Programa de Posters & Blitz-Talks Completo

SESSÃO 1 - 17:20/18:20 - Sexta-feira, 9 de abril de 2021

Blitz-Talks B1-B10

B1 **Evidence in support of a feeling-of-contrast error-editing mechanism in DRM lists**

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False memories in the Deese/Roediger-McDermott (DRM) paradigm are usually explained in terms of the interplay between error-inflating (e.g., backward associative strength or BAS) and error-editing (e.g., monitoring) mechanisms. Specifically, in the present study, we focused on disqualifying monitoring, a decision process that helps participants to reject false memories through the recollection of collateral information (i.e., recall-to-reject strategies). Participants engage in recall-to-reject strategies using one of two metacognitive processes: 1) applying the logic of mutual exclusivity, or (2) experiencing a feeling of contrast between studied items and unstudied critical lures. The main goal of the present study was to provide evidence in favor of the existence of recall-to-reject strategy based on the experience of feelings of contrast. One hundred forty participants studied six-word DRM lists (e.g., spy, hell, fist, fight, abduction, mortal), simultaneously associated with three critical lures (e.g., WAR, BAD, FEAR). At the recognition test, participants were presented with either just one or the three critical lures of the lists. Participants in the three-critical-lures condition were expected to increase their recall-to-reject strategies, as they would experience a lot more feelings of contrast than the participants that were only presented with one critical lure per list. The results supported our hypothesis, with a lower false recognition in three-critical-lures condition than in one-critical-lure condition. These findings suggest that, in the DRM context, disqualifying monitoring could be guided by the experience of feeling-of-contrast between different types of words.

B2 **How perceptions and attributions change with age… of the agent: Judging the same behavior performed by a child or an adult**

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Social psychologists have extensively studied how people interpret and attribute causes to behaviors. As the actors of these behaviors are usually adults, we aimed to investigate whether there would be any differences when the actors are children. In a previous study from our lab, participants more readily inferred traits from the same behaviour when the actor was an adult rather than a child. The current studies aimed to further explore this finding: Do the interpretations (Study 1) or causal attributions (Study 2) differ when the same behavior is performed by a child or an adult? In Study 1, participants (N = 84) read trait-implying behaviours paired with adults' or children's faces and described those behaviors using a word or two. As expected, participants' descriptions included the trait implied by the behaviour (e.g. boring) more frequently for adult actors than child actors. Moreover, participants used more non-trait words (e.g., very positive), rather than other traits, to describe children's versus adults' behaviors. In Study 2, participants (N = 65) rated several aspects related with the potential causes of those same behaviors. Overall, children's behaviors were attributed to less internal, less stable, and less controllable causes. Moreover, children's behavior was less attributed to the person and the entity, and more attributed to the circumstance when the implied trait was stereotypic of adults (e.g., organised). We'll discuss potential implications of these findings for adult-child interactions, particularly in everyday contact settings, such as at school.

B3 A psychological interpretation of Prospect Theory's weighing function

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Problem. The weighing and the value functions at the core of Prospect Theory describe the effects of the cognitive processing of probabilities and values of alternative courses of action. Whereas the value function has an understandable psychological meaning, the weighing function poses some interpretation problems. *Method.* We explored the mental codification of uncertainty using Siegler and Opfer (2003) number line paradigm. We presented participants with problems involving risky decisions (with defined probabilities), and asked them to locate in a number line the likely outcomes. We examined the differences between these empirically obtained locations and the normative linear-scaled locations defined by the Expected-Value model. *Results.* A control group, working on the locations of simple numbers (involving no uncertainty), showed an almost linear translation between numbers and locations. The experimental groups, working on problems involving uncertainty, show a pattern of distortions of locations consistent with the weighing function: values in the middle of the probability scale were well located in the number line and the errors become progressively larger as the objective probabilities approach the extremities of the scale. *Discussion.* Participants responded as if anchoring on the maximum uncertainty in the middle of the probability scale (50/50) and adjusting insufficiently towards the extremes of absolute certainty, with the implication that the weighing function may be undefined at the extremes. [*Siegler, R. S., & Opfer, J. E. (2003). The Development of Numerical Estimation : Evidence for Multiple Representations of Numerical Quantity. Psychological Science, 14(3), 237–243. https://doi.org/10.1111/1467-9280.02438*]

B4 Control adaptations motivated by perceptual disfluency facilitates conflict resolution

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Sequential control adjustments have been described in the literature for incongruence and perceptual disfluency, suggesting a common affective and cognitive experience. Here we propose that these effects are additive and experienced as a general feeling of disfluent information processing. To test this hypothesis, we constructed an interference task that dynamically mixed trials varying in perceptual fluency and/or congruence. Moreover, we also manipulated the proportion of congruent trials within the task to further examine the impact of discrepancy-based fluency effects. We have found a progressive decrease of the interference promoted by incongruent fluent trials, as the processing disfluency of the previous trial increased in the dimensions of perceptual disfluency and/or incongruence. This linear effect was present in all proportion of congruence conditions, although lower when conflict was more frequent. These results suggest an adaptive integration of different sources of processing fluency and that the monitoring system of control could also be using changes in information processing as a need for control signal.

B5 Intuition for the intuitive: Matching naïve theories of intuition and the use of intuition appeals in persuasion.

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The emergent use of intuition appeals in persuasive contexts, including car advertisements, suggests its effectiveness as a persuasive variable. However, no research has examined if, or for whom, intuition appeals influence attitudes. In 2 studies, using an advertisement for a new car brand as a persuasion context, we tested for matching effects between intuition and analysis appeals and participants' naïve theories of perceived validity of intuition and analysis. In Study 1, under unrestricted elaboration likelihood conditions, more favorable attitudes towards the ad with intuition appeals were observed among participants with higher (vs. lower) levels of perceived validity of intuition, and more favorable attitudes towards the ad with analysis appeals were observed for participants with higher (vs. lower) levels of perceived validity of analysis. Importantly, these matching effects were mediated by the favorability of participants' thoughts, suggesting that this matching positively influenced attitudes via a biased generation of thoughts elicited by the ad. In study 2, we manipulated baseline participant involvement, allowing us to test the mechanisms through which these matching effects influence attitudes. Participants saw an ad with a message manipulating the car features as intuitive or analytic. Results replicated the previous matching effects for the intuitive ad, but only for motivated participants. Additionally, we found further evidence for a biasing influence of matching on attitudes through thought favorability, in conditions of high, but not low motivation. These results provide the first evidence of matching effects for intuition appeals in persuasion.

B6 MoCA uncovers changes in white matter microstructure

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Introduction: The Montreal Cognitive Assessment (MoCA) is a screening tool to detect mild cognitive impaired individuals. Although widely used, little is known about the relation between MoCA and possible alterations in white matter (WM). Here, we investigate whether MoCA identifies changes in WM fibers through diffusion tensor imaging (DTI). We hypothesize that MoCA scores correlate with DTI derived measures in the cingulum of the hippocampus and fornix regions. Methods: 57 healthy participants (age = 61 – 79) underwent psychometric assessment followed by DTI scans. Image denoising, brain segmentation, eddy--current correction and motion correction, was performed to compute Fractional Anisotropy (FA) and Radial Diffusivity (RD) maps using FSL software. Average FA and RD values were computed for the Fornix and the Cingulum region using the JHU-DTI atlas. For statistical analysis, the subjects were split in two groups, the 15-highest MoCA scores, and the 15-lowest MoCA scores. Unpaired two-tailed Student's t-test, followed by Bonferroni correction, was used to evaluate differences in FA and RD between the 15-highest and 15-lowest groups. Results: FA and RD measures detected differences between groups. Particularly, we identified significant greater FA values for the 15-Highest group in the left and right Fornix and greater RD values for the 15-Lowest group at the left and right Cingulum. Conclusions: Our results suggest that individuals who perform well in the MoCA test may have greater integrity in the fornix region (increase in FA), whereas individuals that performed poorly may have greater levels of axon demyelination in the Cingulum (increase in RD).

B7 Is Statistical Learning appropriately measured by 2-AFC tasks? Electrophysiological correlates of SL under implicit and explicit conditions for high vs. low predictable triplets

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One of the most popular tasks for testing Statistical Learning (SL) is the two-alternative-forced choice (2-AFC) task in which participants are asked to identify which of two stimuli, i.e., a triplet presented during the previous familiarization phase vs. a new triplet made of the same stimuli but never presented together during exposure (foils), is more familiar based on the stream presented before. Despite the widespread use of this recognition task to assess SL, it has come under increasing criticism. One of main concerns relates to the fact that it is an offline post-learning task that asks participants to make explicit judgments about regularities that are expected to be acquired implicitly, which can confound the results as it allows that other strategic factors to affect the responses. To unravel this question, we analyze the electrophysiological correlates of SL during a 2-AFC task performed after the exposure to an auditory stream made of the concatenation of high- and low-predictable triplets. We also examines whether the neural correlates were modulated by prior knowledge of the regularities. First, ERPs were collected while the participants performed an auditory SL task under implicit conditions; subsequently, it was carried out under explicit conditions. Behavioral results showed that although participants' performance was above-chance in both tasks, no differences were observed across triplets in both learning conditions. Nevertheless, ERP data showed modulations as a function of the instructions and triplets' predictability. This result shows that ERPs provide valuable information on the underlying mechanisms of SL in a 2-AFC task.

