

53. HERBSTTREFFEN DER EXPERIMENTELLEN KOGNITIONSPSYCHOLOGIE

08.-10.10.2021 • JULIUS-MAXIMILIANS-UNIVERSITÄT WÜRZBURG

Felicitas Muth, Lisa-Marie Krause, Roland Pfister & Katharina Schwarz



VIELEN DANK AN:

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Programm

FREITAG, 08.10.2021

12:30 Snacks – Foyer

13:30 Willkommen! – Hörsaal

13:45 Talk Session I – Hörsaal

13:45 Anna Förster (Würzburg) | Weit gefehlt:
Anhaltende Aktivierung fehlerhafter Reaktionen trotz
zielgerichteter Integration von Handlungsmerkmalen

14:10 Kerstin Fröber (Regensburg) | Verhaltens-
kontingente Belohnung verstärkt die Nutzung kongruenter,
aufgabenirrelevanter Informationen

14:35 Eric Griebach (Jena) | Dynamische
Handlungskosten beim Gehen beeinflussen
belohnungsbasierte Entscheidungen

15:00 Kaffee- & Tee-Pause – Foyer

15:30 Poster Session I – Foyer

(1) Peter Löschner (Eichstätt-Ingolstadt) | Credit
assignment errors as a confusion of error monitoring
processes and what promotes them

(3) Viola Mocke (Würzburg) | Bindings will be Bindings:
Response-Effect Bindings in Action Plans Are Independent of
Effect Valence

(5) Annika Klaffehn (Würzburg) | Temporal binding and
multisensory integration: A curious case of sensory coupling

(7) Silvia Selimi (Trier) | Binding between respon-ses is
not modulated by grouping of response effects

(9) Luisa Bogenschütz (Hildesheim) | Parameters of
Decision Making. A Comparison of Signal-Detection Theory
and Decision Diffusion Model

(11) Pamela Baess (Hildesheim) | What makes a stimulus
set? Exploring the multiple Simon effects in a perceptual set
of stimuli

(13) Philip Schmalbrock (Trier) | Predictability beats
Retrieval - Predictable Distractors do not Retrieve S-R
Bindings

(15) Julia Englert (Münster) | The past self in attention and
memory: Findings from perceptual matching and reference
tasks

(17) Birte Möller (Trier) | Some findings about the structure
of event representations beyond individual responses

17:00 Frei

18:00 Nachtwächterführung

SAMSTAG, 09.10.2021

10:00 Talk Session II – Hörsaal

- 10:00 Jan Philipp Röer (Witten/Herdecke) | The truth about irrelevant speech: Increased truth ratings for unattended auditory statements
- 10:25 Paula Soballa (Trier) | Inhibition of Return at home– investigating temporal and spatial influences in online studies

10:50 Kaffee- & Tee-Pause – Foyer

11:15 Talk Session III – Hörsaal

- 11:15 Inga Mögling (Greifswald) | Extremely flexible or merely incapable: Does the lack of transfer of cognitive control states within task sets reflect rapid adjustments or structural limitations?
- 11:40 Lisa Weller (Würzburg) | Group membership does not influence anticipation of sociomotor actions

12:05 Lunch Break – Foyer

14:00 Poster Session II – Foyer

- (2) *Julian Gutzeit (Würzburg)* | Time and Gaze - Temporal Binding in Saccades
- (4) *Ana-Maria Rosca (Freiburg)* | The contribution of pre-existing semantic networks to item-specific associations
- (6) *Philipp Raßbach (Würzburg)* | Longer Preview Times Do Not Fully Alleviate Body State Related Biases When Deciding While Moving
- (8) *Jens Kürten (Würzburg)* | Generic and transient influences on oculomotor action prepotency in multiple action control – Inhibition based dual-action benefits under constant action requirements
- (10) *Sarah Koch (Halle-Wittenberg)* | The influence of magnitude expectation on the processing of loudness and pitch
- (12) *Ryan Hackländer (Hildesheim)* | Swimming in Lethe: Putting the voluntary in voluntary forgetting experiments
- (14) *Lars-Michael Schöpper (Trier)* | Then it took an arrow to retrieve: No IOR but S-R binding is observed when sequentially responding to central arrow targets
- (16) *Christoph Geißler (Trier)* | Stress strikes twice: Working memory capacity is reduced under 10 and again over 20 minutes post stress
- (18) *Tarini Singh (Halle-Wittenberg)* | On the influence of temporal expectation on distractor-response bindings

15:30 Kaffee- & Tee-Pause – Foyer**15:45 Talk Session IV – Hörsaal**

15:45 Alexander Kraut (Göttingen) | Unmasking
temporal successions: bridge building between temporal
and consciousness phenomena

16:10 Tomke Trußner (Göttingen) | Meta-kontrast
Maskierung und Bildschirmtechnologie: Zur Rolle subtiler
Unterschiede der Stimuluspräsentation bei zeitsensitiven
Wahrnehmungsphänomenen

16:35 Simon Merz (Trier) | The influence of stimulus
context on representational momentum.

17:00 Frei**19:00 Weinprobe****SONNTAG, 10.10.2021****10:00 Talk Session V – Hörsaal**

10:00 Bence Neszemélyi (Würzburg) | Unjustified
assumption of motor equivalence can bias the sensory
attenuation effect

10:25 Anna Schröger (Jena) | Interaktionen räumlich-
zeitlicher Wahrnehmungssillusionen in Interzeptionsaufgaben

