue that thinking about one's own conflicting goals activates a reasoning process (mindset), which carries positive consequences for perceptions in the intergroup domain. Previous research has shown that people inaccurately view attitudes of outgroup members as being more different from their own attitudes than they actually are. We argue and show that internal conflicts trigger a mindset that fosters the consideration of alternatives. This mindset bridges the perceived distance between oneself and one's outgroup, and in turn reduces overestimation of outgroup dissimilarity. We further show that a conflict mindset succeeds where explicit accuracy motivation fails. The framework developed in the present research is generative for determining how intrapersonal processes can be capitalized on to alter intergroup perceptions and in turn facilitate social change.

Pursuing Group Goals: How Interpersonal Closeness Leads to Seemingly Selfish Yet Jointly Maximizing Choice
Ayelet Fishbach (University of Chicago) and Yanping Tu (University of Florida)

People routinely pursue goals for the self and others, such as planning a family vacation, or making decisions at work on behalf of a group. We explore the tension embedded in these situations between maximizing the benefits for the group as a whole versus ensuring equal distribution of benefits between group members. Across 7 studies, we find that interpersonal closeness between group members increases the emphasis on joint benefits and maximizing the payoff for the group as a whole, with less concern on allocation of benefits (i.e., "who gets what"). We further explore the circumstances under which such a tendency to focus on total benefits in closer relationships results in more willingness to take resources from close (vs. distant) others as long as the benefit for the taker is larger than the cost for the giver.

Symposium 10: New Directions & Discoveries in Affirmation Research Chair:
Karina Schumann (University of Pittsburgh)

The newest experimental tests of affirmation show that it can have exciting and powerful effects on motivation and behavior, including outcomes as diverse as weight loss maintained over years, higher quality apologies by transgressors, increased commitment and long-term performance in massive open online courses, and reduced discipline and attendance issues and higher core GPA among middle school students. How can a brief writing task have such beneficial effects? What do these findings reveal about our motivation to maintain a sense of personal adequacy in our daily lives? And how can methodological advances developed for these studies be helpful to researchers in other areas? Four speakers address these issues while describing their findings from field interventions, lab experiments, and online modules. They demonstrate the successful application of affirmation to new and important domains of motivation, and discuss how affirmation manipulations can be adapted to address the unique characteristics of different social environments.

A Threat on the Scale: Affirmation and Body Weight Threat
Christine Logel (Renison University College, University of Waterloo)

Body weight is a prevalent, but understudied, domain of social identity threat. It is one of the few domains in which there is a stigmatized *majority,* with two-thirds of Americans classified by the NIH as higher body weight. A set of experiments show that values affirmation bolsters people against weight threat, improving their cortisol awakening response, working memory, eating behavior, well-being, and even triggering a small amount of weight loss. Affirmation appears to be more effective on key outcomes than emotionally intense consumer videos that attempt to convince women that they are more beautiful than they realize. Effects are strongest for participants whose ideal weight is much lower than their actual weight, and appear to last for years.

An Affirmed Self and a Better Apology: The Effect of Values Affirmations on Transgressors' Responses to Victims
Karina Schumann (University of Pittsburgh)

After committing an offense, transgressors are typically motivated to repair the damage done to their relationship with the victim. Comprehensive apologies—which include more apology elements—are powerful tools that transgressors can use to achieve this goal. However, transgressors are also motivated to avoid associating themselves with wrongful actions, which can threaten their sense of morality. Because many apology elements require transgressors to do uncomfortable things like admit fault or promise change, transgressors often avoid using these elements and instead use defensive strategies (e.g., justifications; excuses). How can we promote higher quality apologies? I predicted that a values affirmation would help transgressors maintain their self-integrity, allowing them to offer more comprehensive apologies and bypass defensive strategies. I found support for this prediction in two studies where participants responded to real offenses they had committed. These studies identify a method for facilitating reconciliation by helping transgressors pursue their relationship-serving goals.

Goal-Contingent Values Affirmation: Linking Goals to Values

Omid Fotuhi & Geoffrey Cohen (Stanford University), & Phillip Ehret (University of California, Santa Barbara)

Daily life brings with it numerous opportunities for failure, which can challenge one's sense of self-integrity. Such threatening events weigh heavily on a person because they constrict attention and thought to focus on the source of the threat. Values affirmation interventions provide the opportunity to reflect on values of importance from a broader range of non-threatening domains, and have been shown to have beneficial effects for a wide range of important outcomes. In some cases, however, self-affirmation might lead to goal disengagement, because the affirmed self can easily divest attention and motivation away from the threatened domain and onto a valued-other domain. We offer a new values-affirmation approach, called goal-contingent values affirmation, that buffers against threat while preventing goal disengagement. When applied in 5 Massive Open Online Courses (MOOCs), participants demonstrated greater goal commitment for completing their course, and better long-term performance. Implications for values affirmation interventions are discussed.

Values Affirmation as a Tool for Boosting Academic Performance During Critical Transitions

Kevin Binning (University of Pittsburgh), Jonathan E. Cook (The Pennsylvania State University), Valerie Purdie-Vaughns (Columbia University), Julio Garcia (University of Colorado Boulder), Nancy Apfel (Yale University), David K. Sherman (University of California, Santa Barbara), & Geoffrey L. Cohen (Stanford University)

The present research tests whether values affirmations can improve educational outcomes for students at a diverse middle school facing a shared social threat: the transition from elementary to middle school. Sixth grade students (N = 161) were randomly assigned to receive values affirmation manipulations or control manipulations immediately after their transition to middle school and on eight additional occasions interspersed over all three years of middle school. Results revealed that students in the values affirmation condition had improved academic outcomes over time. Compared to control students, affirmed students had higher core GPA. They also had fewer discipline and attendance incidents, suggesting that affirmation produced a very general change in how the individual engaged and disengaged with their environment. These findings illustrate how educational outcomes are deeply connected to the self-concept and how affirmations may equip the self-concept to survive and thrive in educational contexts. The present research shows how values affirmation exercises can exert broader effects within academic settings than previously recognized.

Symposium 11: Bridging Human Motivational & Cognitive Neuroscience: The Self in Decision Making

Co-Chairs: Markus Quirin (Stanford University, Philipps-Universität Marburg) & Johnmarshall Reeve (Korea University)

Decision-making has yet been investigated by relatively separate traditions, motivation psychology and cognitive neuroscience. Whereas motivation psychology for example asked about the degree of identification or self-determination in decision-making ("self-involvement"), cognitive neuroscience asked

about evaluation and revaluation processes. This symposium aims to facilitate the integration of these two lines of research. Tobias Maldei demonstrates how self-regulation interacts with affective states to predict intuitive decision-making. Johnmarshall Reeve elaborates on how autonomy during choice positively influences learning and the role of the anterior insular cortex. Keise Izuma investigates the causal role of the posterior medial frontal cortex in relieving cognitive dissonance after choices. Elise Radtke presents neural correlates associated with self-choice and related identification processes and how they relate to self-regulation. Markus Quirin identifies neural correlates of the recognition of self-chosen versus alien goals and their relationships to self-regulation and self-awareness. These findings help explain functional underpinnings of self-congruence and intrinsic motivation.