B8 Memory bias towards food stimuli

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Cognitive processes have been related to eating behaviours, and several studies point to the existence of cognitive biases in individuals with eating disorders. The aim of this study was to assess the existence of memory biases in relation to food stimuli. In particular, it was intended to assess whether these biases were related to the caloric content of the food presented. We studied the recognition of more or less caloric images, and collected information regarding binge eating, dieting habits, IMC, and body dissatisfaction. Sixty-two volunteers, from both sexes, with a mean age of 30.5 years, participated in the present study. During the learning phase, participants were exposed to a series of 16 pictures of different food categories: high calorie (sweet or savory), and low calorie (fruit or vegetable), in a free-viewing paradigm. In a second phase, a list of 32 food names was presented to the participants for a recognition test. Sixteen of the names corresponded to the pictures that had been exposed in the learning phase, and other 16 were distractors from the same food categories. Higher levels of body dissatisfaction could predict better recognition of high-calorie food stimuli, while recognition of low-calorie food was associated with higher IMC and more

restrained behaviour. These memory bias towards food stimuli might be a relevant contribution for the understanding of the role of risk factors in the development and maintenance of eating disorders.

B9 Metamemory for faces: Self-other awareness of typicality and race effects

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The Own-race bias (ORB) – the tendency to recognize own-race faces better than other-race faces – has been widely scrutinized and replicated across multiple studies. Recently, some have tried to link metamemory to the ORB, realizing that it also occurs when a person attempts to predict their future memory. Specifically, this thesis strives to further investigate how accurate a person is about their future recognition performance of own and other-race faces and whether typicality – a face being atypical or typical – affects the ORB and subjects' metamemorial predictions. In addition, we also tried to understand if people are aware of these effects when making predictions for others and themselves. Using a standard recognition paradigm and JOL's (judgment of learning) to assess participants' future recognition with Caucasian subjects, our results replicated the ORB and an effect of typicality was found, exposing the fact that people tend to better discriminate atypical faces than typical ones, due to the salience of face features. No differences were found in relative metamnemonic accuracy, nevertheless, people predicted their future memory performance above chance level. Importantly, we found that people are aware of these effects and, this awareness is grounded in a well-adjusted naive theory about the functioning of memory. This awareness was established not only forthemselves but for others. Limitations and proposals for future studies are discussed.

B10 On the track of the visual N1 ERP component: the interplay between early visual-ortographic processing and phonology

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For a skilled reader it takes only approximately ¼ second to identify a word. This remarkable speed depends on a specialized system for letters over symbol strings in the left ventral occipitotemporal cortex and is signaled by the N1 electrophysiological component. While the bottom-up selectivity of N1 to visual-orthographic properties is well-established, it is still under debate if the N1 response is open to top-down influences from language. This study thus aimed to explore whether online processing at the phoneme level can feed back to the visual system during early stages of letter processing, reflected by the N1. For this, we asked 42 typical adult readers to perform an one-back task (visual immediate repetition detection), in which we orthogonally manipulated the stimulus lexical status (words vs. pseudowords) and the spelling-to-sound consistency at the sublexical level ((pseudo)words that can only be sounded out in one way vs. contain ambiguous grapheme-to-phoneme mapping). Results showed a predominant left-lateralized N1 for all letter strings, as a signature of fast, automatic orthographic processes in expert-like readers. In addition, we found amplitude modulations in the visual N1 ERP for different levels of spelling-to-sound consistency, as inconsistent stimuli (vs. consistent) yielded smaller N1 over posterior sites. Especially for words, this effect of consistency was stronger in the dominant language hemisphere. Our results support the interactivity of visual word recognition, providing evidence for top-down influences from phonology in early letter-specific processes tapped by the N1.

Posters P1-P15

P1 Heuristics: Smart and frugal but also biased

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Kahneman and Tversky's (1974) heuristics and biases research program, and Gigerenzer's et al. (1999) Fast and Frugal heuristics, are two well-known approaches to judgment and decision-making under uncertainty. Even though both defend that heuristics correspond to intuitive judgment processes, the first postulates that heuristics lead to systematic and characteristic errors and biases that are costly, whereas the latter argues that heuristics are ecologically valid judgment tools that mostly lead to accurate judgments. The present research addresses the question that naturally emerges: "how can human intuition be simultaneously right and wrong?". We put together in the same study, judgment tasks typically used in each of the two approaches. We tested how participants (N= 120) responded to reasoning problems presenting a conflict between intuitive (heuristic-based) and deliberate answers (CRT, syllogisms and semantic illusions).

Participants also responded to a pairwise comparisons task, typically used in the Fast and Frugal tradition to study the recognition heuristic. We manipulated instructions to be rational versus intuitive, which have been shown to affect deliberate processing but not more autonomous, heuristic-based judgments (Ferreira et al., 2006). Results showed that rational instructions decreased errors to conflict problems but increased reliance on the recognition heuristic. It thus seem that not all heuristics stem from the same intuitive, largely autonomous processes. The recognition heuristic appears to involve a more deliberate type of processing. We are currently replicating and extending these initial results by using other fast and frugal heuristics, other heuristics and biases task, and other manipulations.

P2 Are men up and women down? Gender effects on power spatial metaphors in European Portuguese

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The relationship between language and thought has been largely debated. As an abstract concept, power is metaphorically conveyed through a vertical spatial representation in which powerful is up and powerless down. Recent studies asking English participants to quickly detect which element of a pair (e.g., professor/students) vertically displayed on a screen was the powerful/powerless showed that participants were slower when pairs conveyed a metaphor incongruent position (powerful down), especially in pairs showing greater gender asymmetries (e.g., boss/secretary). Furthermore, male participants showed stronger vertical power biases than female participants, which was taken as a reflection that males perceive power in terms of physical dominance. Here, we extended this line of research by examining if gender effects on power spatial metaphors could be observed in a language with explicit grammatical gender such as European Portuguese and when participants were not explicitly required to judge "Who has more power?". For that purpose, 24 male and 24 female European Portuguese native speakers (M=23,4; SD=3,9) were asked to detect as fast as possible which of the two words vertically displayed on a screen and varying only in gender (e.g., advogado/advogada) corresponded to a male/female noun. Results revealed that although male and female participants were significantly faster at recognising male and female nouns up, they were slower at detecting male nouns when these were presented down. These findings suggest that gender effects on power spatial metaphors are still observed in more implicit and controlled conditions. Nevertheless, male and female participants showed the same vertical power bias.

P3 Are women attracted to shape masculinity in male faces? A meta-analytic review

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Female attractiveness judgements and preference for male faces seem to be influenced by several structural aspects of the face, namely sexual dimorphism, which is one of the facial traits believed to advertise mate quality. Many studies have explored the impact of sexual dimorphism in face attractiveness, reporting, however, inconsistent results. To help obtain a clearer picture of what is presently known about women's preferences, we conducted a systematic review and a meta-analysis to estimate the global effect of sexually dimorphic face shape on male attractiveness. The systematic review revealed that 62% of the studies used two-alternative forced-choice and rating paradigms. Also, relationship context, ovulatory cycle, relationship status and pathogen disgust were the four main variables that were measured/manipulated alongside sexual dimorphism. In the meta-analysis, we found a globally non-significant effect (CI 95% 0.44, 0.50, Chi2 p=0.01, I2 = 97%), suggesting that preferences for masculinized (or feminized) face shapes do not differ significantly from chance. We present possible interpretations for such null effect and suggestions for future research.

P4 Callous-unemotional traits moderate the relationship between anticipated guilt and wrongness judgments to moral transgressions in adolescents

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The presence of Callous-unemotional (CU) traits during adolescence is thought to be the precursor of psychopathic traits in adulthood. Akin to psychopathic traits, CU traits are continuously distributed in the

general population being present in high levels even when there is no clinically significant diagnose. Moral dysfunction in those with increased psychopathic traits in adulthood may stem from a disruption of the affective components of moral processing rather than from an inability to compute moral judgments per se. However, no study to date has directly tested if the dissociation between affective and cognitive dimensions of moral behavior observed in adults with high levels of psychopathy is linked to CU traits during development. Typically developing adolescents (N=47) were screened with the self- report version of the Inventory of Callous-Unemotional traits. Afterwards, they were presented with a computerized novel animated cartoon task depicting everyday harm-based moral transgressions (HbMT) in which they were asked to indicate how they would feel in such situations (anticipated guilt) and how wrong such actions would be (wrongness judgments). In contrast to adult research, CU traits were negatively associated with guilt and moral wrongness in response to the HbMT and the strength of the association between these components was significantly weaker for those adolescents with increased CU traits. This evidence extends our knowledge on the cognitive-affective processing deficits that may underlie moral dysfunction in youth who are at heightened risk for antisocial behavior and psychopathy in adulthood.