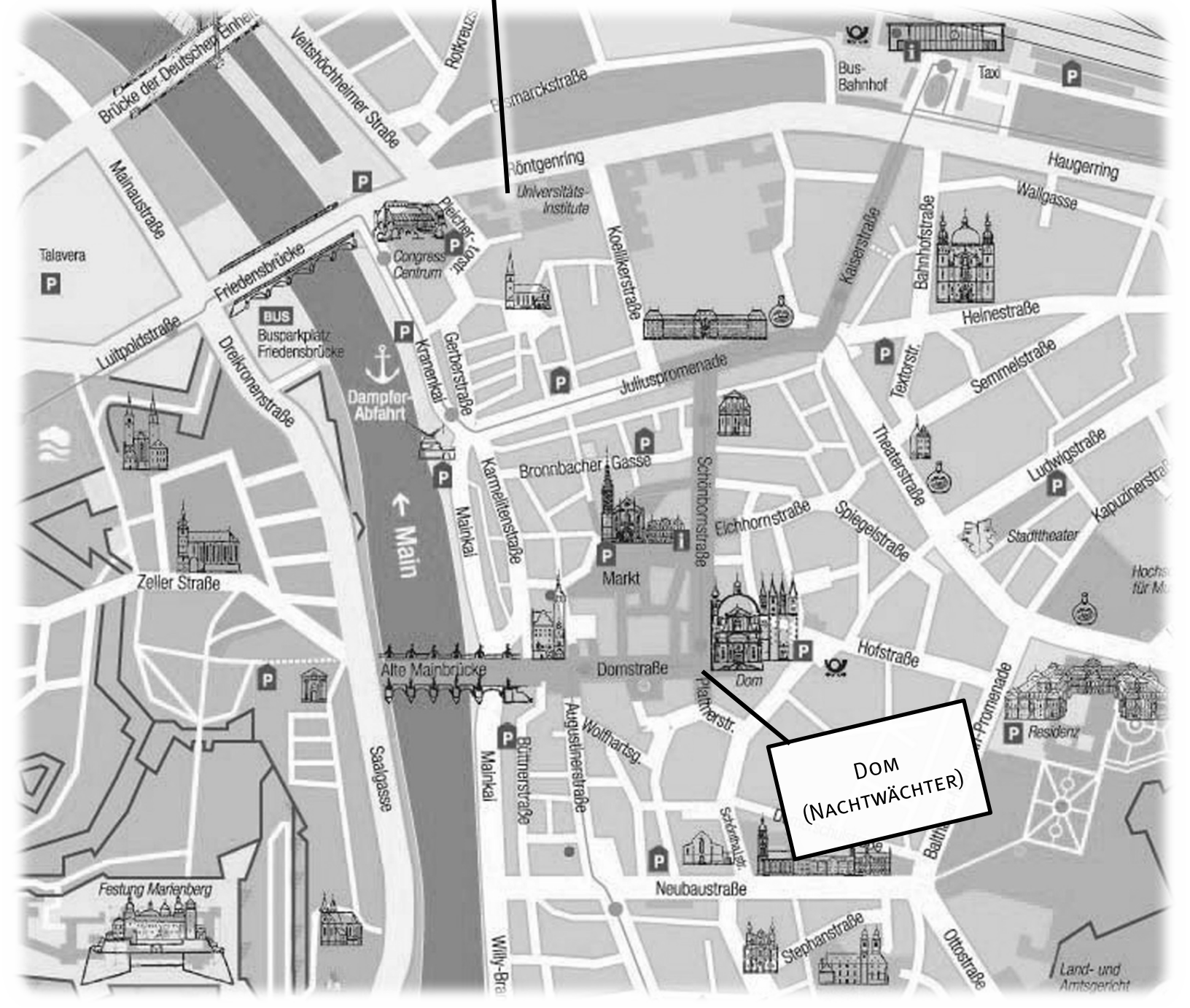
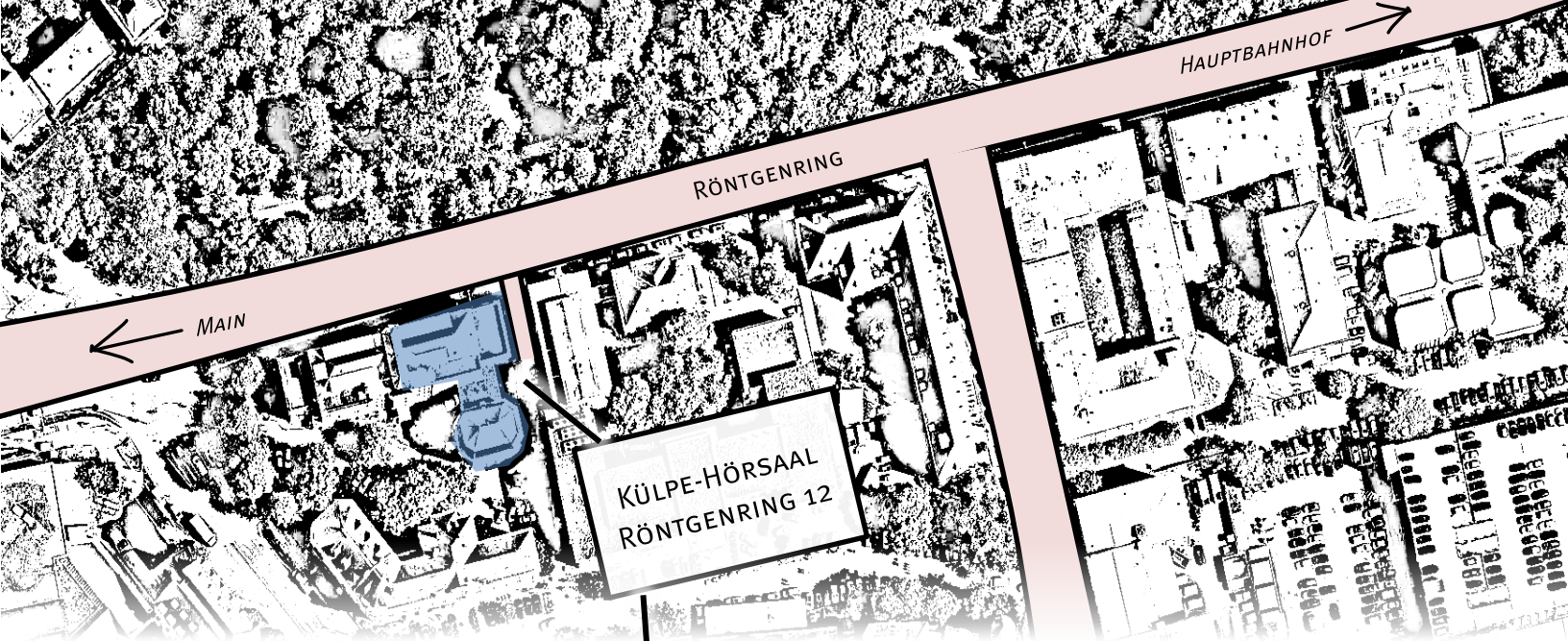
10:50 Kaffee- & Tee-Pause – Foyer**11:15 Talk Session VI – Hörsaal**

11:15 Sarah Schäfer (Trier) | Die Untersuchung der
Adaptivität des Selbst: bisherige Befunde zu einer möglichst
kohärenten Definition des Selbst

11:40 Solveig Tonn (Würzburg) | Agency for prevention
behavior

**12:05-12:22 (ca.) Verabschiedung –
Hörsaal**

Map



Abstracts

UNMASKING TEMPORAL SUCCESSIONS: BRIDGE BUILDING BETWEEN TEMPORAL AND CONSCIOUSNESS PHENOMENA

Alexander Tobias, Andreas Kraut & Thorsten Albrecht

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According to Reeves (1982), the temporal integration or segregation of two briefly and successively presented visual stimuli result from two independent processes. Consequently, both temporal integration and segregation are able to fail at the same time in which cases masking, the failed perception of the first of the two visual stimuli, should result. Reeves' proposal renders masking paradigms perfect opportunities to jointly investigate temporal and consciousness phenomena but runs counter to simple accounts of temporal integration windows. These imply temporal integration and segregation to constitute the antagonistic expressions of the same underlying temporal process, rendering it impossible for both temporal integration and segregation to fail at the same time and hence be associated with masking.

To examine this theoretical incompatibility, we investigated the neurophysiological correlates of temporal integration and segregation as well as masking in a metacontrast masking paradigm. In two EEG and one MEG study, participants reported in each trial whether they perceived the succession of

two visual stimuli as a simultaneous, temporally segregated or masked percept while their neural activity was recorded.

By comparing simultaneous and temporally segregated reports, we found ERP differences after stimulus presentation that closely resemble the contour integration negativity as well as phase differences before stimulus presentation in the alpha and beta frequency band. These phase differences elicited a behavioral periodicity in later temporal report proportions, predicted later temporal reports, and further suggest that temporal integration and segregation are differently realized on the neural level and hence constitute dissociable processes.

Our preliminary results replicate established neural correlates of temporal integration and segregation and hence support theories proposing temporal integration and segregation to be at the core of the metacontrast masking phenomenon. Moreover, they challenge simple accounts of temporal integration windows. In my talk I will additionally cover the relationship between temporal and masking phenomena.