The Role of Self-Regulation in Intuitive Decision-Making

Tobias Maldei (Universität Trier and VU University Amsterdam), Nicola Baumann (Universität Trier), & Sander L. Koole (VU University Amsterdam)

Intuition is a central form of decision-making that reflects intelligent, implicit information-processing which is associated with a higher-level neurobehavioral system ('the intuitive self'). In two studies, we investigated the role of self-regulation in intuition. In line with theoretical assumptions, we showed in the first experiment (N = 77) that people who had high self-regulation abilities (action-orientation) resisted the detrimental influence of negative mood on intuition due to a holistic mindset. To measure intuition, we used a well-known semantic coherence task. In a second experiment (N = 88), we found that low self-regulation doesn't necessarily predict impaired intuition. People with low self-regulation who showed a 'big-picture' mindset as default in a global-local task were able to make reliable intuitive decisions independent of their current mood. The present study suggests that a holistic mindset is a central condition for making intuitive decisions. Self-regulation abilities provide this mindset while coping with negative affect.

Neural Basis of Autonomy and Autonomous Learning

Johnmarshall Reeve (Korea University) & Woogul Lee (Korea National University of Education)

Recognizing that anterior insular cortex (AIC) activations constitute the neural bases of intrinsic motivation, the present study sought to confirm for the first time that autonomy satisfaction (like intrinsic motivation, curiosity, and competence satisfaction) is also associated with greater AIC activity. Twenty (9 females, 11 males) undergraduates participated in an event-related fMRI study to learn new information under conditions of high, moderate, and low felt autonomy toward the learning activity. After each trial, participants rated how interesting the learning experience was; and, after the scanner, participants took a surprise recall test about the information to be learned to obtain an objective measure of learning. Pre-learning 1-3 autonomy rating (not all all; moderate; very much) predicted extent of AIC activations, DLPFC activations (cognitive engagement), self-reported interest, and recall test scores (objective learning). These results show that autonomy satisfaction during task engagement predicts AIC activations, extent of cognitive engagement, interest, and learning.

The Neural Bases of Cognitive Dissonance and Cognitive Imbalance

Keise Izuma (University of York)

According to cognitive consistency theories, individuals prefer incoming information to be cognitively consistent with already existing cognitions, beliefs and attitudes. When there is inconsistency, it induces a negative emotional state, and people are motivated to reduce it. In this talk, we will present social

neuroscience studies that investigated the neural bases of attitude change following two different types of cognitive inconsistency, namely 'cognitive dissonance' and 'cognitive imbalance.' Our two fMRI studies demonstrated that both cognitive dissonance and cognitive imbalance are represented in a brain region called the posterior Medial Frontal Cortex (pMFC). Furthermore, using a brain-stimulation method (TMS), we demonstrated that the pMFC plays a causal role in attitude change following cognitive dissonance. Our data also suggest that attitude change following cognitive inconsistency may share similar neural mechanisms with behavioral adjustment following a negative outcome (i.e., reinforcement learning).

Neural Mechanisms of Self-Choice and Their Relationships to Self-Determination Processes

Elise L. Radtke (Osnabrück University), Andreas Jansen (Philipps-Universität Marburg), Carsten Konrad (Philipps-Universität Marburg), Anna-Sophie Immel, Yulia Khayrutdinova, Michal Ljubljanac, Marcel Lommerzheim, & Benjamin Wulff (Osnabrück University), & Markus Quirin (Philipps-Universität Marburg and Stanford University)

The chronic pursuit of self-incongruent goals (introjection) induces feelings of dissonance, reduces well-being and can even engender depression. In the present study, we used fMRI to test 32 participants to investigate neural correlates of introjection while participants make a choice between alternatives of tasks from a to-do list of equal valence, and on the other hand, are assigned with tasks from a boss' to-do-list. As expected, self-choice was related to brain areas typically involved in self-referential processing. In addition, data will be presented that link brain activations to goal introjection versus introjection, as well as individual differences in self-regulation.

Keeping Personal Boundaries: Brain Correlates of Own, Imposed, and Introjected Goals

Markus Quirin (Stanford University and Philipps-Universität Marburg), André Kerber (Osnabrück University), Ekkehard Küstermann (University of Bremen), Miguel Kazén (Osnabrück University), Carsten Konrad (Philipps-Universität Marburg), & Julius Kuhl (Stanford University)

Striving for goals typically functions as an indicator of mental functioning. However, often enough individuals non-consciously introject others' expectations, i.e. they mistake external goals and norms as self-chosen. Pursuit of such introjects alienates individuals and challenges their integrity and mental health. Our experimental brain imaging study showed that representations of goals chosen in the experiment involved the right ventromedial prefrontal cortex (VMPFC), whereas representations of others' expectations involved the left VMPFC. Introjects involved bilateral VMPFC and the dorsal anterior cingulate cortex. In addition, reduced right VMPFC activation and higher numbers of goal introjections were both linked to self-reports of reduced self-awareness and rumination tendencies. The right VMPFC may thus support the maintenance of psychological self-other boundaries and personal integrity.

Symposium 12: Self-Regulation in Social Context

Chairs: Yanping Tu (University of Florida) & Janina Steinmetz (University of Chicago)

Self-regulation takes place in a social context, but how do social factors influence self-regulation? This symposium addresses this question in a series of talks that explore when and how social context increases goal pursuit. Specifically, Steinmetz and Fishbach show that, in the mere presence of others, people magnify

perceptions of their own goal-relevant actions. Youn and Goldsmith show that whereas social contexts (i.e., public actions) usually increase self-regulation, this effect is attenuated when people experience incidental envy. Kross and Ayduk show that people can take distance from themselves and adopt an outsider perspective by engaging in self-talk, and this strategy in turn enhances self-regulation. Finally, Tu and Fishbach show that individual role models (e.g., Anderson Cooper) inspire self-regulation more than a group of role models (e.g., news anchors).

How Being Observed Magnifies Actions
Janina Steinmetz & Ayelet Fishbach (University of Chicago)

Being observed typically affects people's *performance* through social facilitation or social inhibition. But does being observed also affect people's *perception* of their own actions? We test the hypothesis that, when observed, people magnify their actions and perceive them as larger. In Studies 1 and 2, the more participants feel observed while eating, the larger they (falsely) think the portion was, although all participants ate a fixed amount of food. In Study 3, some participants learn afterwards that they had been observed while snacking. These participants recall having eaten more than unobserved control participants. In Study 4, we find that both desirable and undesirable actions are magnified. In a test of participants' ability to detect fake smiles, observed participants (falsely) believe that they gave both more correct and more incorrect answers than control participants, yet the conditions did not actually differ. Being observed fundamentally alters the subjective weight of one's actions.

Are We Always Better When We Are Being Watched? Understanding the Implications for Social Context and Envy on Self-Bolstering Behaviors
Yeojin Youn & Kelly Goldsmith (Northwestern University)

People's behavior often varies as a function of social context (public vs. private). This occurs in part because decisions that are made in public (vs. private) reflect self-presentational concerns. However, no research to date has examined if this widely acknowledged phenomenon might be affected by people's emotions at the time of the decision. Our research addresses this by examining if incidental envy moderates the effect of social context on subsequent, unrelated self-bolstering behaviors. We find that although public (vs. private) social contexts generally promote self-bolstering behaviors (e.g., effort exertion, conspicuous consumption and charitable giving), this effect is attenuated among people who experience incidental envy. We suggest that this pattern of results occurs because the potential reputational costs of self-bolstering behavior are more salient to those experiencing incidental envy, and discuss this process explanation. We conclude with a discussion of the practical and theoretical implications of this work.