P5 Chronotype and face memory: Evidence of an asynchrony effect for morning-types

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The effects of synchrony and asynchrony between the variables chronotype and time of day on cognitive tasks have been extensively studied in recent years. Differences between studies in terms of evidence for synchrony or asynchrony effects have been mainly explained by the complexity of the tasks and the characteristics of the different cognitive domains. As far as we know, no studies have been conducted to explore the relation between these variables and memory for faces. Three hundred and one participants completed the Morningness-Eveningness Questionnaire and the Cambridge Face Memory Test at different times of day (once per participant). For the morning-types, the results showed a significant positive correlation between the time when the task was performed and the correct response rate, suggesting an asynchrony effect. No effects were found for intermediate or evening-types. Although better performance was expected at the participants' optimal time, the results obtained for morning-types can show compensatory effects such as increased effort or motivation. [*Work supported by national funds through FCT – Fundação para a Ciência e a Tecnologia, I.P., with the project PTDC/PSI-GER/31082/2017*]

P6 Contributions of deep neural networks and behavioural models to tools recognition: Exploring a proof-of-principle model

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A rising number of studies in cognitive neuroscience have been using deep neural networks as proof-of-principle models. These models are thought to shed light on how the human brain solves different problems such as recognizing different object categories from a single exemplar. Convolutional neural networks are argued to be suitable architectures to investigate low and mid level visual processing, as they are trained to recognize up to thousands of different categories. Although these convolutional models can give us a hint on how visual features are encoded at different stages of visual processing, these networks are limited in terms of modelling higher level processing such as the emergence of object-inherent semantic features (e.g. a hammer could showcase semantic feature such as elongated, heavy, used with nails, and so on). In order to address this issue Deveroux and colleagues (2018) proposed annexing an attractor network to the convolutional neural network model. This attractor should receive the transformed visual features from the last layer of the convolutional model and map onto correspondent semantic features outputs. However, a caveat is that Deveroux and colleagues trained their convolutional and attractor networks independently. In the present study we argue that convolutional and attractor networks trained as a whole single model would result in significant changes in the weights of the final convolutional layer nodes, due to error back propagation. These changes could provide us with a model which could better explain our neural data. [*Devereux et al. (2018). doi: 10.1038/s41598-018-28865-1*]

P7 Cross-Race effect and individuation instructions: A preregistered replication of Hugenberg et al. (2007)

Patricia Gonçalves, Sara Fonseca, Francisco Cruz, Ana Sofia Santos, e Tomás Palma

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The literature has systematically identified a tendency for people to have less accurate memory for cross-race (CR) than for same-race faces (SR) – the Cross-Race Effect (CRE). The CRE might derive from one's motivation to process SR faces in an individuated manner, and CR faces in a categorical manner. Accordingly, Hugenberg et al. (2007) showed that motivating participants to individuate CR faces eliminates the CRE. The impact of Hugenberg et al.'s (2007) findings (286 citations) has prompted several replication attempts; however, no consistent pattern of results was obtained, with few successful replications. The fact that most replications seem underpowered can be a reason behind the inconsistent findings. In the present research, we aim to conduct a close preregistered replication of Hugenberg et al.'s (2007) study using a much larger sample size (N = 330). This poster details the reasons that motivated this replication attempt and a detailed explanation of the methods and analytic strategy we intend to use. We believe the present replication could be important to attest to the reliability of the original findings and, ultimately, contribute to a better understanding of the role of instructions to individuate on the CRE. Moreover, through this poster, we aim to highlight several of the advantages of conducting preregistered research (e.g., enhanced result credibility).

P8 Delay testing in a long operant chamber

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The delayed matching-to-sample is a useful and multipurpose task in the realm of memory research. It can and does shed light on what animals remember, and what strategies they use to remember. In broad strokes, a set of stimuli (known as samples) is presented and then a choice must be made between two or more options (known as comparisons). The correct comparison depends on the sample presented before it. After being able to correctly discriminate between samples, a delay (a period of time in which no stimulus is present) is introduced between samples and comparisons. A common result that emerges after the introduction of a delay is the "choose-short effect": the finding that an animal (that has learned to discriminate, in this case between samples of different durations) tends to choose the comparison corresponding to the shortest duration – irrespective of the sample presented. This same bias towards the "short" also emerges when no sample is ever presented (no-sample tests). Several hypotheses have been advanced to try and explain how and why this bias happens but none can explain it fully. In an attempt to clarify this question, we took advantage of the delayed symbolic matching-to-sample procedure while using a long operant chamber that allows for traversal inside it. The rationale behind this was that the patterns of movement correlate with the animal's estimations of duration elapsed, thus providing a real-time externalization of internal events.

P9 Do pictures influence memory and metamemory in Chinese vocabulary learning?

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Research revealed that phonological access to words allow dual-coding making it easier to learn phonologically accessible words than inaccessible ones. Although studies in alphabetic languages showed pictures facilitate written vocabulary learning, there is no such research in phonologically obscure scripts. Also, pictures may distort monitoring processes in metamemory, undermining learning outcomes. Will pictures help to learn Chinese words for alphabet users? Will pictures distort metamemory in learning Chinese words? One hundred thirteen Russian and Colombian participants studied 40 word-aid pairs in four conditions: Hanzi (Chinese in Chinese characters) & picture; Pinyin (Chinese in Latin alphabet) & picture; Hanzi & translation; Pinyin & translation. Participants first evaluated the future recallability of word-aid pairs on a confidence scale (0% to 100%); after distractor tasks, they completed a recognition test for words only and then word-aid pairs, indicating the confidence in their answers in both tests. Results show words written in Pinyin and words paired with translation were judged as easier to remember than in Hanzi and paired with picture. Also, Colombians judged it harder to remember words written in Hanzi, while Russians found it harder to remember words with picture as aid. Furthermore, there was an interaction of script and aid in word recognition, accuracy was higher when the word and aid had similar cognitive load compared to when they had different cognitive load. Additionally, participants were more accurate in selecting the right word-aid match when the aid was picture compared to translation, affirming that pictures may help semantically access Chinese words.

P10 Development and validation of the Lusophone Technostress Image Database (LTID) for elicitation of technology-related stress

Pedro J. Rosa e Adriana Encarnação

Manner can result in technostress. Currently there are several self-instruments to assess technostress, but no standardized material for technostress elicitation was yet developed. The present research describes the results of three independent studies through which we sought to develop and validate the Lusophone Technostress Image Database (LTID). In study 1, the ratings of 423 participants (242 female), ranging from 18 to 86 years old, allowed us to identify the most technostress provoking pictures from an initial pool of 60 pictures. In the second study, the most provoking pictures previously selected were assessed in terms of content validity using ratings of relevance by a panel of 5 experts. In Study 3, we aimed to validate LTID final set, consisting of 12 pictures in a sample of 490 individuals (295 female), ranged in age from 18 to 83 years old, with low- and high-level of technostress. The LTID differentiated between the two technostress groups offering evidence of its high validity and supporting its use in technostress research.

P11 Stroop effects and social presence: A meta-analytic review

Alexandre Fernandes, Ana Carolina Neves, e Teresa Garcia-Marques
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One of the main findings of social psychology is that performance and cognition are modulated by the social nature of a given context, particularly when the context is setted by the presence of others (PO). The effects of PO on cognition have been tested using predominantly the Stroop task; research showed that participants perform better in a range of Stroop-like tasks when in PO than when in isolation. Considering Stroop's task as an executive control measure, these results have been explained in 2 ways: (a) selective attention, ignoring a peripheral incongruent-cue through an early-selection process, and (b) reactive-inhibitory control, suppressing the competing response or the automatic attention promoted by the peripheral incongruent-cue. These explanations are framed in theories under the perspective of social facilitation. However, a great diversity of experimental manipulations of social presence has been used and the results of not always converge. For example, interactive social conditions associated with evaluation (audience) and social comparison (competition) are often used interchangeable with non-interactive social conditions, mere-presence and non-competitive co-action. These operationalizations introduce possible confounds with other effects and make it difficult to derive informative conclusions about the simple social presence effects. The present meta-analysis aims to test the boundary conditions of the effect, helping to distinguish the necessary and sufficient causes for the effect to exist, and to explore and circumscribe its mechanisms. The results show that different moderators have an impact on the effect, namely, the type of presence. These findings are discussed in the light of current theories.

P12 Executive control and emotional interference with auditory stimuli

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Aim: The difficulty in inhibiting irrelevant emotional information has been identified as a transdiagnostic issue in mental health and executive control activation has been pointed out as effective in the reduction of the emotional interference. The present study explored this regulatory role of executive control with emotional spoken words, considering the influence of the emotional regulation strategy preferentially used. Method: A sample of 27 university students (14 men and 13 women) performed two tasks: a flanker task (50% incongruent and 50% congruent trials) and a color discrimination task. Between these tasks, participants were exposed to two versions of auditory stimuli: a) 16 spoken words from a database (8 neutral and 8 negative) and b) the same 16 words recorded by the participant him/herself. Results: Preliminary results seem to indicate that for male participants the executive control activation allowed to decrease the emotional interference only when the stimuli were said by the speaker himself. For female participants, the opposite pattern was found, emotional interference was regulated by the executive control only when stimuli were said by another person. A differentiated use of emotional regulation strategies was also found: men resorted more to emotional suppression and women to cognitive reappraisal. Discussion: These preliminary findings seem to suggest that the emotional regulation strategy preferentially used can influence behavioral performance and compromise the success of cognitive strategies implemented to reduce emotional interference.

