

Talks I

Johanna Falk, University of Geneva | How We Engage in Action Matters: Task Choice Immunizes Against Incidental Affective Influences on Effort-Related Cardiovascular Response | Johanna R. Falk¹, Guido H.E. Gendolla¹, Peter M. Gollwitzer^{2,3,4} & Gabriele Oettingen^{2,5}

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We tested whether working on a task by personal choice vs. external assignment moderates the effect of incidental affective stimulation on effort-related cardiovascular response. We expected a high receptivity towards external affective influences only when the task was assigned, but strong action shielding when the task was self-chosen. Given the difficult nature of the task that we administered, we predicted high effort due to high commitment when the task was chosen, independent of the incidental happy or sad music presentation that we used to induce affect. By contrast, for assigned-task participants, we expected higher effort when they were exposed to happy music and low effort due to disengagement when they were exposed to sad music. As expected, responses of cardiac pre-ejection period were significantly weaker when the task was assigned and participants were exposed to sad music as compared to the other three conditions. Systolic blood pressure and heart rate responses revealed corresponding patterns of results. Apparently, the personal choice of a task leads to action shielding against incidental affective influences on effort mobilization, whereas individuals remain receptive to affective influences when a task is assigned.

Marthe Gründahl, University of Würzburg | Ängstlichkeit und kardiovaskuläre Reaktionen in alltäglichen sozialen Interaktionen | Marthe Gründahl, Martin Weiß & Grit Hein

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Soziale Interaktionen beeinflussen unser Wohlbefinden und unsere Leistungsfähigkeit. Es ist jedoch eine Herausforderung, soziale Interaktionen im Labor authentisch zu rekonstruieren. Mithilfe von Ecological Momentary Assessment (EMA) können wir die Auswirkungen sozialer Interaktionen auf Körper und Geist in der authentischsten Umgebung untersuchen: dem alltäglichen Leben.

In unserer fortlaufenden Studie verwenden wir Smartphones und tragbare Elektrokardiogramm (EKG) - Sensoren, um die Auswirkungen verschiedener Interaktionspartner und -settings auf Ängstlichkeit und damit verbundene Veränderungen der Herzrate (HR) und der Herzratenvariabilität (HRV) zu untersuchen. An fünf aufeinander folgenden Tagen beantworten unsere Teilnehmer*innen (Alter: 18-35 Jahre) täglich bis zu sechs zufällig getimte Umfragen.

Wir erwarten, dass höhere Ängstlichkeit (als State und Trait) positiv mit der HR und negativ mit der HRV zusammenhängt. Wir nehmen an, dass weniger ängstliche Personen von ähnlicheren bzw. vertrauteren Interaktionspartnern profitieren (verringerte HR, erhöhte HRV). Das Gegenteil wird für ängstliche Personen erwartet. Diese Effekte sollten zudem im direkten, persönlichen Kontakt stärker sein als bei virtuellen Interaktionen. Davon ausgenommen sind Personen mit hoher sozialer Interaktionsangst, bei denen virtuelle Interaktionen zu stärkeren stressreduzierenden Effekten führen sollten.

Vorläufige Ergebnisse (N = 32, Mai 2021) deuten darauf hin, dass soziale Interaktionsangst während sozialen Interaktionen mit höherer HR einhergeht, die HRV jedoch nicht beeinflusst. Ähnlichkeit und Vertrautheit haben hingegen einen substantiellen stressreduzierenden Effekt auf HR und HRV. Hohe soziale Interaktionsangst hängt mit stärkeren physiologischen Effekten von virtuellen Kontakten zusammen. Entgegen unseren Erwartungen profitieren jedoch hoch ängstliche Personen stärker von großer Ähnlichkeit mit dem Gegenüber.

Barbara K. Kreis, University of Mannheim | (When) is Hindsight Bias a By-Product of Knowledge Updating?

Learning about a numerical fact makes it difficult for people to reconstruct their prior (naïve) knowledge. In hindsight, people tend to overestimate what they knew in foresight. Their recalled answer is usually biased towards the correct answer. This phenomenon is known as hindsight bias (Blank et al., 2007; Roese & Vohs, 2012). Various theoretical accounts exist that aim at explaining the phenomenon and its underlying processes (Blank et al., 2007; Hawkins & Hastie, 1990; Roese & Vohs, 2012).

Traditionally, hindsight bias has been viewed as the result of biased information processing, such as anchoring-and-adjustment processes. However, an alternative account proposes that hindsight bias could be a by-product of adaptive learning and knowledge updating processes (Hawkins & Hastie, 1990; Hoffrage et al., 2000). Until now, those two accounts have not been systematically tested against each other. To examine and quantify knowledge-updating processes in the context of hindsight bias, we propose a new integrative framework that makes use of another line of numerical estimation research – seeding effects (Brown & Siegler, 1993, 2001). Seeding effects reflect processes of knowledge-updating in real-life numerical estimation situations. The goal of our research project is manifold. First, we aim at contributing to a better understanding of knowledge-updating as a potential underlying mechanism of hindsight bias. Furthermore, we will examine the boundary conditions under which the updating hypothesis might be true and contrast it with the anchoring-and-adjustment account. Lastly, we want to further the theoretical understanding of numerical estimation phenomena by integrating separate research lines.

Jonathan Mendl, University of Regensburg | On the interplay of introspective switch costs, objective switch costs, and the voluntary switch rate | Jonathan Mendl & Gesine Dreisbach

In everyday life, being able to switch flexibly between different cognitive tasks represents an often required and fundamental ability. Previous studies have indicated that the rate of voluntarily choosing to switch tasks is related to actual task switching performance. If you are good at switching, you do so more often. The present study investigated the role of introspection about the task-switching performance: To what degree is the choice behavior in voluntary task switching governed by the objective or the subjective switch costs? The experiment consisted of two phases: (a) A (hybrid) voluntary task switching phase in which the voluntary switch rate (VSR) was the main dependent measure and (b) an introspection phase with forced task switching in which participants had to estimate their reaction times after every second response on a visual analog scale to measure the introspective switch costs. The order of phases was counterbalanced across participants. The results show that the objective switch costs from (a) predict the VSR. Furthermore, participants had introspection about their task switching performance as indicated by subjective switch costs. As opposed to the objective switch costs, the subjective switch costs did not further predict the voluntary switch rate. This suggests that participants' choice behavior is economically guided by objective performance whereas the potential role of introspection about this performance remains unclear.