Self-Talk as a Regulatory Mechanism: How You Do It Matters
Ethan Kross (University of Michigan) & Ozlem Ayduk (University of California, Berkeley)

Does the language people use to refer to the self during introspection influence how they think, feel, and behave under stress? This talk will review findings from a series of studies that suggest it does. First, we will provide an overview of work indicating that using non first person pronouns and one's own name (rather than "I") during introspection enhances self-distancing. We will then review evidence indicating that non first person self-talk (compared to first person self-talk) enhances people's ability to self-regulate effectively (assessed via self-report and behavioral measures) in the laboratory and in daily life. We will conclude by addressing three questions that these findings raise: (a) Does non first-person self-talk constitutes an

effortless form of self-control?, (b) What cognitive processes underlie the benefits of non first-person self-talk?, and (c) what are the potential practical applications of this work?

The Impact of Role Model on Goal Pursuit

Yanping Tu (University of Florida) & Ayelet Fishbach (University of Chicago)

Goal pursuit is often motivated by role models, who can be either a group (e.g., news anchors) or an individual (e.g., Anderson Cooper). People assimilate to their role models; they share the role models' positive attitudes towards the goal as well as the actions role models take to achieve the goal. And because a group-role-model is less extreme than an individual-role-model people assimilate to a group-role-model more. We explore the implication this greater assimilation to group (vs. individual) role models. We show in three studies that people are less likely to follow the actions of the group-role-model compared to individual-role models, because when watching a group people get a sense that they "have done it, too" and relax effort. Importantly, whereas group-role-model's actions are less motivating than the individual-role-model's actions, this pattern attenuates for role modes' expressed attitudes, which do not imply action.

Data Blitz Talks

Wanting and Liking of Rewards and Punishments in a Clinically Depressed Sample: Evidence for a Differential Response Pattern

Kerstin Brinkmann & Jessica Franzen (University of Geneva)

Clinical and subclinical depression are linked to reduced responsiveness to positive and negative consequences. Recent studies have demonstrated that subclinically depressed individuals mobilize less effort in anticipation of rewards and punishments (i.e., wanting), show reduced facial expressions during reception of rewards but similar facial expressions during reception of punishments (i.e., liking). I will present data from a new study (N=40) that demonstrates this pattern in a clinically depressed sample. Patients with major depression and control participants worked on a Sternberg memory task under neutral, reward, and punishment instructions (within-persons factor). Effort mobilization was operationalized by participants' cardiovascular response during the task. Facial expressions were operationalized by facial electromyography during reward and punishment reception. Results of depressed patients' reactivity compared to controls confirmed reduced cardiovascular reactivity during reward and punishment anticipation, reduced electromyographic reactivity during reward reception but similar electromyographic reactivity during punishment reception. Self-report data complete this pattern.

Promoting One Self While Preventing Another: The Self-Aspect-Specificity of Motivational Orientations for Promotion and Prevention

Alexander S. Browman, Mesmin Destin & Daniel C. Molden (Northwestern University)

The self-concept represents a collection of diverse self-aspects, each associated with a largely unique set of attributes that develop to aid in the pursuit of self-aspect-relevant goals. Leveraging a prominent motivational framework—regulatory focus theory (RFT)—we propose that distinct self-aspects may also be associated with unique motivational orientations, or preferences regarding how self-aspect-relevant goals should be framed and pursued. Study 1 experimentally confirms that people enact different motivational

orientations as they shift from one self-aspect to another. Studies 2 and 3 then examine how motivational orientations influence the structure of the self-concept. We find that more integrated (versus conflicting) self-aspects are marked by more (versus less) similar self-aspect-specific motivational orientations, and that the nature of the goals associated with a self-aspect ("ideal" goals versus "ought" goals) determine that self-aspect's motivational orientation. Together, these findings contribute to a goal-driven, multiple self-aspects perspective on the structure of the self-concept.

The Process of Disengagement from Personal Goals
Mirjam Ghassemi, Katharina Bernecker, Marcel Herrmann, & Veronika Brandstätter (University of Zurich)

How individuals disengage from personal goals is empirically not well understood. Only recently, research has revealed that disengagement is often preceded by an action crisis, an intrapsychic conflict in which the individual brings the costs and benefits of goal pursuit back to bear. Contributions of the present research are twofold: First, we postulate the existence of reciprocal influences between an action crisis and the perception of goal desirability and attainability in the disengagement process from personal goals. In two longitudinal studies (N = 345), an action crisis in the goal to complete a university degree predicted a devaluation of its desirability and attainability, while, conversely, low goal attainability (but not desirability) forecasted an increase in action crisis. Second, drawing on previous theoretical work, we present empirical evidence that the devaluation of goal desirability is functional for individuals' life satisfaction when facing the inability to reach a goal.

Who Opts for Job Challenge: The Role of Goals and Gender
Fiona Lee & Carol Dweck (Stanford University)

Often it is better to jump into a new job and learn as you go, but many people hold back until they have the complete skill set. The present research, using a goal-orientation framework (learning vs. ability goals), asked participants what percentage of the required skills and knowledge they would like to have before they start a new job. Both goals and gender played a role. A learning goal orientation predicted opting for more challenge (i.e., indicating a lower percentage of skills needed at the start of a job), while an ability goal orientation predicted taking on less challenge. In particular, women opted for less challenge than men, and such gender difference was reduced when women were led to endorse learning goals (vs. ability goals).

Conservatives Derogate Counterstereotypical People To Maintain a Sense of Certainty
Chadly Stern & Tessa V. West (New York University), & Nicholas O. Rule (University of Toronto)

People often rely on stereotypes to categorize individuals into groups. The present studies tested whether political conservatives would be more likely to derogate people who deviate from stereotypes because they are more motivated to use the stereotypes to maintain a sense of certainty about the world. In Study 1, conservatives evaluated men whose facial characteristics deviated from stereotypes about their sexual orientation group (i.e., masculine gay men and feminine straight men) more negatively than men who conformed to stereotypes, whereas liberals did not. In Study 2, participants learned a bogus stereotype that could be used to categorize people into groups. Conservatives evaluated counterstereotypical people more negatively than stereotypical people, but liberals did not. However, when liberals' motivation for certainty was experimentally heightened, they were just as likely as conservatives to derogate counterstereotypical

people. These findings indicate that ideological differences in the motivation to attain certainty shape social evaluations.

Motivated Collective Defensiveness: On the Behavioral Consequences of Intergroup Sensitivity

J. Lukas Thürmer (University of Konstanz), Sean M. McCrea & Baylee M. McIntyre (University of Wyoming)

A growing body of research shows that self-defeating behaviors are goal-directed. We argue that this is also true at the group level and investigate whether group members not only defensively reject outgroup criticism (intergroup sensitivity effect), but are also motivated to act on this threat. Three experiments show that group members prioritize counterarguing outgroup criticism over getting their own work done (Studies 1 and 3) and are willing to pay with their own money to punish an outgroup critique (Study 2). Study 3 further tested whether these behaviors actually reflect goal-directed investments of resources: Using group affirmation as an alternative means of attaining the defense goal reduced counterarguing and improved performance after outgroup criticism. Together, the experiments suggest that intergroup sensitivity leads group members to incur personal costs that are motivated by the need to protect one's group. We discuss intergroup sensitivity as one instance of motivated collective defensiveness.