THE CONTRIBUTION OF PRE-EXISTING SEMANTIC NETWORKS TO ITEM-SPECIFIC ASSOCIATIONS

Ana-Maria Rosca

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Stimulus-response (S-R) associations are formed when stimuli and responses co-occur. Upon re-encountering a stimulus, corresponding S-R associations are retrieved. This leads to faster and more accurate responses when the stimulus requires the same rather than a different response (item-specific repetition priming, e.g., Henson et al., 2014). Specifically, S-R associations have two components: Stimulus-classification (S-C associations between stimulus and task-specific semantic classification e.g., apple – red/small) and stimulus-action (S-A) associations (between stimulus and motor output e.g., apple – right e.g., Moutsopoulou et al., 2015 Pfeuffer et al., 2017). Our prior work suggested that S-C and S-A associations can be acquired both by active response execution and, to a limited degree (reduced S-C/S-A effects), by mere instruction. This could imply that instruction-based S-C associations rely on the activation of pre-existing semantic networks, whereas execution-based S-C associations are further boosted by additional processes. Thus, here, we tested how pre-existing semantic networks contribute to item-specific S-C effects (execution-

based). Assessing execution-based associations, we employed two tasks where participants (N = 40) either classified a word stimulus as animate/inanimate (non-arbitrary, pre-existing semantic information) and a task where participants determined whether a word stimulus contained more or less than two (randomly allocated) capital letters (arbitrary task). Between a stimulus' prime and probe instance (lag 2-7 trials), the classification task and with it the semantic classification could either repeat (e.g., arbitrary – arbitrary) or switch (e.g., arbitrary – non-arbitrary) while item-specific action repetitions/switch were manipulated orthogonally. When participants had encountered the non-arbitrary task in the prime, we observed item-specific S-C effects in error rates and prime-probe reaction time differences. However, S-C effects were absent when participants encountered the arbitrary task in the prime. Our results highlight that pre-existing semantic networks play an essential role during the encoding and retrieval of item-specific S-C associations.

WEIT GEFEHLT: ANHALTENDE AKTIVIERUNG FEHLERHAFTER REAKTIONEN TROTZ ZIELGERICHTETER INTEGRATION VON HANDLUNGSMERKMALEN

Anna Foerster, Birte Moeller, Christian Frings & Roland Pfister

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Handlungsfehler werden nicht nur prompt detektiert, sondern auch durch die integrierte Repräsentation von Reizen und intendierten, korrekten Handlungen korrigiert. Die erneute Konfrontation mit diesen Reizen, führt nämlich zum Abruf der gebundenen korrekten Handlungen und begünstigt so deren erfolgreiche Durchführung. Die hier vorgestellte Studie untersucht das Schicksal der ausgeführten, fehlerhaften Handlung und den Einfluss expliziten Fehlerfeedbacks in der zielbasierten Integration und

dem Abruf intendierter Handlungsmerkmale. Die Ergebnisse zeigen robuste Integrations- und Abrufeffekte mit und ohne Feedback sowie eine andauernde Aktivierung der ungebundenen Fehlerantwort. Insofern scheint die Merkmalsintegration zukünftigen Handlungserfolg vor allem durch interne Feedbackprozesse zu begünstigen, wobei Fehler dennoch deutliche Spuren in Handeln hinterlassen.

INTERAKTIONEN RÄUMLICH-ZEITLICHER WAHRNEHMUNGSILLUSIONEN IN INTERZEPTIONSAUFGABEN

Anna Schroeger, Markus Raab & Rouwen Cañal-Bruland

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Beim Fangen eines Balls müssen Menschen nicht nur räumlich, sondern auch zeitlich genau präzisieren und reagieren. Die Einschätzung von räumlichen und zeitlichen Merkmalen sind jedoch nicht immer objektiv und können sich gegenseitig beeinflussen: Benussi (1913) zeigte, dass die Distanz zwischen nacheinander aufleuchtenden Lichtsignalen als größer eingeschätzt wird, wenn das zeitliche Intervall zwischen den Stimuli größer war (Tau-Effekt). Umgekehrt kann die zeitliche Einschätzung eines Intervalls von der räumlichen Distanz der Stimuli abhängen (Kappa-Effekt Abe, 1935 Cohen et al., 1953). Beides wurde für visuelle, auditive und taktile Stimuli gezeigt. Basierend auf der Annahme, dass der Mensch in verschiedenen Sinnesmodalitäten unterschiedlich sensitiv für räumliche und zeitliche Größen ist (vgl. Recanzone, 2009), wurde in dieser Studie in einer Interzeptionsaufgabe untersucht, ob sich auch die Größe der Effekte zwischen Modalitäten unterscheidet. Visuell ist der Mensch besonders sensitiv für räumliche Informationen, weshalb ein großer Effekt von Raum auf Zeit (Kappa-Effekt) erwartet wird. Das auditive System hat eine hohe Sensitivität für zeitliche Informationen und sollte

daher den Tau-Effekt begünstigen. In einer visuellen Bedingung wurde ein weißer Kreis auf einem Touchscreen, in einer auditiven ein Sinus-Ton (800 Hz) über zwei Lautsprecher präsentiert. Der Stimulus wurde nacheinander an vier Positionen von links nach rechts gezeigt, wobei die räumlichen und zeitlichen Intervalle zwischen den Präsentationen konstant waren. Die Probanden sollten den Touchscreen zur richtigen Zeit am richtigen Ort der vermuteten fünften Präsentation berühren. Ob Reaktionszeit und -ort von den räumlichen bzw. zeitlichen Intervallen beeinflusst werden, wurde in Linear Mixed Models getestet. Die Ergebnisse unterstützen die Hypothese zu unterschiedlichen Sensitivitäten der Sinnesmodalitäten: Werden Stimuli auditiv präsentiert, schätzen Probanden weitere räumliche Intervalle, wenn die zeitlichen Intervalle zwischen den Präsentationen länger waren (Tau-Effekt). Visuell gab es keinerlei Einflüsse. Auch die Augenbewegungen der Probanden liefern Hinweise auf Wechselbeziehungen zwischen Raum und Zeit. Die (Null-)Befunde werden vor dem Hintergrund der Hypothesen und früherer Studien diskutiert.

TEMPORAL BINDING AND MULTISENSORY INTEGRATION: A CURIOUS CASE OF SENSORY COUPLING

Annika Klaffehn

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Actions and their effects are perceived closer to each other in time, than when the same events are judged in isolation. This seminal finding has been the center of much debate, recently sparking a discussion about optimal cue integration as underlying model for the phenomenon. How much is optimal about temporal binding stands to question, however. For one, classic temporal binding does not stretch across the entire real delay of actions and effects but covers only a percentage of it. Even more strikingly, the main advantage of optimal cue integration, namely more

precise estimations in a multisensory setting, do not seem to be reflected in temporal binding. In two experiments I manipulated the action-effect delay and measured the subjective temporal shifts of actions and effects towards each other individually with the clock method. This revealed, whether classic action-effect delays are merely too long, to introduce complete fusion of the two events as well as which aspects of temporal binding can, and which cannot be explained by multisensory cue integration accounts.

UNJUSTIFIED ASSUMPTION OF MOTOR EQUIVALENCE CAN BIAS THE SENSORY ATTENUATION EFFECT

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Studies relying on event-related potentials (ERPs) to investigate the processing of self-induced stimuli often estimate sensory components of the ERP signal elicited by action-sound conjunctions by subtracting an ERP waveform recorded in a separate condition, in which participants perform actions without external effects. This method is based on the motor equivalence assumption—suggesting that ballistic actions are not affected by changing the set of action effects associated with the movement—which has been challenged by recent studies. We examined whether relying on the unjustified assumption of motor equivalence may lead to biased estimates of action-related sensory ERP attenuation.

Participants were administered an auditory attenuation paradigm with three isolated conditions: generating sounds by pinching a force sensor (motor-auditory), listening to sounds (auditory), and performing actions without auditory effects (motor). In one half of the experiment, participants were instructed to alternate between stronger and softer

actions. In the other half, they could execute the actions without restrictions. Increased variability of action execution in the alternating force condition made it possible to match actions from the motor and motor-auditory conditions with regard to various action parameters, resulting in the selection of subsets for which the motor equivalence assumption was true. Action-related N1 and P2 attenuation estimated in these subsets was compared to the same effects obtained in the free task where the motor equivalence assumption was violated.