P13 Examining the gender congruency effect in early Spanish-Galician bilinguals: A forward and backward translation study with bare nouns

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Several studies on bilingualism have found a facilitated processing for translation equivalents that share the same gender in the languages involved, in comparison to those with a different gender, the so-called gender congruency effect (GCE: homogeneric < heterogeneric). Nevertheless, the results across studies are not consistent, probably because of the effects of some variables such as word cognateness and similarity between the gender systems (Sá-Leite et al., 2019). In the present study, and for the first time, forward and backward translation tasks with bare nouns were carried out by Spanish-Galician bilinguals. Half of the words shared their gender in both languages and half did not. The variables related with the phonological structure of nouns, cognateness (by applying the normalized Levenshtein similarity metric to translations), and word frequency were matched across conditions. As Galician and Spanish share highly similar gender systems (both are Romance languages), we expected the GCE to arise, in line with previous results in other languages (Manolescu & Jarema, 2015; Paolieri et al., 2010, 2018). Results showed a GCE that was restricted to feminine targets. As for masculine targets, the observed effect approached significance and was of incongruency rather than of congruency (i.e., a facilitation effect for heterogeneric translations). These results are in line with the marked gender hypothesis and would support an integrated view of bilingual gender representation and processing.

P14 Forgetting alcohol: a double-blind, randomized controlled trial investigating memory inhibition training in binge drinkers

Natália Almeida-Antunes, Margarida Vasconcelos, Rui Rodrigues, Alberto Crego e Eduardo López-Caneda
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Binge Drinking (BD), a pattern of alcohol misuse widely prevalent among youngsters, is associated with altered inhibitory control and augmented reactivity to alcohol-related information. Despite these alterations may constitute a risk factor for alcohol dependence, the extent to which binge drinkers (BDs) may have difficulties to inhibit alcohol-related memories remains unexplored. Memory inhibition (MI), the voluntary suppression of thoughts/memories, may lead to forgetting of unpleasant memories in psychiatric conditions. However, no research to date has investigated MI in BDs and the potential of MI training for reducing alcohol use/craving in this population. This study examines the behavioral and electrophysiological (EEG) signatures of MI among college BDs and evaluates an alcohol-specific MI training protocol using cognitive and transcranial direct current stimulation (tDCS) while scrutinizing its effects on behavioral and EEG outcomes. Forty-five BDs and 45 age-matched controls are assessed by EEG while performing the Think/No-Think Alcohol task, a paradigm that evaluates alcohol-related MI. BDs are then randomly assigned to a training group: combined (active cognitive training [CT] and tDCS); cognitive (active CT and sham tDCS); or control (sham CT and tDCS). Training occurs in three sessions and tDCS is applied over the right dorsolateral prefrontal cortex. MI is re-assessed in BDs through a post-training EEG assessment, while alcohol use/craving is measured at the first EEG assessment, and 10-days and 3-months post-training. If the protocol is efficient, BDs should show an improved capacity to suppress alcohol-related material as well as reduced alcohol use/craving in the short/medium-term, which might have major clinical applications.

P15 The science behind attraction: A multimodal sensory integration

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Most of the studies on interpersonal attraction focus only on the importance of visual cues as predictors of overall attractiveness judgments. However, attractiveness seems to be also influenced by other features, such as a person's voice. For example, research has shown that men have a preference for feminine-looking faces and women for masculine-looking faces. In addition, men prefer feminine voices (higher pitch) in women, and women masculine voices (lower pitch) in men. Therefore, our study aims to investigate the effects of cross-modal integration on attraction, determining if preferences for a particular sign of attractiveness – femininity in women and masculinity in men – perceived through visual and auditory markers are correlated, and their relative importance. In our study, photos served as the visual stimuli, in which masculine and feminine faces were manipulated regarding masculinity/femininity using computer graphics software. For the auditory stimuli, voice pitch (higher and lower) was manipulated using the PSOLA method. This resulted in four stimuli per face-voice feminine/masculine combination. Participants viewed and rated each individual and compounded stimulus for attractiveness. Preliminary analyses (n = 113) showed that preferences for facial and vocal femininity were correlated within men (and masculinity among females), suggesting that changes in the cognitive system in situations related to reproductive fitness constitute a unitary adaptation. In addition, men's and women's attractiveness ratings were higher

with compounded feminine and masculine stimuli, respectively. Furthermore, men seem to give more relative importance to the faces, and women to the voices.

SESSÃO 2 - 18:20/19:20 - Sexta-feira, 9 de abril de 2021

Blitz-Talks B11-B20

B11 Neural mechanisms underlying processing speed in healthy older adults

Sara Ferreira, Guilherme Schu, Stella de Haan, Lénia Amaral, Ana Martins, Mário Simões, Jorge Almeida, e André Peres

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The processing speed corresponds to the rate of information processed in a determined amount of time. During the cognitive aging process, it is expected a decline in processing speed. For this reason, a better comprehension of the neural mechanisms underlying processing speed in older adults may facilitate the understanding of the aging process and the development of therapeutic strategies aiming at retarding or attenuating it. Therefore, in this study, we proposed to evaluate the impact of the functional and anatomical connectivity in the processing speed of 57 healthy, right-handed Portuguese older adults (mean age: 68.3; DP = 4.8). All participants underwent magnetic resonance imaging (MRI) sessions of diffusion tensor imaging (DTI) and resting-state functional MRI (fMRI). Additionally, they were assessed regarding processing speed according to a Processing Speed index composed of three neuropsychological tests: the Digit Symbol-Coding and the Symbol-Search subtests from WAIS-III and the Stroop Color-Word Test. Results point out that the radial diffusivity of several white matter fibers is negatively associated with processing speed, possibly indicating that demyelination is a degeneration process with a strong impact on processing speed performance. Furthermore, it was found that functional connectivity between several areas like left/right entorhinal - right superior parietal that present an important role for memory, attention, and motor planning, is positively associated with processing speed. In conclusion, our results suggest that processing speed performance is related to the optimal functioning of memory systems, with particular emphasis on episodic memory, as well as motor planning, attention, and executive functioning.

B12 When profit and production are getting in the way: Reevaluating care-oriented occupations

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Healthcare, Early Education and Domestic (HEED) occupations are less socially valued than Science, Technology, Engineering and Mathematics (STEM) occupations. Social psychologists have predominantly focused on HEED occupations being typically female and communal, while STEM occupations are typically male and agentic. We propose that the caring nature of HEED work itself may play a role in its devaluation. With female liberation, this work migrated from the private sphere towards being monetized, while not offering means of production on which modern society is based on. Thus, we suggest that not conforming to profit and production norms may be at the core of the devaluation of HEED occupations. Study 1 aimed at exploring whether the care orientation of HEED occupations readily comes to people's minds. In a free association task, participants (N = 64) wrote 3 words related to each of 18 different occupations in HEED, STEM, and filler fields. As expected, HEED occupations elicited more care-related words than the other occupations. In Study 2, we manipulated how the impact of a HEED or STEM occupation was described in a text: economic versus well-being value. After reading the text, participants (ongoing data collection) rated several aspects of the occupation (e.g., ideal income, perceived status, difficulty, professionals' attributes). We predict that highlighting the economic (vs. well-being) value of HEED occupations will lead to more positive ratings, particularly in status and competence perception, because people already presume the well-being value. We don't predict differences in the STEM condition, where the economic value is more obvious.

B13 Beginning readers show stronger Ebbinghaus illusion than preliterate children

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Early stages of visual processing are influenced by learning to read, including those underpinned by the primary occipital cortex. Interestingly, this is also the neural underpinning of the Ebbinghaus illusion (i.e., a central circle surrounded by small circles or inducers is perceived as larger than another surrounded by

large inducers). In the present study, we thus examined whether learning to read would impact this illusion, while controlling for the potential confound of maturation. To -this aim, in a two-alternative size discrimination task, we tested two groups of children matched in age and cognitive development, who differed only on schooling/literacy: preschool preliterate children and first-grade beginning readers. The two groups showed similar size discrimination when the two circles were not surrounded by inducers. However, in the block with inducers, first-graders were less accurate than preliterate, and hence, beginning readers showed a larger Ebbinghaus illusion than non-readers. These results suggest that the intensive perceptual training involved in learning to read enhances the influence of surrounding information during visual processing, including in the Ebbinghaus illusion.

B14 Are angry men perceived as more masculine?

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Sexually dimorphic features have been shown to interact with emotionality in faces, as faces expressing happiness and anger are more accurately and quickly identified as female or male faces respectively. The present study aimed to explore whether facial expression influences the perception of masculinity in men. In this experiment, female participants were asked to evaluate happy, neutral, and angry composite male faces, which were previously masculinized or feminized in terms of shape, indicating to which extent such faces appeared more feminine or more masculine. Results have shown that, regardless of the masculinity transform, angry faces were perceived as more masculine when compared to neutral and happy faces. Moreover, emotional expression amplified the effect of the masculinity transform, since angry masculinized faces were perceived as more masculine than happy masculinized faces, and happy feminized faces were perceived as less masculine than angry feminized faces. These results suggest that implicit face perception of masculinity seems to be influenced by temporally fluctuating traits, namely by emotional expression.

B15 Are emoji really emotional? The influence of emoji facial expressions in the processing of emotional sentences

Márcia Costa, Helena Oliveira e Ana Paula Soares
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Although emojis are widely used in the billions of text messages exchanged every day in platforms such as WhatsApp or Twitter, little is known about how their use may affect the emotional processing of those messages and the extent to which their potential effect is modulated by the emotional content conveyed by the message . To shed light on these issues, 36 students from the University of Minho (34 females; Mage=21.7; SD=4.4) highly familiar with the use of emojis in their daily lives, were asked to perform an affective appraisal task combined with the masked priming paradigm to examine how the brief (34 ms) presentation of emojis congruent with the emotional content of sentences designed to represent the five basic emotions of happiness, sadness, anger, disgust, and fear, and neutral situations, relative to their verbal equivalents or the absence of any stimulus as control, affected the intensity (arousal) and the speed with which those sentences were processed. Results showed that although the use of emojis did not appear to affect the level of arousal elicited by the sentences, they did impact the speed with which these responses were made, though only for the sentences associated with the negative emotions of sadness and disgust. Specifically, in these sentences, the prior presentation of the emoji produced longer latencies when compared to the control stimulus. These results suggest that the use of emojis does not seem to offer advantages in the emotional processing of written messages, at least at early stages of processing.