Harnessing Intrinsic Incentives to Increase Persistence on Long-Term Goals

Kaitlin Woolley & Ayelet Fishbach (University of Chicago, Booth School of Business)

Existing self-control research carries the underlying assumption that people should focus on extrinsic benefits to motivate persistence on long-term goals. We examine an alternative: whether attention to intrinsic incentives of a long-term goal increases goal persistence to a greater extent than attention to extrinsic incentives, even though these goals are primarily pursued for their extrinsic incentives. We find that intrinsic incentives are stronger predictors of persistence on studying and exercising than extrinsic incentives. Manipulating incentive focus, attending to intrinsic (vs. extrinsic) incentives during activity pursuit increases persistence on health goals, which is moderated by the appeal of intrinsic incentives. Extending beyond a single activity session, intrinsic (vs. extrinsic) incentives predict engagement in healthy habits over time. Together, we suggest one way people can facilitate persistence on long-term goals that also offer immediate, intrinsic incentives is to emphasize these benefits during pursuit, and to select means based on intrinsic incentives

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Posters

Bare Skin and Blank Stares: Functional Intimacy Increases Social Distancing

Juliana Schroeder (University of California, Berkeley), Ayelet Fishbach (University of Chicago), Chelsea Schein & Kurt Gray (University of North Carolina)

Intimacy is not always motivated by interpersonal closeness; sometimes it is merely functional. Interactions with service providers, such as undergoing a dermatology exam or airport security check, often require high functional intimacy. Despite the objective value of these services, we propose recipients will compensate for

functional intimacy by increasing social distance. In Experiment 1, participants who experienced or anticipated a more intimate medical procedure preferred a less social interaction partner. This finding replicated in the field with patients in flu vaccination clinics (Experiment 2). A third experiment revealed more social distancing (e.g., looking and turning away) in highly intimate settings with a stranger, but not with a romantic partner, demonstrating that only functional intimacy increases social distance. Creating social distance may be an effective strategy for coping with functional intimacy.

Extraversion and the Desire to Win: Individual Differences in Competitiveness and Competitive Behaviour within Auction Games
Matthew S. Fong, Kun Zhao, Luke D. Smillie (The University of Melbourne)

Despite the ubiquity of competition, little is known about the relation between personality and competitiveness. Competitive behaviour can be viewed as an instance of reward-seeking, which also plays a key role in the different components of extraverted personality (Smillie, 2013). These consist of the desire (Assertiveness) and enjoyment (Enthusiasm) of rewards. The present study examined whether these components of extraversion predict self-reported competitiveness, as well as actual competitive behaviour during two auction games (a standard Winner-Pay auction, and an All-Pay auction—where all bidders must pay their maximum bid even if they do not win). Participants (N = 304) competed in online, simulated versions of both auction games. Results indicated that Assertiveness predicted self-reported competitiveness and escalation in bidding across both auctions, while Enthusiasm modestly predicted self-reported competitiveness but was unrelated to bidding behaviour. Implications and future directions will be discussed.

Motivation Behind Volunteerism
Siham Saeed Albesisi (Concordia University, Chicago)

Engaging students in volunteering work is beneficial for students in and out of the academe. The goal for volunteerism is to change peoples' lives for the better. Volunteerism offers many advantages to the volunteers that motivate them to work. This paper explored the motivations behind volunteerism for international students as many students travel overseas to continue their education. In the process, they become involved with volunteer work. This study provided a thorough review of literature pertaining to volunteerism: Motivational theories, key determining factors for volunteering, gender differences between men and women in engaging in volunteer work, and the association between organization and volunteers. This study aims to help organizations gain insight in what drives international student volunteers so they may address them effectively.

An Examination of Goal Contents, Motivation, Need Satisfaction, & Well-Being Among Practicing Physical Therapists
Patti Berg-Poppe & Amy Schweinle (The University of South Dakota),

Research supports a positive relationship between aspirations for intrinsic outcomes and psychological well-being (PWB) and a negative relationship between aspirations that highly value extrinsic outcomes and PWB. Aligned with self-determination theory (SDT), several studies support the mediating effect of basic need satisfaction, more fully depicting the relationship between both extrinsic goal contents and extrinsic motivation with poor PWB. Research looking at these relationships within a group of healthcare professionals has not been undertaken. The current study explored the relationship between goal contents

and PWB for a group of physical therapists and examined the mediating effect of basic need satisfaction in this relationship for the group of therapists. Further study of the relationship between goal contents and PWB examined level of congruence between personal and contextual intrinsicality and its bearings on PWB. A sample of 151 physical therapists completed a demographic questionnaire and four research instruments. Results revealed that contextual intrinsicality moderated the relationship between personal intrinsicality and PWB ($R2 = .114$, R2-change $= .044$, $F(3,147) = 6.290$, $p < .001$). Partial mediation by basic need satisfaction in the relationship between goal contents and PWB was uncovered. Findings reveal that physical therapists are intrinsically motivated and inclined to establish intrinsic goals. The extent to which physical therapists perceived the healthcare employment environment as supportive of intrinsic or extrinsic goal contents has bearing on the relationship between personal intrinsicality and PWB, suggesting that physical therapists seek a level of congruence between their own goal contents and those that they perceive the employer promotes.

Torn: Emotional and Behavioral Consequences of Self-Control Conflict

Daniela Becker & Nils B. Jostmann (University of Amsterdam), Wilhelm Hofmann (University of Cologne), & Rob W. Holland (University of Amsterdam, Radboud University Nijmegen)

People often experience self-control conflicts (e.g., feeling tempted to indulge while motivated to restrain). Whereas self-control conflict can facilitate self-control success, self-control conflict is also affectively aversive. It was, however, not clear yet how this aversiveness influences further self-control processes. Therefore, three studies (Ntotal = 667) investigated the immediate consequences of experiencing self-control conflict during a food choice (healthy vs. unhealthy) on people's emotions (guilt, regret, pride), and on future self-control. Study 1 (lab) and 2 (field) demonstrated that self-control conflict is related to increased levels of guilt and regret, but not to pride. This was independent of choice. Moreover, conflict increased the likelihood of reversing one's choice in the future. Study 3 (online) showed that conflict during a healthy choice can lead to more pride, but only when the choice is first appraised as a self-control success. Our findings thus highlight the importance of appraisals in the self-control process.

An Activated Explicit Affiliation Motive Neutralizes the Influence of the Implicit Power Motive on Negotiation Performance

Julia K. Trapp & Hugo M. Kehr (Technical University of Munich)

We examined the presumed positive impact of the implicit power motive on negotiation performance. Further, we tested the long-held notion that the influence of an aroused implicit motive can be neutralized by an activated and conflicting explicit motive. Two experiments with student samples were run to test our hypotheses. Adopting the role of a job applicant, participants engaged in simulated salary negotiations against a fictitious opponent. Negotiation performance was assessed with participants' salary requests. As predicted, results indicated a positive impact of the implicit power motive on negotiation performance, regardless of whether the implicit power motive was measured (Experiment 1, N = 65) or manipulated (Experiment 2, N = 96). In addition, Experiment 2 confirmed that the effects of the aroused implicit power motive were neutralized when the explicit affiliation motive had been activated prior to negotiation. Theoretical and practical implications of our findings are discussed.