The violation of the motor equivalence assumption resulted in the positive deflection of auditory ERPs elicited by self-induced sounds and, thus, in the overestimation of action-related N1 attenuation and underestimation of the P2 attenuation effect. These results indicate that conventional methods for separating sensory and motor components can only be applied when the influence of sensory action effects on action execution is taken into consideration.

SOME FINDINGS ABOUT THE STRUCTURE OF EVENT REPRESENTATIONS BEYOND INDIVIDUAL RESPONSES

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Accounts of human action control assume integration of stimulus and response features at response execution and, upon repetition of some of those features, retrieval of other previously integrated features. Even though both processes contribute sequentially to observed binding effects in studies using a sequential prime-probe design, integration and retrieval processes theoretically affect human action simultaneously. That is, every action that we execute leads to bindings between features of stimuli and responses, while at the same time these features also trigger retrieval of other previously integrated features. Nevertheless, the paradigms used to

measure binding effects in action control can only testify for integration of stimulus- and response features at the first and retrieval of the past event via feature repetition at the second response. Here we combined two paradigms used in the action control literature to show that integration and retrieval does indeed function simultaneously. We found both significant stimulus-response and response-response binding effects, indicating that integration of responses must have occurred at the same time as response retrieval due to feature repetition and vice versa. Implications for the structure of event representations are discussed.

STRESS STRIKES TWICE: WORKING MEMORY CAPACITY IS REDUCED UNDER 10 AND AGAIN OVER 20 MINUTES POST STRESS

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Laboratory procedures such as the Trier Social Stress Test or the (Socially Evaluated) Cold Pressor Test have been used to investigate working memory performance under stress. Researchers so far have reported a diverse spectrum of stress effects or the lack thereof on multiple working memory tasks. We conducted a review of the effect of inducing acute stress on working memory performance in standardized laboratory procedures. An overview of the existing literature suggests that acute stress affects working memory in a time-dependent manner. More concretely, following acute stress, two distinct time-periods of impaired working memory capacity are apparent. A first decrease in working memory performance seems to occur within the first 10 minutes post stress. A second period of decreased working memory performance occurs at a later time-interval, beginning about 20 minutes post stress. We argue that these two distinct periods of relative

working memory impairment seem to closely coincide with the time course of two hormones of pivotal importance in both human central stress response, noradrenaline and cortisol. Central noradrenaline levels quickly rise with stressor onset, reach their maximum around stressor offset and then swiftly decline to normal within the first 15 minutes post stress. This seems to correspond well with the first observable period of working memory impairment post stress. Central cortisol levels on the other hand increase more slowly and reach their maximum about 20 to 25 minutes post stress, after which they slowly decline to normal. This seems to correspond well to the second observable period of working memory impairment post stress. We outline future research directions, like combined pharmacological and naturalistic stressor interventions, which could confirm and further explore the implications of our latest findings.

DYNAMISCHE HANDLUNGSKOSTEN BEIM GEHEN BEEINFLUSSEN BELOHNUNGSBASIERTE ENTSCHEIDUNGEN

Eric Griessbach

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Entscheidungsverhalten wird häufig als ein sequenzieller Verarbeitungsprozess mit einer Handlung als Endergebnis betrachtet. Dementsprechend werden in Experimenten meistens konstante Kosten und Belohnung vor dem Beginn einer Bewegung angezeigt, u.a. mit dem Ergebnis, dass Entscheidungsoptionen mit höheren motorischen Kosten vermieden werden (z.B. Hartmann, Hager, Tobler, & Kaiser, 2013). Im Gegensatz dazu müssen alltägliche Entscheidungen häufig parallel zur Bewegung getroffen werden, d.h. mit zeitgleich sich verändernden, dynamischen motorischen Kosten. Speziell beim Gehen kann vermutet werden, dass motorischen Kosten für einen Richtungswechsel vom Standbein (Moraes, Allard, & Patla, 2007) und dem Ausmaß der Richtungsänderung abhängen (Wilson et al., 2013). Ob Entscheidungsverhalten diese Bewegungsdynamik parallel berücksichtigt, wurde von uns in mehreren Experimenten untersucht (z.B. Griessbach, Incagli, Herbort, & Canal-Bruland, 2021). Hierfür wurden Teilnehmern zwei Belohnungsalternativen für seitliche Ziele im Gehen präsentiert (Y-Gabelung). Um Punktebelohnungen zu sammeln, musste unter Zeitdruck in eine zentrale Markierung gegangen und danach ein

Richtungswechsel zu einem von zwei Zielen mit angezeigten Punkten ausgeführt werden. Die Ziele hatten u.a. unterschiedliche Winkel zur Gehrichtung und der Fuß in der Markierung wurde durch ein Vorgeben der Startstellung manipuliert. Der Fuß in der Markierung beeinflusst, zu welchem Ziel ein einfacherer lateraler Schritt nach außen gemacht werden kann, oder ein aufwändiger Kreuzschritt nach innen gemacht werden muss.

Die Ergebnisse zeigten, dass die Teilnehmer sowohl vom Winkel der Ziele als auch vom Schritt in die Markierung beeinflusst wurden. Dabei wurde bevorzugt zu derjenigen Seite mit einer geringeren Richtungsänderung und einem lateralen Schritt gegangen, selbst wenn dies mit einer geringeren Belohnung einherging.

Der Einfluss des Standbeines/-fußes und der Richtungsänderung beim Gehen deutet darauf hin, dass motorische Kosten auch unter dynamischen Bedingungen eine Rolle im Entscheidungsverhalten spielen. Ob die parallele Integration der Bewegungsdynamik zur Entscheidungsfindung sequenzielle Modelle in Frage stellt und für eine parallele Informationsverarbeitung spricht, wird im Vortrag kritisch diskutiert.

EXTREMELY FLEXIBLE OR MERELY INCAPABLE: DOES THE LACK OF TRANSFER OF COGNITIVE CONTROL STATES WITHIN TASK SETS REFLECT RAPID ADJUSTMENTS OR STRUCTURAL LIMITATIONS?

Inga Mögling

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To efficiently execute one's actions, it is crucial to adjust performance in a context-sensitive manner. It is currently debated if and under which conditions learned control states (CS) are maintained and applied despite changes in context and task features. Such transfer of CS was reported, for example, in the task switching (TS) paradigm. A context of frequent required task switches promoted a more flexible CS (i.e., reduced switch costs), which generalized to a subsequent voluntary switching phase, so that high forced switch rates triggered more voluntary switches.

On the other hand, such switching-induced flexibility did not transfer when the temporal structure between tasks had been altered. In two own previous studies, blocks with different switch frequencies were followed by dual task (DT) blocks with simultaneous task presentation. No evidence of transfer was found in the DT.

The present study was designed to test two alternative explanations for this lack of transfer. First, changing the temporal structure of task processing prevented the application of the acquired CS and, thus, reflects a determining component in CS maintenance. An alternative possibility is that the CS adapted immensely fast to the new task setting. Any evidence of transfer might have been concealed by the length of DT blocks. To test these two options, we interspersed single DT trials into the TS context of low vs. high switch frequencies. A repeated absence of transfer would suggest that the temporal structure of tasks determines the generalization of CS. Any evidence of transfer, on the contrary, would advocate a fast adaptability towards changing task presentations, indicating a high level of flexibility. To illuminate how CS application is shaped by task structure, results will be discussed with regard to cognitive flexibility.