B16 The relationship between components of mind-wandering consciousness and the empathizing/systemizing modes

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Mind-wandering has been defined as the process of perceptual decoupling and mental improvisation in which the mind flows across spaces, time, and perspectives (i.e., multidimensional construct). Research suggests that the brain's default mode network, activated during mind-wandering, prioritizes the processing of an empathizing mode (orientation to the psychological domain) while systematizing mode (orientation to the physical domain) seems to be mostly associated with attentional and executive networks. The objective of the current study is pursuing this hypothesis further and to test the empirical relationship between MW and the empathizing/systemizing modes. A large sample (N=1.162) of participants completed

a series of questionnaires to measure mind-wandering thoughts and the predominant way of thinking (i.e., empathizing/systemizing modes). The study used a Principal Components Analysis (PCA) followed by a Partial Least Squares Structural Equation Model (PLS-SEM) to explore the relationship between mind-wandering and empathizing/systemizing modes. The subsequent PLS-SEM path analysis using the recovered components indicated mind-wandering is significantly and positively associated with empathizing but not with systemizing. Overall, the results showed the importance of taking a multidimensional approach (i.e., perceptual decoupling, mental improvisation and mental navigation) to mind-wandering and suggested the existence of a relationship between these components and empathizing mode.

B17 Does hallucination proneness modulate cognitive and emotional conflict processing?

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An essential part of social interaction is the fast and efficient integration of information from different sensory modalities. In certain situations, the information conveyed by different sensory channels can be contradictory (e.g., sarcasm), resulting in conflict. This conflict can be categorized as either cognitive or emotional, depending on whether it involves non-emotional or emotional dimensions of the stimuli, respectively. Previous evidence indicates that deficits in multisensory integration predict hallucination severity, suggesting a link between hallucination proneness and multisensory integration deficits which may, in turn, interfere with conflict processing. The main aim of this study was to understand whether and how hallucination proneness in nonclinical participants modulates cognitive and emotional conflict processing. Sixty-two participants viewed audiovisual dynamic stimuli (i.e., videos including face and voice information) and were asked to attend to the voice. Specifically, they had to identify spoken vowels (cognitive conflict task) or their emotional content (emotional conflict task), regardless of whether the visual information was congruent or incongruent. Hallucination proneness was measured with the Launay-Slade Hallucination Scale. Reaction times and error rates were analyzed for both tasks. The preliminary results show that longer reaction times were associated with increased hallucination proneness in the cognitive conflict task only. These results show that individual differences in hallucination proneness affect multisensory integration when emotional information is not task-relevant.

B18 Tell me what you see: Hearing verbal labels improves visual working memory

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Visual working memory stores a small number of visual elements with imperfect precision. Souza and Skóra (2017) demonstrated that these capacity limitations can be alleviated when participants overtly label the memoranda (e.g., colors), allowing more precise information to be stored. Here, we tested whether experimentally labeled colors provides a similar benefit (Experiment 1) and whether this benefit is specific to the labeled item (Experiment 2). Participants memorized a sequence of four colored dots, which were reproduced in random order using a continuous color wheel. In Experiment 1, during item presentation, participants heard: (a) "ba-ba-ba"; (b) distinct names (e.g., Paul, Ben); (c) the item's serial input position (i.e., first, second); or (d) its color label (e.g., red, blue). Only color labels improved color reproduction. In Experiment 2 participants heard: (a) distinct names to all four items; (b) color labels describing each item; (c) first two items: names, last two items: color labels; or (d) first two items: color labels, last two items: names. Color reproduction improved only for items labeled with color terms. These results indicate that the labeling benefit: (a) is not due to a production effect, as it occurs in passive listening conditions; (b) cannot be explained by an increase in distinctiveness, since distinct names did not improve memory; and (c) color labels did not reduce visual working memory load, since the effect was local to the labeled items.

B19 The Emotional Movie DataBase (EMDB): Second stage validation

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Film clips are an effective and reliable tool for evoking emotional responses. In 2012, Carvalho and colleagues validated a total of 52 emotion inducing films in the categories of erotic, horror, social positive, social negative, positive landscapes, and neutral. Since then, more than 300 researchers around the world have requested access to the Emotional Movie Database (EMDB). However, some of the requests highlighted the need for new categories, and as such, this stage two validation comprises the validation of 4 additional emotional film categories: social inclusion, social exclusion, unpleasant landscapes and Sports,

with 10 40-s clips each. A total of 117 healthy volunteers participated in this study (M = 21.1; SD = 4.4; 93 females). Participants rated their levels of valence, arousal and dominance after each film clip with the Self-Assessment Manikin (SAM). Social inclusion films, were rated as positive valence (M = 7.17; SD = 0.49) and low arousing (M = 4.66; SD = 0.56) , while social exclusion film were rated with a negative valence (M = 2.16; SD = 0.17) and high arousal (M = 5.99; SD = 0.28). Unpleasant landscapes were rated as negative valence (M = 2.76; SD = 0.33) and low arousal (M = 4.55, SD = 0.36), and extreme sports were rated as positive (M = 6.25; SD = 0.40) and low arousal (M = 5.29, SD = 0.44). These ratings highlight the distribution of the categories on the affective quadrant space, which will be added to the updated version of the EMDB.

B20 Blocking Effects in Learning to Interpret the Behaviors of Others

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In the literature on associative learning, cue competition effects delve into how competing cues interact with each other, both in the learning phase, and, later, when that learning is brought into light. One such effect is that of blocking: after first learning to associate a cue with a specific outcome, the learning that a new cue is also associated with that same outcome is blocked, if the new cue is presented together with the first. Although much research has been done on it, in both human and non-human learning, to our knowledge only a few studies have explored blocking effects in social psychology. And, within those, little to no attention has been given to how these effects express themselves (if at all) in social cognition. In a set of studies following the classical blocking paradigm, we've presented participants with information regarding some behaviors a target could have—early cues (e.g., Plays with hair), and had them guess the target's internal state (e.g., Optimistic), before teaching them the right answer. At a later stage, additional behaviors were introduced into the trials: some were paired with the original ones—late cues, and some were paired with other new ones—control cues. Finally, when late cue behaviors were paired with early and control cue behaviors, participants were less likely to pick internal states predicted by the late cue behaviors (Fs ≥ 11.31), suggesting the association between these and their respective internal states had been blocked.

Posters P16-P30

P16 Diferentes "rótulos" mas um mesmo estereótipo?

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Os termos linguísticos que utilizamos para definir grupos sociais associam-se a estereótipos, moldando crenças e atitudes relativas às pessoas que pertencem a esses grupos. Dados dos nossos estudos anteriores salientam a importância do "rótulo". Concretamente, vários termos utilizados para definir um grupo social, por exemplo "negro", "preto" e "de cor", são associados a diferentes grau de ofensa, tendo impacto na forma como percecionamos quem os usa e quem é alvo dos mesmos. No seguimento destes dados, procurámos investigar se, ao "rótulo", os indivíduos associam ou não diferentes conteúdos. Isto é, se o conteúdo do estereótipo associado aos diferentes termos varia. Para responder a esta questão, acedemos aos estereótipos das categorias de pessoas definidas com os rótulos de branco, bem como de cor, negro e preto, usando o procedimento de Esses e Zana (1989). Os participantes listaram, indicaram a prevalência (atribuindo uma percentagem) e avaliaram (atribuindo uma valência) características e afetos que associavam a grupos de pessoas definidas com os diferentes termos. Com base nestas respostas, computámos dois índices estereotípicos: um relacionado com características e outro com afetos. Os resultados mostram que o termo "branco" induz respostas mais positivas do que os restantes termos. Não se encontraram diferenças quando os rótulos usados foram "de cor", "preto" e "negro". O padrão é idêntico para ambos os índices de estereotipicidade. Uma análise de conteúdo das respostas poderá esclarecer se existem diferenças nestas perceções, que não são detetadas pelos índices utilizados. Por agora, os dados sugerem que a mudança é apenas de "rótulo".

P17 Free association norms for differently-valenced emotion, concrete and abstract Portuguese words

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Semantic memory is often described as being organized as a network in which concepts are linked to each other according to their relatedness. The level of relatedness among concepts impacts various cognitive processes (e.g., memory and attention) making it a variable of interest in research. However, few studies on this topic are available in European Portuguese (EP), particularly in combination with other variables also known to impact cognition (e.g., concreteness and valence). One way of accessing the structure of this semantic network is by asking participants to name the first word that comes to their mind in response to a target item: a free association task. We report free association norms for 100 Portuguese words (nouns and adjectives; Mresponses/word=68.23; SD=1.71) characterized for concreteness, familiarity and emotional valence (N=70 young EP native speakers; Mage=21.00; SD=2.21; 50% female). Furthermore, this set contains positive, neutral and negative words, that can also be classified as concrete, abstract or emotion words. Emotion words (words containing an affective component) are typically classified as abstract words. However, recent studies have argued for relevant differences between these types of words (e.g., concreteness or context availability). We analyzed our data using indexes typically used in free association norming studies (set size, number of idiosyncratic responses and relative strength of association) and present some comparisons among types of words. These norms should represent a valuable resource for other researchers. Also, they suggest that, indeed, one needs to treat these groups of words differently in our studies.