Influence of Mortality Salience on Effort-Related Cardiovascular Response to an Identity-Relevant Challenge

Christopher Mylnski, Eric R. Schuler, Rex A. Wright (University of North Texas)

We examined effort-related cardiovascular responses to an identity-relevant performance challenge after exposure to a prime that made mortality more or less salient in an undergraduate population. The performance challenge was presented to the participants either (1) as fixed at an easy level or (2) as having an unfixed, do-your-best, in character. Mortality salience had no impact on effort-related cardiovascular responses when the challenge was fixed at an easy level, but improved the responses when it was unfixed in character. Findings provide a fresh approach to the understanding of the behavioral outcomes of Terror Management Theory.

Avoiding Temptations: Perceptual Distancing in Dieting Self-Control Conflicts

Janna Kline & Shana Cole (Rutgers University), & Emily Balcetis (New York University)

How are successful self-regulators able to resist temptations and instead make progress toward long-term goals? We suggest perceptual distancing is a tool that may help individuals resist temptations. Within the dieting domain, we explored whether people with strong motivations to eat healthy perceived tempting foods as farther away. Furthermore, we tested an underlying process that may predict perceptual distancing: avoidance motivations. Using an approach-avoidance computer mouse task, we tested people's motivations to approach and avoid healthy and unhealthy foods. We then measured their perceptions of distance to unhealthy foods. We found that successful restrained eaters perceived unhealthy snacks as further away. Moreover, this perceptual distancing bias reflected an underlying motive to avoid unhealthy foods. This work has important implications for the processes that predict successful self-regulation, suggesting that motivations to avoid unhealthy foods ultimately predict temptation resistance by shifting the way people perceive the world around them.

Doping for 'Couch Potatoes': Caffeine Influences Exercise-Related Choice

Joel B. Chidley, Gurprit S. Lall, & Samuele M. Marcora (University of Kent)

The primary aim of this study was to investigate whether the effects of caffeine on psychological responses to high-intensity interval training (HIIT) are associated with changes in exercise behaviour, as determined by choice. Nine physically inactive adults completed three weeks of treadmill-based HIIT. Prior to training, participants ingested caffeine (3mg/kg) or placebo, in a randomised and counterbalanced alternating order. Ratings of perceived exertion (RPE) and exercise enjoyment were recorded for each training session. Post training, participants were asked to choose whether they preferred 'this' or the previous session – providing opportunities to choose between treatment pairs. Caffeine reduced RPE ($p=0.037$) and increased enjoyment ($p=0.025$). Caffeine sessions were chosen significantly more often, with 80% of choices in favour of caffeine ($p=0.007$). We demonstrated for the first time that the psychological effects of caffeine are associated with a significant change in exercise-related choice, with participants preferring to exercise with caffeine.

Self-efficacy, Achievement Goals, and Self-Involved Emotions: Examining the Relationship Between Pride, Shame, and the 3 x 2 Model for Achievement Goals in Math in an Elite American Boarding School

Hadley J. Solomon (University of New Hampshire)

Student achievement goals (3 x 2), self-efficacy, and self-involved achievement emotions (pride and shame) were examined among a sample of high-achieving high school math students (N = 180) in an elite boarding school in New England. Correlation and regression analyses were conducted to examine the goals that students hold and their related achievement emotions when controlling for self-efficacy. Pride in math was positively related to task goals (both approach and avoid), and self-approach goals. Shame in math was related to self-avoid goals. Findings suggest students experience pride in math class when they are oriented toward the task itself regardless of valence, supporting the separation of task and self goals introduced by Elliot et al. (2011). Other goals were not related to self-efficacy, pride, or shame for this sample. Results and implications are discussed in the final paper.

When Superstars Fail: How Erroneously Compensating Top Players in the National Basketball Association Affects Adjacent Teammates' Performance

J. Logan Jones (Missouri Western State University), Richard J. Gentry (University of Mississippi), & Christopher H. Thomas (Saint Louis University)

Drawing from the economic perspective of tournament theory, and incorporating the psychological mechanism of goal-proximity, we hypothesized that when higher compensated players are not performing as expected, an adjacent lower compensated player will increase performance levels to increase his chances at higher future compensation. Using salary and individual performance data from the National Basketball Association (2001-2009), we investigated whether underperformance by a team's most highly compensated player has an effect on the performance of his lower compensated teammates. We found support for two separate hypotheses. First, higher compensation of top players affects the subsequent performance of lower ranked adjacent players. Second, for the top players (ranks 1-3), performance failures would result in an increase in subsequent performance of the lower ranked player. These results suggest an effect on participation and effort that is different than a standard equity theory prediction. Poor performance by the highest paid player, maybe compensated for by increased performance by the lower paid player.

Differences in Mindset of Collegiate Freshman and Upperclassmen

Audra P. Jensen & Valanne L. MacGyvers (University of Louisiana at Lafayette),

College retention is an issue facing most colleges. In two similar studies University upperclassmen and incoming freshmen completed parallel online surveys. Students responded to measures of mindset (Dweck, 2006), academic goals and intellectual confidence. In the combined analysis, freshmen were more likely to hold an entity mindset, $F(1, 625) = 14.65$, $p<.0001$; to endorse performance goals, $F(1, 625) = 5.04$, $p<.05$ and learning goals, $F(1, 625) = 15.95$, $p<.0001$; and showed no significant difference in confidence in intelligence. More notable is the dramatic skew in the mindset measure, whereas 10% of upperclassmen endorsed the fixed mindset in contrast to 22% of the freshmen. The ongoing longitudinal study following freshman may indicate whether those with entity mindset are altering their mindset or quitting college. Discussion focuses on mindset as an important collegiate achievement variable.

Neural Evidence of an Anxiety-Buffering Function of Self-Esteem

Kuniaki Yanagisawa & Nobuhito Abe (Kyoto University), Emiko S. Kashima (La Trobe University), & Michio Nomura (Kyoto University)

Reminders of death often elicit defensive responses in individuals especially among those with low self-esteem, yet the precise mechanism underlying this anxiety-buffer function of self-esteem remains unclear. We used fMRI to test a hypothesis that self-esteem modulates the neural responses to death-related stimuli, especially the functional connectivity within the limbic-frontal circuitry, with implications for later behavioural defensiveness. As predicted, individuals who are high (vs. low) in self-esteem exhibited an increased connectivity between the amygdala and ventrolateral prefrontal cortex (VLPFC) while processing the death-related stimuli. Further, stronger amygdala-VLPFC functional connectivity predicted a decline in defensive reaction towards others who threaten their cultural worldview. Results indicate that self-esteem may moderate the amygdala-VLPFC interaction which can reduce the defensiveness caused by death-related stimuli, providing a neural explanation for why individuals with high self-esteem can reduce defensive reactions to death reminders.