THE TRUTH ABOUT IRRELEVANT SPEECH: INCREASED TRUTH RATINGS FOR UNATTENDED AUDITORY STATEMENTS

Jan Philipp Röer

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I will present the results of a study that investigated behavioral aftereffects of ignoring task-irrelevant speech. Participants performed a visual-verbal serial recall task either in silence or while task-irrelevant statements were presented over headphones. The truth status of these statements was unknown to most participants in a pretest (e.g., 'The fir tree is the conifer with the longest needles.'). After the serial

recall task, participants rated the truth of previously ignored and new statements. Previously ignored statements received significantly higher subjective truth ratings than new statements, suggesting that ignoring task-irrelevant speech not only impairs ongoing cognitive performance, but can also have profound behavioral aftereffects.

GENERIC AND TRANSIENT INFLUENCES ON OCULOMOTOR ACTION PREPOTENCY IN MULTIPLE ACTION CONTROL – INHIBITION BASED DUAL-ACTION BENEFITS UNDER CONSTANT ACTION REQUIREMENTS

Jens Kürten

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Previous research on multiple action control has, under special conditions, demonstrated benefits of executing two actions at the same time compared to only one in isolation. Such dual-action benefits were due to costly inhibition of highly prepotent actions in single-response trials. The current study addresses the relative influence of generic and transient sources of oculomotor action prepotency on inhibitory control difficulties. Participants were required to respond with either an eye movement (single saccade), a manual button press (single manual), or both (dual action) to a single peripheral visual stimulus. We manipulated generic saccade prepotency by having the fixation cross either disappear prior to stimulus onset (higher generic prepotency) or remain present throughout a trial (lower generic prepotency). To manipulate transient sources of saccade prepotency, response

requirements either varied from trial to trial (maximal transient fluctuations in prepotency) or remained constant throughout a block (minimal transient fluctuations in prepotency). We observed robust dual-action benefits in terms of higher error rates in single response (vs. dual response) trials. This effect was larger under varying (vs. constant) response requirements but was not influenced by different levels of generic saccade prepotency. Furthermore, generic saccade action prepotency was high enough to induce substantial inhibitory difficulties even under constant single manual response requirements. These results indicate that transient fluctuations in action prepotency increase the potential to observe dual-action benefits but are not their sole determinant at least in the oculomotor domain.

THE PAST SELF IN ATTENTION AND MEMORY: FINDINGS FROM PERCEPTUAL MATCHING AND REFERENCE TASKS

Julia Englert, Karola von Lampe, Marlene Behrens, & Nexhmedin Morina

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Processing advantages due to self-involvement are observed across domains. Self-reference during encoding leads to better memory performance than other-reference. Self-related shape-label pairings receive prioritization in perceptual matching tasks. Similar, but smaller advantages occur for intimately familiar others, hinting at a role of psychological distance. However, effects of self-involvement and psychological closeness can differ across paradigms, suggesting they are based on at least partially different mechanisms: While the self-reference effect on memory can be eliminated by strengthening elaboration in the control task, perceptual self-prioritization appears to be more invariant against task manipulations.

The past self is of interest in this context: On the one hand, there is evidence from reference tasks suggesting that the past self is represented similarly to an intimately familiar other. On the other hand, involvement of past selves versus close others produces diverging results: In an online experiment employing the perceptual matching task, we found no evidence for perceptual prioritization of past

selves as compared to a stranger. If anything, past selves were de-prioritized. Whether the self was situated in the immediate or the remote past, or whether or not participants had been encouraged to engage in reminiscence and elaboration on the past, did not make a difference. This finding is in line with prior research and seems at odds with a straightforward account of perceptual prioritization in terms of psychological distance.

Further questions concern the effects of retrospective self-reference on memory which we investigated online, using a depth-of-processing paradigm. In addition to the encoding referent, we varied if elaborative processes were encouraged through instructions, prior engagement, and response format. We expect elaboration to reduce differences between encoding conditions. If elaboration was not encouraged, we expect strongest memory performance after present self-reference, weakest performance after (non-intimate) other-reference, with intermediary performance for past self-reference.

TIME AND GAZE - TEMPORAL BINDING IN SACCADDES

Julian Gutzeit

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The experience to be in control of one's actions and their outcomes is called sense of agency. While numerous studies have focused on sense of agency for manual actions, we investigated whether typical effects from the manual domain generalize to the oculomotor domain.

In a first study, participants performed saccades to a stimulus on the screen. The stimulus changed its color after a certain delay and participants' task was to reproduce the delay between saccade-landing and color-change. In two different conditions (presented in different blocks), participants were made to believe that they could (agency condition) or could not (random color condition) influence the timing of the color-change. By contrast, in a baseline condition, participants did not perform saccades but fixated a stimulus, which changed its color after a certain delay. In a second study, we presented the stimuli which could be influenced by the participants in each trial along with those stimuli that could not be influenced. Participants were either instructed which stimulus to fixate before each trial or could choose their target freely. All trials were interleaved.

Once again, participants reproduced the delay between saccade-landing and color change.

In both studies, we analyzed interval reproductions as a measure of temporal binding and agency ratings. In the first study, we found higher agency ratings and shorter interval reproductions between saccades and color-change when participants believed that they had caused the color-change (agency condition) compared to the condition in which they believed they had no control over the color-change (random color change condition). Surprisingly, interval reproduction was shortest in the baseline condition. In the second study, interval reproduction did not differ between agency and random color condition, while agency ratings were higher in the agency compared to the random color condition.

These findings indicate that oculomotor actions may generate a sense of agency comparable to manual actions, as measured via agency ratings, but temporal binding in this domain is influenced by peculiarities of the oculomotor effector system and learning processes.

VERHALTENSKONTINGENTE BELOHNUNG VERSTÄRKT DIE NUTZUNG KONGRUENTER, AUFGABENIRRELEVANTER INFORMATIONEN

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In Konfliktaufgaben wie der Simon-Aufgabe lassen sich Kontrollanpassungen wie der Kongruenz-Sequenzeffekt oder der Anteil-an-Kongruenzeffekt beobachten. Gängige Theorien führen diese Effekte darauf zurück, dass nach einem inkongruenten Durchgang oder bei einem hohen Anteil an inkongruenten Durchgängen der Fokus auf die aufgabenrelevante Dimension verstärkt und der Einfluss der irrelevanten Dimension gehemmt wird. In einer Serie von vier Experimenten wird gezeigt, dass sich durch verhaltenskontingente Belohnung unabhängig von dieser Anpassung an inkongruente Durchgänge eine verstärkte Anpassung an kongruente Durchgänge findet. Und zwar wird nach einem kongruenten Durchgang oder bei einem hohen Anteil an kongruenten Durchgängen die irrelevante Dimension verstärkt genutzt, was Vorteile in kongruenten, aber selektive Nachteile in

inkongruenten Durchgängen bringt. Zusätzliche Evidenz für diese Wirkung verhaltenskontingenter Belohnung findet sich in einem spezifischen drift-rate-Effekt in einer Diffusionsmodellanalyse. Diese Befunde bestätigen, dass verhaltenskontingente Belohnung die Nutzung informativer Hinweisreize erhöht. Diese Wirkung ist bereits aus Studien mit Zwischengruppenvergleichen bekannt und konnte hier nun auch im Messwiederholungsdesign gezeigt werden. Darüber hinaus verdeutlichen die Ergebnisse, dass Kontrollanpassungen nicht allein durch inkongruente Durchgänge getriggert werden, sondern auch die Information kongruenter Durchgänge strategisch genutzt werden kann. Die Anpassung an inkongruente Durchgänge scheint dabei eher automatisch zu passieren, während sich die Anpassung an kongruente Durchgänge motivational steigern lässt.