P18 Gender differences in the emotional appraisal of rape

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Access to violent pornography has been growing rapidly. While past studies suggested that exposure to sexually violent themes influence men and women's attitudes toward the acceptance of rape, there is a gap in the literature regarding individuals' emotional processing of these themes. Findings on the emotional appraisal of sexually violent contents may shed some light on the dynamics behind rape acceptance and blaming of the victim. Accordingly, the aim of the current study was to assess individuals' emotional responses to rape versus nonsexual physical violence against women. Twenty-six men and 18 women were presented with three 40-second video-clips, depicting: 1) rape (a woman being raped by a man), 2) physical violence (a woman being physically attacked by a man), 3) non-violence (a consensual/non-violent male-female interaction). Emotional responses were measured physiologically (SCL) and through self-report (PANAS, subjective sexual arousal). Results showed a gender x video content interaction effect on perceived intensity, with women rating violent video-clips more intensively than men. However, no difference across gender was found for non-violent video-clips.

P19 Are lay beliefs about science explainable through the lenses of intuitive dualism?

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Laypeople tend to think that science can explain some psychological phenomena, but not others. For instance, they think that science can explain thoughts and feelings that are not associated with introspective access (e.g., how to read a map), but they do not believe that science can account for other more introspective thoughts and feelings (e.g., how people experience romantic love). In our research, we show that dualistic beliefs help explain this effect. The more a certain psychological phenomenon is associated with an immaterial (soul or spirit) vs. material (the brain) part of a person, the less it is believed to be explainable by science. A further study showed that these dualistic conceptions are intuitive, inasmuch as they are more evident in fast gut responses than slow reflected ones. These findings suggest that intuitive dualistic conceptions drive lay beliefs about science.

P20 How does elderly see animacy in words? A norming study with a Portuguese sample

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The animacy effect refers to a processing advantage (e.g., better retrieval and automatic attention capture) for animates/living beings over inanimates/non-living things. This advantage in memory has been consistently obtained, namely in (young) adults; studies with older adults are still scarce. As studies tend to compare performance for animates vs. inanimates, animacy norming data from the age group of interest are needed. Thus, this study aimed to collect animacy norms for words from older adults. Animacy ratings for 224 words were collected from elderly Portuguese native speakers (N=97; Mage=67.96; SD=7.23). A minimum of 24 ratings were obtained per word using a 7-point scale (1="totally inanimate"; 7="totally

animate"). As this same set of words was previously normed by Portuguese (young) adults, comparisons between the two samples can be made. The results showed high agreement in the animacy ratings provided by the two samples (ICC=0.99; r=0.98). A significant difference only emerged on the average ratings for the inanimate words. An inspection of these data revealed that some of the words classified as inanimate by younger people (e.g., hospital) obtained higher animacy ratings by older adults. These results suggest that, although the two groups are largely in agreement, intergenerational differences might occur when processing the (animacy) meaning of the words. Our conclusions add to the growing literature showing similarities but also important differences in the way elderly and young adults process words. Furthermore, our animacy norming data constitutes an important tool to other researchers interested in this topic of research.

P21 Language and memory in bilinguals: Source monitoring differences for false information in Russian-English bilinguals

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It is proposed that linguistic characteristics being specific to a particular language can shape an individual's thoughts and behavior, including the way information is encoded and retrieved. False information endorsement is known to be affected by language, however, in bilinguals the effect is understudied. Source monitoring which underlies misinformation effect seem to rely on inhibitory control, which is also heavily utilized by bilinguals. Moreover, it is suggested that thinking in a second language (L2) leads to more analytical reasoning. We question if these mechanisms will allow bilinguals for better rejection of false information when they encounter it in their L2. We implemented a misinformation paradigm, in which participants (56 Russian-English bilinguals, mean L2 proficiency = 20/25) first watched a video of a crime, encountered false information from Russian and English narrative reports, and finally performed a true/false recognition task, followed by surprise source monitoring task (whether information was in Russian narrative, English narrative, or it was not present in the narratives). We found misinformation effect; however, it did not differ between the languages of presentation. However, analysis on source attributions revealed that when making incorrect judgements for the sources of false information (Russian and English narratives), they made more attributions towards the Russian narrative over the "not present" option. The results provided a novel perspective into bilingual memory functioning. First, false information acceptance was not affected by the language of presentation. Second, information processing in L2 can be more demanding, leading to better overall recognition, but source misattributions.

P22 Memory for faces and cars: Association with time-of-day and chronotype

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There is considerable evidence that performance on various cognitive tasks may be influenced by the time of the day and the individual's chronotype. No such evidence exists for face recognition abilities. The present study explored the impact of time of day on face and car recognition tasks, and its relation with chronotype. Forty participants, divided into four time groups (9:00-11:30; 11:30-14:00; 14:00-16:30; 16:30-19:00) performed on the Cambridge Face Memory Test (CFMT) and the Cambridge Car Memory Test (CCMT), and completed the Morningness-Eveningness Questionnaire (MEQ). The sample was mostly evening and intermediate-type. Controlling the effect of chronotype, there was an effect of session time on RTs in phase 1 of the CFMT and CCMT, with longer RTs for the 16:30-19:00 group. Also, there was a significant negative correlation between the score on the MEQ and accuracy in phase 2 of the CFMT, for the 11:30-14:00 group, indicating that more tendency to evening-type is associated with better performance. These results suggest a possible asynchrony effect on task performance, serving as a basis for future studies on this topic. [*Work supported by national funds through FCT – Fundação para a Ciência e a Tecnologia, I.P., with the project PTDC/PSI-GER/31082/2017*]

P23 Moral judgement and decision making in a social context

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Haidt's (2001) Social Intuitionist Approach to Moral Judgment not only claims for the prevalence of intuitive (deontological) over reasoned (utilitarian) judgments but also for the importance of social influence. However, the latter (i.e., social influence in moral judgment) has been seldom investigated. This is unfortunate since we rarely make moral judgments in a social vacuum but rather in interaction with others.

To change this state of affairs we explored the impact of others' moral judgment on one's own judgments. We tested the prediction that participants (N=159) would give more reasoned (utilitarian) moral judgments when first confronted with intuitive (deontological) judgments from others but only when others are perceived as less morally competent (more driven by their emotions) than participants themselves. Results confirmed this prediction. To further explore boundaries and moderators of our initial findings, we are currently manipulating the perceived moral development of the "other" (e.g., a child vs. a Professor of Moral Reasoning) and the number (2 or more) and nature (deontological or utilitarian) of others' responses (that participants are confronted with before providing their own moral judgments).

P24 More is less: Detrimental effects of repetitions in a 2-AFC task aimed to assess Statistical Learning for high- and low-predictable nonsense words under implicit and explicit conditions

Helena Mendes Oliveira, Tiago França, Francisco Gutierrez, Inês Sousa, e Ana Paula Soares
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A current issue in Statistical Learning (SL) literature is whether SL measures assess learning in a valid and reliable way. One of the most popular SL tasks involves presenting participants with a continuous stream of repeating three-syllable nonsense-words with a mean transitional-probability (TP) of 1.0. Learning is then assessed using a 2-AFC task, in which participants are presented with pairs of stimuli, a nonsense-word and a foil (sequences of three-syllables never occurring together during exposure; TP=0), and asked to identify which was more familiar. If learning occurred, participants' discriminations should be greater than chance. Despite the widespread use of this task, it has come under increasing criticism. Several proposals have been introduced, as increasing the number of trials by repeating the same triplets repeatedly throughout the 2-AFC task and using triplets with different levels of predictability. This work aimed to directly analyze the cost this practice might entail by examining how SL performance may change as the number of nonsense words and foils repetitions increases. Moreover, we also analyzed if that cost was modulated by nonsense words predictability (TP=1.0 versus .50) and the conditions in which the SL task was performed (implicit vs. explicit). With a careful design, we showed that increasing the number of 2-AFC trials by repeating the same nonsense words and foils throughout the 2-AFC task have detrimental effects on SL performance, particularly for low predictable triplets under implicit conditions. These findings strongly recommend caution when using this strategy in research to improve SL assessment.

P25 Orientation polarizing visual cues modulate the perceptual displacement of a moving target

Rodrigo Freitas e Nuno Alexandre de Sá Teixeira
William James Center for Research, Departamento de Educação e Psicologia - Universidade de Aveiro

The perceived vanishing location of a moving target has been found to be systematically displaced forward, in the direction of motion (Representational Momentum), and downwards, in the direction of gravity (Representational Gravity). In what refers to the latter, the meaning of "downward in the direction of gravity" is ill-defined, for it is well established that the perceived direction of gravity ("downward") results from the interaction of vestibular signals, sensitive to the gravito-inertial vector, an aprioristic tendency to assume that it aligns with the body's main axis (idiotropic vector) and visual cues. The present work aims to disclose what effects, if any, visual cues have on Representational Gravity. A spatial localization task, referring to the offset position of a target moving along 16 possible trajectories varying in orientation, was performed with a realistic background either aligned with earth's vertical or tilted rightward or leftward by 22.5°. The observed displacement along the target's trajectory (M-displacement) was measured and subjected to a discrete Fourier decomposition with trajectory's orientation as parameter. The found outcomes disclosed a significant effect on the second and forth harmonic components. Albeit the second harmonic, accounting for a higher perceptual displacement for horizontally moving targets, has been previously reported in similar studies, its relevance has been elusive – our results show, unambiguously, that it (along with the fourth harmonic) specifically indexes the visually induced spatial orientation, thus offering the prospect to expand available tools for inquiries concerning human spatial orientation, besides clarifying the multisensorial nature of Representational Gravity.