How Do Counter-Stereotypes Boost Cognitive Flexibility? The Causal Role of Epistemic Motivation

Ekaterina Damer (The University of Sheffield) & Richard J. Crisp (Aston Business School)

Female CEOs, Muslim hipsters, Harvard-educated carpenters: Society is increasingly characterized by complex combinations of social, religious, and cultural identities that do not conform to traditional stereotypes (and are thus termed 'counter-stereotypes'). How do humans respond and adapt to such new forms diversity? According to Crisp and Turner (2011), exposure to counter-stereotypes not only reduces intergroup bias, but also boosts cognitive flexibility. Recent evidence supports this prediction (Goclowska et al., 2014; Prati et al., 2015), however little is known about the mechanisms underlying this effect. In two online experiments (n=254) we conceptually replicate the effect of counter-steotypes on cognitive flexibility and demonstrate that epistemic motivation (the desire for a thorough understanding of the world) partially explains it. We highlight the importance of self-regulatory processes for human cognitive adaptation to diversity and discuss implications for interventions and policy making.

Growth Mindset and Performance: The Case of Cost

Meghan I. H. Linderman, & Amanda M. Durik (Northern Illinois University),

In achievement settings, information that focuses on potential growth (growth feedback) fosters performance compared with information that focuses on fixed abilities (fixed feedback) (Dweck, 2008; Good, Aronson, & Inzlicht, 2003). The current research attempts to link growth feedback to expectancy-value models of achievement choices by exploring whether cost (anxiety about the task) could be a plausible mediator of the effects of feedback type on performance (Eccles et al., 1983). In this experiment, participants received positive growth or fixed feedback about their potential to learn a new math technique. Feelings of anxiety were measured prior to the learning task to measure cost. Performance was measured by the number of problems solved correctly. A significant indirect effect of cost emerged on the relationship between feedback and performance, indirect=.64 (SE=.5), CI95%=.0003, 2.0358. These results suggest that growth feedback might positively affect performance because it reduces the perceived cost of learning tasks.

Students with Academically-Contingent Self-Worth Underperform on Working Memory Task: The Role of Anxiety

Jason S. Lawrence, Yana Weinstein, & Sean McCaffery (University of Massachusetts Lowell)

Students with academically-contingent self-worth tend to underperform on "ability-diagnostic" tests via heightened anxiety. The present study sought to examine whether the anxiety experienced by these students also impairs working memory performance. One hundred twenty one participants, who completed an academic contingencies of self-worth measure during prescreening, came to a lab to take a math test. Participants learned that the math test was either ability-diagnostic or ability non-diagnostic. Next, they completed measures of anxiety and worry. Then they did a working memory task (operation span). Results showed that in the non-diagnostic condition, there was no link between academic contingencies of self-worth and working memory performance. In the ability diagnostic condition, there was evidence that the higher participants' academically-contingent self-worth the worse their working memory performance, and that this effect occurred through heightened anxiety. This suggests that impaired working memory may explain the math underperformance of students with academically-contingent self-worth.

A Dyadic Approach to the Michelangelo Phenomenon

Rebekka Wedimann, Janina Bühler, & Alexander Grob (University of Basel)

Previous research suggests that partner affirmation is associated with target movement toward the ideal self and enhanced well-being. The Michelangelo phenomenon, encompassing partner perceptual and partner behavioral affirmation, as well as movement toward the ideal self, has not yet been examined in an Actor-Partner Interdependence Model (APIM). Because these processes are interlinked between partners, we investigated concurrent actor and partner effects in an integrative model including variables of the Michelangelo phenomenon. Using the data of 237 couples, the results indicate not only intrapersonal effects but also interpersonal effects. More specifically, if one person reported high partner perceptual affirmation the other partner reported more behavioral affirmation. Further, partner behavioral affirmation and movement toward the ideal self was related to the other partner's relationship satisfaction. Further, substantial indirect effects confirmed the mediational structure of the Michelangelo phenomenon. This research underlines the interpersonal approach to study relational processes, such as the Michelangelo phenomenon.

Approach and Avoidance Modes of Self-Regulation in Sports and Situation Incentives

M. Wegner (University of Bern), J. Schüler (University of Bern & Universität Konstanz), R. Grätzer (University of Bern), & H. Budde (Medical School Hamburg, University Reykjavik, & Lithuanian Sports University)

Approach and avoidance foci affect the self-regulation of behavior. In three studies we investigated whether a fit between a chronic self-regulatory focus × situational × instructional framing benefits sports performance. In Study 1, in which participants performed basketball free throws, only approach-oriented individuals improved their performance in the control condition when they did not receive any instruction (instruction × focus). In Study 2, being ahead or behind (situation) in a competitive match interacted with the chronic self-regulatory focus, with avoidance-oriented individuals showing better performance when being ahead and approach-oriented persons' performance benefiting from being behind. In Study 3, the three-way interaction was tested but only a chronic self-regulation × instruction interaction yielded significant results. Approach-oriented players benefitted from approach instructions and avoidance-oriented from avoidance

instructions. Results suggest that players with a chronic avoidance focus may benefit from goal instructions and that instructions may be more important than the situational framing.

A Multifaceted Race Horse: Implementation Intentions as a Successful Self-Regulatory Strategy for Decreasing as well as Increasing Projection

Anton Gollwitzer (Yale University), Bettina Schwoerer (University of Hamburg), & Klaus Michael Reininger (University of Hamburg)

Two studies examined whether implementation intentions, self-regulatory "if-then" plans, can decrease as well as increase projection in the form of people's tendency to overestimate that other people share their attitudes (false consensus effect). In Study 1, participants agreed or disagreed with twenty attitudes, (e.g., "I like mechanics magazines") (N = 120), and then formed either implementation intentions directed at reducing the false consensus effect: "If I'm asked to estimate what percent of other people agree with me, then I will remember that other people are different!", a goal intention: "I will remember that other people are different!", or simply continued the experiment. Participants who formed implementation intentions exhibited lower levels of projection than participants in the goal or control conditions. Study 2 (N = 268) replicated and extended these findings to increasing projection. These results imply that automatic self-regulatory strategies can successfully alter cognitive biases.

Conflict Detection Predicts Effective Regulation of Eating Behavior

Sandra Wittleder (University of Hamburg), Andreas Kappes (University of Oxford), Tilman Reinelt (University of Bremen), Dennis Hebbelmann (University of Hiedelberg), Mike Wendt (Medical School Hamburg), & Gabriele Oettingen (New York University and University of Hamburg)

The conflict monitoring hypothesis predicts that the need for self-regulation during cognitive tasks is signaled by the detection of cognitions in conflict with the task (Botvinick et al., 2001). To date, little is known about whether such conflict detection relates to content-specific self-regulatory success beyond the task itself. Three studies examined whether effective conflict detection measured via conflict adaptation after incongruent trials in a food-related flanker task predicted the regulation of eating behavior. Food-related conflict detection in the flanker task predicted the strength of being committed to improving one's eating (Study 1 and 2), resisting a food-related temptation (Study 2), and healthy eating in the upcoming 2 weeks (Study 3), but food-unrelated conflict detection did not (Study 2 and 3). The present research demonstrates the predictive value of content-specific conflict detection measured in the lab for respective self-regulation in daily life.