THEN IT TOOK AN ARROW TO RETRIEVE: NO IOR BUT S-R BINDING IS OBSERVED WHEN SEQUENTIALLY RESPONDING TO CENTRAL ARROW TARGETS

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When localizing a stimulus appearing to the left or right of a fixation cross, a benefit for location changes – and by that response changes – emerges, referred to as inhibition of return (IOR). Such task performance is typically unmodulated by repeating or changing non-spatial stimulus information like color. However, if the task is to discriminate a feature of a stimulus – its color, shape, and so on – response repetitions and changes interact with repeating or changing task-irrelevant stimulus information. The resulting so-called stimulus-response (S-R) binding effects are marked by a benefit for full repetitions and full changes of stimulus information, and interference for partial repetitions. In attentional orienting research, IOR has been replicated numerous times however, it seems to be rather hard to observe IOR in tasks involving central arrow targets which pointing directions indicate to press the left or right key. Following Taylor and Ivanoff (2005), we

hypothesized that responding based on central arrow direction resembles shape discrimination – which should be subject to S-R binding. In the current study, twenty participants gave left/right responses to peripheral rectangles and central arrow targets (presented block-wise, order counter-balanced), repeating or changing their color. Whereas the peripheral target task only showed IOR unmodulated by color repetitions and changes, the central arrow target task was heavily modulated by color repetitions and changes, suggesting the occurrence of S-R binding. Cumulative reaction time distributions suggested that fast response execution does not explain the absence of this effect in peripheral localization performance. The current experiment shows that S-R binding explanations can be generalized to research areas in which these are typically not discussed.

GROUP MEMBERSHIP DOES NOT INFLUENCE ANTICIPATION OF SOCIOMOTOR ACTIONS

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When interacting with another person, own actions regularly trigger responses from the other person and vice versa. Based on ideomotor approaches to action control, the sociomotor framework suggests that consistent responses of another person to own actions can be incorporated into own action control. In line with this idea, several studies have shown that being imitated by another person facilitates own motor action compared to being counterimitated. In the present study, we investigated whether this finding is influenced by the relationship between the interacting persons. To that end, we manipulated whether a participant was being imitated by a

member of the ingroup or by a member of the outgroup. In two experiments, we found a positive influence of being imitated, i.e., faster reaction times when being imitated rather than counterimitated, irrespective of the other person's group membership. The results suggest that people incorporated their partner's behavior into own action control and that this was not further qualified by group membership as a higher-order social variable. This finding points to a universal account of action control for actions with social action effects and actions with inanimate action effects alike.

PARAMETERS OF DECISION MAKING. A COMPARISON OF SIGNAL-DETECTION THEORY AND DECISION DIFFUSION MODEL

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The Diffusion Decision Model (Ratcliff, 1978 Ratcliff & McKoon, 2008) and Signal-Detection Theory (Green, D.M. & Luce, R.D., 1966) are two popular models utilized to describe perceptual decision-making processes. Both models include parameters which are commonly interpreted as decision sensitivity and criterion. Even though both models are commonly used in overlapping research fields, there has not been an empirical comparison to this day. A perceptual decision-making task was designed to test the models' parameters' correlation. It included manipulations of the response bias, the accuracy as

well as the stimulus difficulty. It was hypothesized that the sensitivity parameters d' (SDT) and v (DDM) and d' and a (DDM) would correlate as well as the criterion parameters c (SDT) and z_r (DDM). 24 students of Georg-August University Göttingen were tested with the paradigm. Contrary to the hypotheses, only the parameters d' and v correlated with each other. The criterion parameters z_r and c are not connected. Still, there was a correlation between c and the mean drift rate. Thus, the common interpretations of the models' parameters need to be questioned.

WHAT MAKES A STIMULUS SET? EXPLORING THE MULTIPLE SIMON EFFECTS IN A PERCEPTUAL SET OF STIMULI

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In recent years, the Simon effect has been intensively studied using multiple stimulus locations along the horizontal or vertical axis of the screen's center. We recently implemented a version of the Simon task in which a single stimulus setup was compared to a multiple stimulus setup containing a perceptual set of identical stick-figure manikin stimuli. With this paradigm, we typically observe two kinds of Simon effects, i.e. one along a global reference frame (based on the screen's side) and local reference frame (based on the side of manikin stimulus). Our own previous work showed that these two Simon

effects were differently impacted by the variation in the stimulus setup (i.e. single stimulus display vs. multiple stimulus display). With a multiple stimulus setup, both Simon effects were equal in size, however the global Simon effect was larger than the local one in the single stimulus setup.

Thus, how are the events in the multiple stimulus setup coded?

Here, we present the results of a series of experiments using different variants of the multiple stimulus setup in order to explore the formation of spatial codes in a perceptual set of manikin stimuli.

INHIBITION OF RETURN AT HOME— INVESTIGATING TEMPORAL AND SPATIAL INFLUENCES IN ONLINE STUDIES

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The presentation of a target at the same location a cue was shown shortly before facilitates responding compared to conditions with previously uncued locations. This phenomenon is called facilitation of return (FOR). With an increasing interval between cue and target this benefit reverses, leading to a delay in reaction times which is known as inhibition of return (IOR). IOR has been studied for nearly 40 years with different designs, tasks, and modalities. Still, neither IOR nor FOR have been investigated systematically with an online design yet. Therefore, three online studies (each $N = 31$) were conducted, in which cue

and target were presented at the same or a different position of four possible locations. IOR was reliably observed with interstimulus intervals ranging from 0 – 900 ms as well as cue durations of 50 and 300 ms. Further, preceding FOR was evidenced with short cue presentation times. Additionally, analyses of target position revealed spatial influences such as advantaging the lower location in trials in which cue and target location was the same. Overall, our results underline the stability of IOR beyond the controlled conditions of laboratories.

CREDIT ASSIGNMENT ERRORS AS A CONFUSION OF ERROR MONITORING PROCESSES AND WHAT PROMOTES THEM

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In daily life, we perform multiple actions simultaneously all the time. In such a scenario, the capability not only to distinguish single subtasks as correct or erroneous, but also to trace back the source of an error within multiple, potentially simultaneous subtasks, is essential. If this process fails, a credit assignment error occurs, meaning an actually correct subtask is labelled erroneous, while an erroneous subtask goes without notice. Research on dual-tasking suggests that error monitoring processes within such scenarios can be divided into a subtask level and a superordinate level that considers the whole dual-task. We hypothesize that error monitoring needs to take into account both these monitoring levels to achieve the goal of correctly attributing the erroneous task within a dual-

task setting. We conducted four experiments with PRP paradigms in which participants reported their presumed errors and the associated subtask after each trial. Permutation Tests provided evidence for credit assignment errors being a type of error that span the whole dual-task and occur more frequent than would be expected from individual subtasks' error reports. A logistic regression could show that their frequency depends on temporal proximity, as measured by the stimulus onset asynchrony, as well as spatial proximity of the response keys. We conclude that credit assignment errors are indeed monitored on the dual-task level but subtask level monitoring processes influence this dual-task level monitoring.

PREDICTABILITY BEATS RETRIEVAL - PREDICTABLE DISTRACTORS DO NOT RETRIEVE S-R BINDINGS

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We constantly produce action and that almost effortlessly. However, internal processes that lead to our actions are all but simple. The action control literature describes several processes that make actions possible without perceiving their production as effortful. One of these processes that enables us to act intentionally is the binding of stimuli and responses. Comprising stimulus and response features in a short-lived memory trace (event file), we are able to quickly represent information input and action output in a single format without additional translation- or processing steps. Building on previous work from the flanker literature, we speculated that predictability possibly plays an important role in

binding. This previous study showed that the flanker effect depends on the predictability of the flanker stimuli identity. If the identity of the flanking stimuli is perfectly predictable (e.g., by repeating the same flanker stimuli over the course of a whole block while the target varies), the flanker effect decreases. Implementing the same logic into the distractor-response binding paradigm, we blocked the occurrence of different distractor identities. Critically, we observed that distractor-response binding is abolished when the distractor identity is predictable. We speculate that this effect emerges due to reduced attention towards the distractor stimuli.