P26 Studying reconsolidation of episodic memories on virtual settings: A variant of Hupbach's object learning paradigm

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Memory reconsolidation is understood as a process by which, when a consolidated memory is reactivated, it enters a lability state and is susceptible to change. Animal research has shown empirical evidence in

favor of this psychological process. Hupbach and collaborators (2007) developed a 3-day object-learning paradigm (two encoding and one retrieval session separated by 48 h) to study the reconsolidation of episodic memories in humans. In this paradigm, participants who reactivated their memories showed significantly more intrusions than participants who did not reactivate. This result showed that episodic memory is highly susceptible to interfering material presented after its reactivation. A virtual variant of this paradigm seems crucial to explore potential reconsolidation phenomena further, especially in an increasingly digital world. The present study aimed to adapt Hupbach's paradigm to a virtual setting and to test whether the assymetrical pattern of intrusions appears. Across four experiments, 152 participants were randomly assigned to a reactivation or no-reactivation condition. Results replicate only partially Hupbach's findings. Challenges to running online studies are discussed.

P27 Tell me who you work with and I'll tell you who you are: Is perceived competence of care-oriented professionals influenced by how we perceive the group they care for?

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Professionals in HEED (Healthcare, Early Education and Domestic) occupations are perceived as less competent, albeit warmer than those in STEM (Science, Technology, Engineering and Mathematics). HEED professionals are socially devalued when compared to STEM professionals, receiving lower wages for similar levels of education and lower levels of perceived prestige. Past attempts to explain these results focused on how each kind of occupation is associated to feminine/masculine gender roles and communal/agentic values. In addition to those aspects, we propose that the professionals' perceived competence will be influenced by the perceived competence of the social groups they contact with. This should be particularly relevant for HEED professionals given that they provide care to vulnerable populations (i.e., social groups with perceived low competence, such as people with disabilities, children, or older adults). In Study 1, participants (N = 64) wrote down three words they associated with each of 18 HEED, STEM, or filler occupations. As predicted, HEED occupations elicited more associations with social groups than STEM or filler occupations. In Study 2, we manipulated the perceived competence of the social groups to whom HEED professionals provide care. Participants saw two CVs and rated the professionals (e.g., preschool teacher) on several attributes. The professionals supposedly worked with a perceived lower or higher competence group (e.g., children with intellectual disabilities vs. intellectually gifted). We predict that professionals supposedly working with groups with lower perceived competence will be perceived as less competent than their counterparts. Data collection is ongoing, but will be complete before the conference.

P28 The effect of emotional facial expressions on time perception

Flávia Ferreira, Daniela Costa e Joana Arantes
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Emotion plays a fundamental role in the perception of time. For example, research has shown that time flies when events are enjoyable, whereas unenjoyable moments are perceived to drag. In addition, our perception of time seems to be altered when we are exposed to emotional facial expressions. The aim of this systematic review is to identify studies that have investigated the time perception when faces are used as stimuli, in order to better understand the effect of the different emotional facial expression on our timing system. Computer-assisted searches were conducted through February 2021 in the PubMed, Psycinfo, Web of Science, Medline, Current Contents Connect, KCI and Scielo Citation Index databases. Twelve sets of key-words were used, combining "time perception", "subjective time", "time estimation", "perception of time", elapsed time", "timing", "timing task", "time reproduction", "time discrimination", "estimation of time", "implicit timing" and "concurrent timing" with face* and emotion*. Inclusion criteria comprises: i) empirical studies; ii) studies with human and nonhuman animals; iii) studies with specific populations, such as participants with clinical characteristic. Exclusion criteria were as follows: non-English language studies, reviews, editorial material, proceeding papers, notes, letters to the Editors, meeting abstracts, books chapter. Studies are being independently reviewed by two readers, and they will be confirmed by a third reader. A total of 841 studies were initially identified: 353 in PubMed, 265 in Web of Science and 223 in Psycinfo databases. Duplicated studies were eliminated, and a final number of 475 studies were included.

P29 Visual tasks modulate functional connectivity patterns of the auditory cortex in deaf

Zohar Tal e Jorge Almeida
Faculty of Psychology and Educational Sciences - ProactionLab - Universidade de Coimbra

Congenital sensory deprivation is associated with functional and anatomical neuroplasticity, such as the cross-modal recruitment of the deprived cortical areas by the intact senses. For example, the auditory cortex of deaf individuals is activated by and processes different aspects of visual information. On the other hand, resting-state functional connectivity analysis has been shown that the large-scale topographic organization of the auditory cortex is retained in deaf, despite the life-long sensory deprivation and cross-modal plasticity. Here, we explored whether this tonotopic-based organization is modulated by engagement in visual tasks. We compared the background connectivity patterns within the auditory cortex of deaf and hearing individuals, during resting-state and visual tasks. We found that while the tonotopic-organization of the auditory cortex retains under resting-state and visual tasks, the connectivity of A1 with bilateral STS/MTG varies between the groups. Specifically, we show that the engagement in visual tasks strengthens the connectivity in deaf and reduces the connectivity in the hearing group. These findings suggest that cross-modal plasticity in deprived cortical areas influences both task-related activity and background connectivity patterns.

P30 To err is human, to avoid err is even more human: A skewed selection of learning environments

André Gonçalves e Leonel Garcia-Marques
Faculdade de Psicologia - Universidade de Lisboa

Hogarth (2001) defended that learning environments could be created and selected by learners themselves, suggesting that they should seek and generate kind environments by seizing opportunities to receive corrective feedback. The present research aimed to explore the active role learners have in directing their learning and selecting learning environments. We propose that this decision process is, however, affected by a tendency for minimizing risks and by skewed views on the benefits of errors. In this study, participants (N = 166) went through one learning phase, where they saw sets of pictures that followed an implicit rule. Afterwards they went through two testing phases, where they had to discriminate if sets did or didn't follow that hidden rule. During the first test phase, we manipulated participant's ability to select their learning environment by adding an option that allowed participants to skip trials. Still, every time a participant chose this response, they didn't receive any corrective feedback, making it a wicked environment. The second test phase didn't have this option, serving has a final test for what was learned. We hypothesized that the participants with the skip trial option would have lower performances in the final test as a repercussion of their avoidance. Additionally, we manipulated the difficulty of the implicit rule the sets followed. Results show that participants chose not to skip trials when they could. Additionally, participants with the hardest implicit rule had lower performances during the experiment. Future experiments focus on adjusting cost/benefits of errors in controlled settings.

SESSÃO 3 - 19:20/20:20 - Sexta-feira, 9 de abril de 2021

Blitz-Talks B21-B33

B21 Mapping the dimensions of object knowledge

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Our study aimed to demonstrate a relationship between the cognitive organisation and the neural organisation of objects. First, we investigated how objects are organized at the cognitive level. To do this, we performed a behavioral experiment using a forced-choice paradigm where subjects indicate the similarity between objects based on 3 different knowledge types; manipulation, function, and vision. We then applied multidimensional scaling (MDS) to the similarity ratings in order to extract, for each knowledge type, the dimensions underlying the organisation of the objects. These dimensions were then used in a second part of the behavioral experiment where individuals learned to associate objects based on their proximity in the extracted dimensions. Overall, these behavioral data suggest that we hold independent internal representations for different object knowledge types, and that we organize objects along a spectrum. To see how these cognitive object representations are represented in the brain, we carried out an fMRI experiment where we presented objects ordered according to the dimensions obtained in the behavioral experiment. Our phase-lag analysis demonstrates a correspondence between the cognitive organisation and the organisation of responses in the dorsal occipital cortex.

B22 Modulation of the cognitive event-related potential P3 by transcranial Direct Current Stimulation: Systematic review and meta-analysis

Augusto J. Mendes, Kevin Pacheco-Barrios, Alberto Lema, Óscar F. Gonçalves, Felipe Fregni, Jorge Leite, e Sandra Carvalho

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Transcranial direct current stimulation (tDCS) has been used to modify cognition and behavior. However, only a few studies so far have been probing the brain mechanism underlying the effects of tDCS. In this sense, electrophysiological (EEG) data can be invaluable, as it provides an excellent temporal resolution about the brain processes involved in cognition. P3 is one event-related potential widely studied and observed in several cognitive tasks, which is thought to index attention allocation and working memory that support high-order cognitive processes. Therefore, in this meta-analysis, we propose to evaluate the effects of tDCS in P3 amplitude and latency on oddball, n-back, Go/No-Go tasks, and during emotional processing. A total of 37 studies were identified, but only 23 of them were included in the quantitative analysis. The results showed that parietal P3 amplitude increased during oddball and n-back tasks, mostly after the anodal stimulation over the left dorsolateral prefrontal cortex (lDLPFC) and right inferior frontal gyrus (rIFG) respectively. Moreover, a significant decrease in frontal P3 amplitude after cathodal tDCS over lDLPFC was also shown. The data from this meta-analysis clearly suggests that the modulation of frontal cortical regions affects the P3 component. Moreover, the underlying effects of tDCS in several high-order cognitive functions may be at least partly of attention and working memory, as indexed by the P3. Nonetheless, this analysis has some limitations due to the low number of studies and the presence of considerable risk of bias among studies, highlighting several issues that future studies should address.