The Moderating Impact of Success Importance on the Relationship Between Listening Demand and Listening Effort

Michael Richter (Liverpool John Moores University)

Research on listening effort often relies on the assumption that effort is a direct function of demand. The presented study aimed at challenging this assumption by demonstrating that the relationship between listening demand and listening effort is moderated by success importance—as suggested by motivational intensity theory (Brehm & Self, 1989). Sixteen participants with normal hearing performed four blocks of an auditory discrimination task in randomized order. In each block, participants could earn a monetary reward—either CHF 0.20 (about USD 0.20, low success importance) or CHF 2 (high success importance)–by successfully discriminating two tones. Discrimination was either easy (tones differed by 20 Hz) or difficult (3

Hz difference). Results demonstrated the expected moderation effect: Effort—assessed as sympathetic-driven pre-ejection period—increased from easy to high task demand in the high-success-importance condition. In the low-success-importance condition, effort was low and did not differ between task demand conditions.

How Lay Models of Goal Systems Affect Self-Regulation

Franki Y. H. Kung & Abigail Scholer (University of Waterloo)

People juggle multiple goals simultaneously. Understanding how individuals construe relations among their goals is important because it may generate insights into effective goal-regulation. We propose that there may be important variability in lay goal models—how people think about relations among goals. When asked to draw goal models spontaneously, three major organizing structures emerged: hierarchical, network, and sequential. Most people organized their goals as a network or sequence versus a hierarchy (Study 1). In addition, we discovered that among people who viewed the self as more fixed (vs. malleable) (i.e. entity person theory), having hierarchical models reduced goal satisfaction and motivation, whether goal models were measured (Study 2) or manipulated (Study 3). We discuss the implications of each lay goal model for various self-regulatory processes.

Guided Strategic Planning Enhances Student Class Performance

Patricia Chen, Omar D. Chavez, Teck Sheng Tan, Michelle S.Y. Lee, & Brenda Gunderson (University of Michigan)

Many educational policies have focused on providing additional learning resources for students, but less so on how students effectively utilize existing resources. We hypothesized that simply getting students to tactically plan how they would use their learning resources effectively would improve their class performance. We designed and tested a Strategic Planning intervention with 2 cohorts of an Introductory Statistics college class (N1=198, N2=207). The aim of the intervention was to promote student performance through thoughtful resource utilization in their exam preparation. Before each exam, students in the treatment group wrote about which academic resources they would use to prepare for their exam, why each resource would be useful, and planned out when, where, and how they were going to use those resources. Compared to control group students, students who self-administered our 15-minute online intervention performed better on both class exams and, on average across both cohorts, half a letter grade higher on their final course grades.

Do Hedgehogs Live in Lodges? The Effects of Motivational and Cognitive Factors on Informational Trust

Shannon K. Pinegar, Dani Martineck, Sibel Adali, Jennifer Mangels (Baruch College CUNY),

Do motivations change trust towards information in a peer-to-peer social network? How does contradicting information influence trusting? We examined how motivation, cognitive preferences, source attributes, and metacognitive cues bias trust. In two tasks, we used the Baruch Information Trust Task (BITT), where students responded to an array of difficult general knowledge questions that encouraged their reliance on outside sources to achieve rewards. After generating their own response to a question and rating it, participants were shown one alternative (Study One) or three alternatives (Study Two) generated by previous players. They then decided whether to trust this new information over their existing choice. While metacognitive factors and information quality predicted trust in new information for both studies, behavioral

inhibition only predicted informational-based trust when there was one alternative, while motivational drive and personal fear in invalidity predicted informational-based trust when there were three alternatives.

Perceived Partner Support and Goal Pursuit Intentions: The Mediating Role of Goal Commitment

Julia Briskin, Catalina Kopetz, & Richard Slatcher (Wayne State University)

Perceived support from significant others could advance one's goal pursuit (social support) or undermine it (outsourcing self-regulation). In two online studies, we tested the effects of perceived partner support on intent to engage in goal relevant behavior. In study 1 (N = 210), thinking about partner support in relation to a specific goal led to increased goal commitment, which in turn increased intentions to engage in goal relevant behavior. Study 2 (N = 293) replicated the findings of Study 1. In addition, it showed that the effects were moderated by commitment to one's partner; those with higher commitment to their partner showed stronger goal commitment and intentions to engage in goal pursuit. These findings are in line with the research on social support and suggest that goal commitment is the mechanism through which perceived partner support may influence goal pursuit.

Interpersonal Victimization and Sexual Risk-Taking Among Women: The Role of Attachment and Regulatory Focus

Jacqueline Woerner & Catalina Kopetz (Wayne State University)

Three studies explored the relationship between women's experience of interpersonal violence victimization and risky sexual behavior (RSB). Study 1 (N = 370) found that women who experienced (vs. did not experience) interpersonal violence reported higher rates of RSB. Study 2 found that avoidant attachment mediates this relationship (N = 193). This may be the case because interpersonal violence potentially disrupts individuals' expectations of secure relationships and therefore increases the likelihood of RSB as means to interpersonal connection without emotional intimacy. Study 3 (N = 312) replicated and extended these findings by investigating multiple types of violence and by demonstrating that the relationship between violence victimization and RSB is stronger among prevention-oriented individuals, who prioritize safety and avoidance of loss. These effects did not extend to other risk behaviors, supporting the notion that RSB may represent a means to interpersonal connection rather than a general tendency toward risk-taking.

Motivation and Self-Regulatory Abilities of Deaf and Hard of Hearing Elementary School Children

Kendra Di Bacco, Lynda Hutchinson, & Sheila Moodie (Western University)

Due to language acquisition delays and communication challenges, Deaf or Hard-of-Hearing (D/HH) children may be at risk for poor self-regulation (SR); defined as independent and effective approaches to managing emotions, learning, and social interactions using metacognition, motivation, and strategic action). Strong SR skills are necessary for social, developmental, and academic success. To date, nearly all research about children's motivation and SR has involved children with normal hearing, yet 150/ out of 1000 elementary students report a form of hearing loss. The study addressed the following questions: 1) What are the relationships between motivation, SR, hearing loss, and academic achievement? 2) What are the motivation and SR profiles of D/HH students and how do these compare to normal hearing peers? 3) How do features of classroom instruction provide opportunities for D/HH children's development of and engagement in motivation and SR? A mixed methods research design was used. Elementary teachers (n=20) provided

ratings of their students' (n=300) self-regulation and motivation, with results of D/HH and normal hearing participants compared. In-class observations, as well as noise level measures were conducted. This study furthers our knowledge and address gaps in research studying the effect of hearing loss on SR and motivation. Results may be used to educate teachers and administrators about the effect of hearing loss on SR and motivation, and what they can do to further support D/HH students in their classrooms and schools.

The Effects of Task Framing and Personalized Feedback on Motivational Variables

Robert E. Frite, Meghan I. H. Lindeman, & Amanda M. Durik (Northern Illinois University)

Information about a learning task can affect motivation, and specifically, information that highlights how skills can grow through effort can support task engagement (Dweck, 2007). That said, information about growth may be presented as a general task frame (e.g., "with effort, people improve on this task") or as personalized feedback (e.g., "with effort, you can improve on this task"). This experiment tested how two types of growth information, task framing versus personalized feedback, influenced motivational variables (Eccles et al., 1983) prior to completing a novel learning task. The effects of the task frame were larger than the effects of the personalized feedback. Compared with those given no frame, learners given a growth task frame cared more about doing well, $F(3, 87) = 4.479$, $p = .037$, and reported slightly lower cost, $F(3, 87) = 3.556$, $p = .063$. Implications of the results will be discussed.