LONGER PREVIEW TIMES DO NOT FULLY ALLEVIATE BODY STATE RELATED BIASES WHEN DECIDING WHILE MOVING

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Many behaviors in sports and everyday life encompass value-based decision making during concurrent movement: A soccer player must decide whether to pass a defender to their right or left while dribbling the ball a driver on the highway may decide whether or not to overtake a car in front while steering the wheel. For such nested behaviors, we have shown in a previous study that the body state not only biases decisions by determining the action costs, but also due to cognitive crosstalk resulting from overlapping cognitive representations between motor and decision processes. According to the embodied choice model, longer preview times of choice options should reduce the effect of the body state on value-based decisions. This is because more time allows an agent to adopt a body state that facilitates implementing the action to acquire a desired choice option. In the present study ($N = 54$), we examined this prediction with the Multilane

Tracking Task, a computerized, abstracted version of concurrent movement nested within value-based decision making. While the bias due to cognitive crosstalk linearly decreased with increasing preview times, the bias due to action costs was not modulated by preview times. These findings indicate that decision processes do not always fully leverage additional preparation time to adapt the body state and implement a less biased decision, possibly because adaptation of the body state also introduces certain action costs. Further, the fact that action costs biased decisions independent from preview time indicates that the body state is automatically integrated into value-based decisions. These findings have implications for the embodied choice framework in the context of nested behaviors where movements and decision processes are bidirectionally dependent.

SWIMMING IN LETHE: PUTTING THE VOLUNTARY IN VOLUNTARY FORGETTING EXPERIMENTS

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Forgetting is generally thought of as something that “happens to” an agent, rather than something that the agent is responsible for. That being said, there is evidence that agents can exert influence on what they remember and what they forget. This evidence has largely been gathered by using the directed forgetting paradigm. Research with this paradigm shows that, when subjects are instructed to remember some items and forget other items, presumably because they are test irrelevant, in a learning trial, then memory performance is indeed greater for the to-be-remembered than the to-be-forgotten items, despite memory for all items being queried. While this it seems correct to interpret this as evidence of intentional forgetting, it is less clear that this should be taken as evidence of “voluntary”

forgetting, given that subjects are always told by a third party which items should be remembered and which should be forgotten. In the current experiment, we investigate whether directed forgetting effects are also present when subjects choose which information they would like to forget. We use a variation of the item-method directed forgetting procedure, whereby subjects are usually informed after the presentation of each word on a list whether they should remember or forget the word. In our “free choice” variation, subjects decide on their own after the presentation of each word whether they would like to remember or forget the word. We test whether effects are similar with our “free choice” method to standard directed forgetting effects.

DIE UNTERSUCHUNG DER ADAPTIVITÄT DES SELBST: BISHERIGE BEFUNDE ZU EINER MÖGLICHST KOHÄRENTEN DEFINITION DES SELBST

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Eine Vielzahl von theoretischen Annahmen, empirischen Untersuchungen und Übersichtsartikeln zu Teilaspekten liefert eine Vorstellung davon, wie komplex – und bis-her ungeklärt – unser „Selbst“ unser Denken beeinflusst. Unumstritten ist dabei, dass das, was wir für selbstrelevant halten, steuert, was wir fokussieren, verbinden, behalten u.v.m. Immer wieder kommt allerdings die Frage auf, welche Definition des „Selbst“ zugrunde gelegt werden kann. Fraglich ist also: Was halten wir für selbstrelevant und wie genau beeinflusst uns das? In mehreren Studien haben wir die Fragen untersucht,

auf welche Art die Assoziation formaler neutraler Reize mit dem Selbst unsere Informationsverarbeitung beeinflusst, wann es zu einer Priorisierung selbstrelevanter Reize gegenüber anderen Reizen kommt und wie sich Effekte von selbst-relevanten Reizen von Effekten anderer relevanter Reize unterscheiden. In diesem Vortrag soll eine Integration der bisherigen Ergebnisse vorgestellt werden, mit dem Ziel, eine möglichst kohärente Definition dafür zu finden, was das Selbst ist, sowie zu verstehen, wie dieses unsere Informationsverarbeitung beeinflusst.

THE INFLUENCE OF MAGNITUDE EXPECTATION ON THE PROCESSING OF LOUDNESS AND PITCH

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Several theories suggest the existence of a generalized magnitude representation system (e.g. A Theory of Magnitude, Walsh, 2003) for various magnitude dimensions like numbers, space, or time. Some studies also indicate possible interaction effects between numbers and loudness (e.g. Hartmann & Mast, 2017), and associations between pitch and object size (e.g. Gallace & Spence, 2006). However, whether auditory dimensions are represented by a generalized magnitude representation system is still an open question. We investigated this assumption in an online experiment by testing the effect of magnitude expectations on the processing of loudness and pitch. In each trial, participants saw a number sequence in ascending, descending, or random order to induce an

expectation about the next item's magnitude. Immediately after the last number, participants heard a tone varying in either loudness or pitch, and they had to decide whether the tone was loud/gentle or high/low. If loudness, pitch, and numbers are represented on the same generalized magnitude representation system, the tone can confirm (e.g. a loud tone after an ascending order) or violate the magnitude expectation. A confirmed expectation should result in shorter reaction times whereas the violation of the magnitude expectation should result in longer reaction times in comparison to the random order condition. The experiment's results will be discussed with regard to a generalized pitch-size association and a generalized magnitude representation system for loudness.

BINDING BETWEEN RESPONSES IS NOT MODULATED BY GROUPING OF RESPONSE EFFECTS

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Current action control theories pose that individual responses are represented as bindings between stimulus, response, and effect features that are stored in short-term memory units called event files (Hommel et al., 2001; Frings et al., 2020). Recently, it was shown that multiple responses may form a composite of such bindings, resulting in event-files comprising more than one response (response-response bindings, Moeller & Frings, 2019). Here, two sequential responses are integrated in one event-file so that repeating one of them later on retrieves the other, influencing current responding. So far, not much is known about how responses are bound together. Borrowing from the ideomotor theory idea that responses are partially represented by their

effects, we investigated the role of response effects in the control of multiple actions. We analyzed bindings between responses and manipulated whether or not the effects of to be bound responses were spatially grouped. If responses were partially represented by their effects, we expected response-response binding to be more pronounced for responses causing grouped effects than for responses causing non-grouped effects. Across three experiments (N total = 86), there was no indication for a modulation of response-response binding by effect grouping. We discuss that response representations might include effect features only after a longer-term response-effect association has been established.

THE INFLUENCE OF STIMULUS CONTEXT ON REPRESENTATIONAL MOMENTUM

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Representational Momentum (RM) is a robust phenomenon in which the final location of an (implied) motion sequence is systematically overestimated in motion direction and has been observed in vision, audition, and lately, also in touch. Interestingly, tactile RM studies typically use a different experimental context than non-tactile studies, that is, non-motion stimuli (which don't imply any consistent motion) are intermixed with motion stimuli, whereas in visual experiments, mostly only motion stimuli are presented. Therefore, in this experimental series, we systematically investigated the influence of local (trial N-1) as well

as global (proportion of motion and control trials within one experimental block) stimulus context on visual RM. The results indicate that global context has a strong influence on the RM phenomenon, whereas local context does not. That is, a motion sequence for which a robust RM phenomenon is observed when presented in isolation, results in decreased or even no overestimation when intermixed with non-motion stimuli. Important implications for theoretical frameworks hoping to explain the localization of moving stimuli are discussed.