Interpersonal Goal Conflict and Social Behavior

Jacob S. Gray & Daniel J. Ozer (University of California, Riverside)

The newly developed Interpersonal Goal Conflict Scale (IGCS) assesses the perception that one's goals conflict with the goals of one's romantic partner. Participants (N=255) were recruited using Amazon's MTurk software and completed the IGCS and measures of personality traits, relationship satisfaction, life satisfaction, and personal goals. Scores on the IGCS correlated with a detached interpersonal style on the Interpersonal Circumplex. Higher perceived interpersonal goal conflict was associated with reduced relationship satisfaction and reduced life satisfaction. Hierarchical regression demonstrated that the IGCS predicted relationship satisfaction independently of personality traits. Personal goals related to independence, interpersonal interactions, and resources showed the strongest and most consistent relationships with scores on the IGCS. The Interpersonal Goal Conflict Scale shows utility in predicting important relationship and life satisfaction outcomes.

Does Michelangelo Worry About Age? Generational Differences in the Michelangelo Phenomenon

Janina Bühler, Rebekka Weidmann, & Alexander Grob (University of Basel, Switzerland)

As personal growing is an elementary human need, individuals constantly seek to develop across the lifespan. Embedded in a social context, close others play a key role in growth striving. Within romantic relationships, the Michelangelo phenomenon describes how people move closer to vs. further away from their ideal selves. However, little is known about differences between generations, as previous research predominantly studied student samples. The Co-Development in Personality study surveyed a sample of 500 individuals (M = 52.4 years) from three generations. Results from multivariate analyses of variance found partner affirmation crucial for all generations' relationship satisfaction, but movement toward the ideal self only relevant for the youngest generation. Our results therewith underline the relevance of motivated

partner support in the context of romantic relationships and reveal young adulthood as a life stage where the need for personal growth is more decisive for relational well-being than in subsequent stages.

Too Tired For a Reward: Intense Depletion Inhibits Reward Sensitivity

Mauro Giacomantonio (University of Rome), Jennifer Jordan & Bob M. Fennis (University of Groningen)

Existing research shows that ego depletion—impaired self-regulation following repeatedly exerting self-control— promotes both motivation to conserve energy, thus reducing engagement and persistence, and motivation to seek rewards. However these two motivations can lead to opposite behaviors thus being conflicting to each other. We advance that heightened need for conservation originating from intense depletion actively inhibits reward seeking, especially if the pursue of the reward entails energetic expenditure and provide little or no energetic restoration. To test this hypothesis we manipulated ego depletion and then had participants engage an additional math task that was either easy or difficult. Subsequently we measured pupil dilation while watching neutral or rewarding images. As expected, only when depletion was followed by a difficult task, we observed reduced pupil dilation for images of potential rewards. We conclude that conditions increasing need to conserve energies can also divert attention from rewarding stimuli.

Enjoyment or Success? Comparing the Content Validity of Four English and Four French Motivation-Related Vignettes

Felix A. Proulx & Kaspar Schattke (Université du Québec à Montréal)

Achievement motivation and intrinsic motivation has often conceptually been confused (Locke & Latham, 1990). Previous factor analysis showed that achievement, intrinsic and extrinsic motivations were distinct factors (Gagné et al., 2012). However, experimental evidence is still missing. Therefore, the aim of this pilot study was (1) to create vignettes in English and French that allow us to separate achievement from intrinsic motivation and (2) to comparatively demonstrate both versions' validity. Thus, we created four vignettes on the topic of hiking in both languages, which described the same situation but differed in the reason why people pursued the hiking activity. N=26 anglophone and N=12 francophone experts rated the vignettes regarding their account of achievement, intrinsic, identified and extrinsic motivation. The vignettes differed only in achievement and intrinsic content compared to a neutral vignette. The results demonstrated similar validity for both versions. The theoretical and practical implications will be discussed.

The Influence of Distinct SDT Regulations as Mediators of the Effects of Cause Empathy on Support for Various Charitable Events

Kaspar Schattke (Université du Québec à Montréal), Michèle Paulin, Aela Salman, & Ronald Ferguson (Concordia University)

Achievement motivation and intrinsic motivation has often conceptually been confused (Locke & Latham, 1990). Previous factor analysis showed that achievement, intrinsic and extrinsic motivations were distinct factors (Gagné et al., 2012). However, experimental evidence is still missing. Therefore, the aim of this pilot study was (1) to create vignettes in English and French that allow us to separate achievement from intrinsic motivation and (2) to comparatively demonstrate both versions' validity. Thus, we created four vignettes on the topic of hiking in both languages, which described the same situation but differed in the reason why people pursued the hiking activity. N=26 anglophone and N=12 francophone experts rated the vignettes

regarding their account of achievement, intrinsic, identified and extrinsic motivation. The vignettes differed only in achievement and intrinsic content compared to a neutral vignette. The results demonstrated similar validity for both versions. The theoretical and practical implications will be discussed.

The Relationship Between Students' Perceptions of Class Structure and Emotional Engagement in Statistics Courses: The Mediating Role of Basic Psychological Needs
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Given the undeniable importance of statistics courses in the curriculum of education and psychology, the current study examined the relationship between students' perceptions of classroom structure and emotional engagement in statistics courses with regard to the mediating role of basic psychological needs. Participants were undergraduate students in psychology and education (N=315) who registered for descriptive or inferential statistics courses in the state universities of Tehran. They responded to a questionnaire measuring sub-dimensions of students' perception of classroom structure (Blackburn, 1998), basic psychological needs (Evelien et al., 2008), and task value (pintrich & et al., 1991). Path analysis indicated that students' perceptions of classroom structure had direct effect on their emotional engagement. Additionally, basic psychological needs played the role of mediator between predictor variables and the criterion variable. Finally, the tested model of emotional engagement predicted 52% of variance in task value. Potential implications and suggestions for further research are discussed.

Approach-Based Health Goals Moderate the Relation Between Body Dissatisfaction and Self-Esteem
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Concerns about physical appearance are often strong determinants of self-esteem (Harter, 1999), especially for adolescents (Clay, Vignoles, Dittmar, 2005). The current research used a longitudinal design to test the hypothesis that health goals buffer perceptions of self-esteem from body dissatisfaction. The 2x2 measure of health goals (O'Loughlin & Fryer, 2011; based on Elliot & McGregor, 2001) assesses competence in the health domain with four goals – personal-approach (be as healthy as possible), personal-avoidance (avoid being unhealthy), comparative-approach (be healthier than others), and comparative-avoidance (avoid being less healthy than others). Body dissatisfaction was related to decreases in self-esteem, but this relation was significantly moderated by health goals; approach-based goals were associated with a non-significant relation between body dissatisfaction and self-esteem, while avoidance-based goals did not offer such protection. In general, a focus on approach-based forms of competence lessens the likelihood that negativity about physical appearance extends to the global sense of self.