AGENCY FOR PREVENTION BEHAVIOR

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When acting, we affect our environment. In doing so, we generally feel in control of our actions and their consequences, a phenomenon termed sense of agency. Agency is well documented for actions that aim at causing perceivable effects in the environment, but not all actions aim at causing an effect – rather, actions may also aim at preventing a certain event from occurring. Such prevention behavior poses a critical challenge to the cognitive system, because successful prevention inherently revolves around the absence of a perceivable

change. Based on a series of experiments, we will show that this state of affairs leads to a profound dissociation of explicit and implicit measurements of agency: Whereas participants reported high levels of agency in explicit judgements, there was no sign of agency in corresponding implicit proxies, i.e., temporal binding. These results attest to an altered action representation for prevention behavior and support recent proposals to model related processes such as avoidance learning in terms of propositional rather than associative terms.

ON THE INFLUENCE OF TEMPORAL EXPECTATION ON DISTRACTOR-RESPONSE BINDINGS

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Action planning theories assume that stimuli and responses are integrated together and stored in temporary episodic traces – i.e., Event Files (Hommel, Müsseler, Aschersleben, & Prinz, 2001), stimulus-response episodes (Waszack, Hommel, & Allport, 2003), or instances (Logan, 1988). Along with relevant stimuli even irrelevant stimuli that appear in close temporal contiguity are integrated into such episodic traces – distractor-response binding (Frings, Rothermund, & Wentura, 2007). Although a lot is known about the boundary conditions for such bindings, the effect of temporal expectation is as yet unknown. Temporal expectation has been known to influence stimulus processing even in highly automatic processes, (e.g., Niemi & Näätänen, 1981). For instance, Fischer, Schubert, and Liepelt (2007) observed that subliminal priming effects were

modulated by manipulations of temporal attention. The aim of the present study is to examine the effects of temporal expectation on distractor-response binding effects. To this end, temporal expectation was manipulated between subjects by implementing a fixed interval in one group and a random interval in the other group. Distractor-Response binding effects were measured in both groups. Preliminary results indicate a descriptive trend towards larger binding effects in the group with a random interval. The findings could be interpreted as evidence that temporal expectation is required in order to be able to be able to shield against irrelevant information, and that in the absence of temporal expectation, irrelevant information may have a larger influence on action planning.

META-KONTRAST MASKIERUNG UND BILDSCHIRMTECHNOLOGIE: ZUR ROLLE SUBTILER UNTERSCHIEDE DER STIMULUSPRÄSENTATION BEI ZEITSENSITIVEN WAHRNEHMUNGSPHÄNOMENEN

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Metakontrast-Maskierung ist ein klassisches Paradigma im Bereich visueller Maskierung, das als Technik in vielen Bereichen der psychologischen und neurokognitiven Wahrnehmungs- und Bewusstseinsforschung eingesetzt wird. Dabei sind die dem Phänomen zugrundeliegenden Mechanismen noch immer unklar und selbst Gegenstand der Forschung. Bei einem Großteil dieser Forschung wurde das Stimulusmaterial auf CRT-Monitoren präsentiert. Durch die begrenzte Lebensdauer und fehlende Verfügbarkeit dieser Geräte werden zukünftige Forschungsprojekte zum Wechsel auf aktuelle LCD-Technologie gezwungen sein. Auch wenn diese Technologie auf den ersten Blick die Voraussetzungen an Geschwindigkeit und Präzision erfüllt, bleiben basale Unterschiede im Bildaufbau bestehen, deren Effekt auf das Paradigma nicht einfach vorhersagbar scheint. In einem direkten Vergleich der beiden Technologien wollten wir mögliche Effekte auf die resultierenden Maskierungsfunktionen untersuchen. Eine Stichprobe von $N = 16$ Personen bearbeitete dazu eine typische Metakontrast-Aufgabe. Die Personen mussten einen Zielreiz (Quadrat oder Raute) diskriminieren, auf den stets eine Maske

(Sternausschnitt) mit einem variablen SOA zwischen 20 und 120 ms folgte. Sitzungsweise wurden die Monitortechnologie und die Polarität der Stimuli (schwarze Stimuli auf weißem Hintergrund und umgekehrt) variiert. Im Vorfeld waren die Präsentationseigenschaften der Monitore soweit wie möglich angeglichen worden. In allen vier Bedingungen konnten Maskierungseffekte mit U-förmigen Verläufen und hoher interindividueller Varianz in der Ausformung der Maskierungsfunktionen beobachtet werden. Abgesehen von einem Haupteffekt der Polarität, mit insgesamt besserer Sichtbarkeit bei weißen Stimuli auf schwarzem Hintergrund, deuten sich Interaktionseffekte zwischen Monitorart, Polarität und SOA an: Besonders bei schwarzen Stimuli auf weißem Hintergrund scheinen die, in ihrer Form sonst ähnlichen, Maskierungsfunktionen bei Präsentation auf dem CRT zu früheren SOA verschoben zu sein. Eine Replikation dieses Effekts ist bereits angelaufen. Ungeachtet deren Ausgangs lässt sich bereits jetzt die grundsätzliche Replizierbarkeit von Kernbefunden der Metakontrast-Forschung mit Hilfe von LCD-Technologie bestätigen.

BINDINGS WILL BE BINDINGS: RESPONSE-EFFECT BINDINGS IN ACTION PLANS ARE INDEPENDENT OF EFFECT VALENCE

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According to the BRAC framework, planning an action involves the temporary binding of features of the action and its perceptual effects. Previous research has shown that the observation of an external event that would predictably follow a planned (but not yet executed) action retrieves that very action facilitating its execution. However, these binding and retrieval processes only emerge if the environmental effects are relevant to the task. An open question is whether the strength of binding and retrieval differs between environmental effects with higher or lower relevance for the agent. In the current experiment, participants first prepared two actions, that is, a left and a right keypress, without knowing which they would eventually have to execute. Each keypress was

announced to produce a certain effect letter. Varied block-wise, both letters were either associated with a positive, a negative, or a neutral financial outcome. Before participants were asked to execute one of these actions, they performed another intermediate task in which responses to the font style of letter stimuli could be congruent or incongruent with the previously instructed response-effect associations. Replicating previous findings, performance was better for congruent responses. Crucially, the data provided strong evidence against an effect of valence on the overall congruency effect. These results suggest that the mere prospect that a planned response will have a valent outcome does not alter binding or retrieval processes.

HexKöppe

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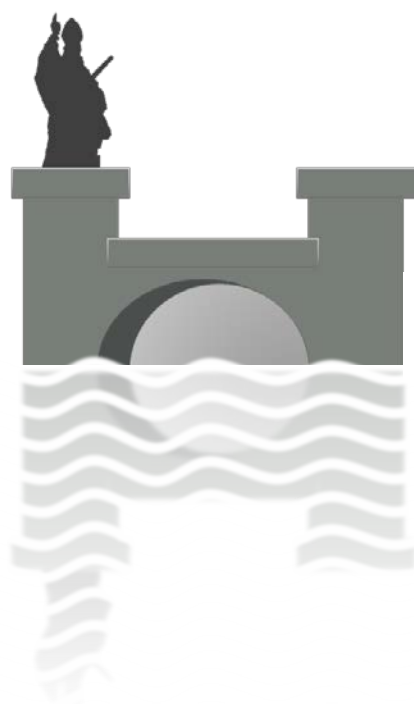
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