B23 Mother-infant Structured Social Interaction at 12 months: The effect of the task on the Maternal Touch Patterns

Juliana Serra, Helga Miguel, Adriana Sampaio, Ana Alexandra Moura, e Alfredo Pereira

CIPsi - Universidade do Minho

This study analyzed the maternal touch patterns of 41 mothers as interacting with their 12-month-old infants, in a structured social interaction, composed of three tasks: (1) free play with toys, (2) free play without toys and (3) play with a challenging toy. Every touch performed by the mother was segmented and categorized using the Ordinalized Mother Touch Scale (OMTS Category). In a 3 (Play Task) x 8 (OMTS Category) ANOVA, all effects were significant. We found that in the free play without toys task, mother's use touch is highly frequent, when compared to object-oriented tasks. Mothers also adjusted to object-oriented task difficulty: they touched almost twice as much in the challenging play task as in the free play with toys. Moreover, the different play tasks influenced the proportion of time mothers used particular categories of touch. Together, these findings support the notion that mothers change their tactile behavior as function of the demands of the different play tasks (object vs non-object-oriented tasks).

B24 Observation and imagination as sources of false memories for everyday actions

Margarida Cipriano, Pedro B. Albuquerque, Ana P. Pinheiro, Paula Carneiro, e Isabel Lindner

Faculdade de Psicologia - Universidade de Lisboa, CIPsi - Universidade do Minho, Universität Kassel - Institut für Psychologie (Kassel, Germany)

When someone claims to have performed an action that they did not perform we are before a self-performance false memory (SPFM). Both imagining perform an action (e.g.: 'to open the locker') and watching someone else performing it, can lead participants to claim having performed actions that were only imagined or observed. It is still not clear which cognitive mechanisms explain this phenomenon and if the same explanation accommodates SPFM from observation and imagination. The source-monitoring framework has been proposed as one possible account. We tested imagination and observation separately and together on SPFM and manipulated distinct degrees of source-monitoring. Actions imagined and observed are expected to produce more SPFM than only imagined/observed. Increased source-monitoring demands are expected to decrease SPFM. On a first stage, participants performed (vs. did not perform) presented actions. Afterwards, they i) imagined actions from an object photo (imagination-only); ii) observed actions being performed on a video (observation-only); and iii) both (combined imagination + observation). Two weeks later, participants returned for a recognition test. For each action, they answered two questions: "Did you perform this action?" and "Was the action presented on phase 2? How?". Questions were asked: a) separately (blocks); b) subsequently (double-trial); or c) double-trial plus Memory Characteristics Questionnaire. We found differences between conditions, but distinct degrees of source-monitoring did not interact with any condition. We propose that SPMF from observation and from imagination may rely on different cognitive mechanisms and that, at least at recognition, increased source-monitoring demands do not decrease SPFM.

B25 Turn-taking in face-to-face and object-oriented interactions: A longitudinal study at 7 and 12 months

Vladimiro Lourenço, Joana Coutinho, Juliana Serra, Helga Miguel, Adriana Sampaio, e Alfredo F. Pereira
CIPsi - Universidade do Minho

Turn-taking is the irregular oscillation of speech between partners, characterized by the tight adaptation of the minimal-gap/minimal-overlap effect. Although properties of turn-taking in adult interactions are well known, we know less about its developmental pathway and the context of emergence. Previous research has shown that the duration of overlaps remains stable throughout the first 18 months of life, while gaps duration increases around 9 months, to slowly decrease over time (Hibrik et al., 2015). However, distinction between face-to-face and object-oriented interactions has not been considered. We know that from 6 to 12 months, infants progressively increase the amount of object exploration within their social exchanges (Bakeman et al., 1990). It is critical to understand how turn-taking may differ between those interactions. We present a longitudinal study of face-to-face and object-oriented mother-infant interactions, at 7- and 12-months-old. Twenty-three dyads participated in three conditions: free-play with objects, free-play without objects, play with a challenging toy. Vocalizations were segmented and turn transition measured as overlaps and gaps durations. We examined the effect of infant's age, task, and turn-transition direction – mother to infant and reverse. We found an increase in both gap and overlap production, from 7 to 12 months. Overlap duration remained stable across conditions. Gap duration was consistently longer in object-oriented tasks than in face-to-face interaction, although only when initiated by mother the gap durations decreased between age points. Results show that different interactions may affect turn-transition duration and suggest that gap duration may increase earlier than expected in the developmental path.

B26 Auditory statistical learning in children with and without development language disorder (DLD) and its relation to language skills

Alexandrina Lages, Francisco-Javier Gutiérrez-Domínguez, Helena M. Oliveira, David Tomé, Marisa Losado, e Ana Paula Soares
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Children with developmental language disorder (DLD) have deficits in language that cannot be attributed to neurological damage, hearing impairment, intellectual disability, or disadvantage psychosocial/educational conditions. The etiology of DLD is complex and hotly debated, ranging from impairments in language-specific mechanisms to deficits in more general learning mechanisms that contribute to language development. Here we examined whether the problems observed in children with DLD might stem from a general impairment in their ability to extract the regularities embedded in a continuous auditory stream made of the concatenation of eight three-syllable non-sense words with different levels of predictability (high vs. low) and whether explicit learning mechanisms can be mobilized to compensate for those deficits. To that purpose, 13 children with DLD (2 girls; Mage = 5.38; SD = 0.51) and 24 chronological-age controls (13 girls; Mage = 5.21; SD = 0.42) with typical language development (TLD) performed an auditory Statistical Learning (SL) task, firstly, under implicit, and, subsequently, under explicit learning conditions. Children's language skills were assessed with the Teste de Avaliação da Linguagem Pré-Escolar (TL-ALPE). Results from the 2-AFC tasks performed after each SL task failed to show significant differences between both groups. However, analyses exploring the associations between SL and language skills showed that SL is related to different components of language functioning, particularly in children with DLD.

B27 Better waste (food) than sorry: Households' aversion to cook "just enough"

Nuno Fernandes, Rita Jerónimo, Cláudia Simão, Mário Ferreira, e Matilde Loureiro
ISCTE - Instituto Universitário de Lisboa

Food waste has long-term implications for the environmental, economic, and social domains, with households assuming the major responsibility for these losses. The fear of not being a "good" provider is linked to an over-serving behaviour. We hypothesized that status losses would prevent people from reducing their served food quantities, and that this would be explained by a higher risk aversion towards these immediate losses. In one study, 126 participants were presented with behavioral intentions binary choices regarding hypothetical food quantities options (just enough vs. excess). In a within-subjects design, we manipulated the temporal framing perspective of those consequences (immediate losses and delayed gains vs. immediate gains and delayed losses) crossed by four different domains (environmental, economic, social, and status). The results showed a main effect of domain on food quantities choices: When status losses were salient, the likelihood of cooking food in excess increased. No temporal framing

effect was found. Overall, these findings may be a useful insight towards the designing of food waste reduction nudging interventions, with practical implications for consumers, marketeers, and public policy officials.

B28 Cognitive control and social norms of prohibition and obligation: An adapted Flanker task with traffic signs.

Teresa Garcia-Marques, Pedro Figueira, Alexandre Fernandes, e João Martins
William James Center for Research, ISPA - Instituto Universitário

Deontic norms shape our lives significantly; for example, allowing us to safely share the road. Traffic signs are prime examples of deontic norms being communicated; using color, shape, and arrows to automatically orient individuals' attention, priming the need for behavior monitoring. Few experiments address this process; specifically, no experiment has yet addressed how prohibition and obligation may facilitate the allocation of attentional resources, hence benefiting executive control functions. We shed light on how deontic norms affect activation of monitoring mechanisms, influencing cognitive control, with a modified flanker task using traffic signs, in both social and socially-isolated contexts. Experiment 1 compares performance on a classic-flanker, with a task replacing arrows with traffic prohibition/obligation signs. Results show reduced flanker effects and RTs for normative stimuli, especially prohibition. Temporal analysis reveals norm-induced proactive control, decreasing distractors' interference (from faster to slower responses). Prohibition norms efficiently eliminate interference when individuals' responses are slow. Experiments 2 and 3 clarify the independent role of norms as targets and distractors. No flanker effect occurred for prohibition targets flanked by arrows (across all RTs), suggesting that this target leads to less attention being diverted by distractors. However, prohibition flankers interfered strongly with the identification of an arrow's direction. This effect, occurring in earlier processing, is later efficiently overcome, suggesting that, when compared with the interference of simple arrows, the interference promoted by prohibition signs is easier to control. In short, deontic context modulates cognitive control activation by increasing proactive control, and through inhibitory mechanisms that mitigate their interference."

B29 Investigating the role of stereotypic information on the cross-race effect in face recognition

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People's group memberships exert a profound influence on how they perceive, remember, and interact with other people. In face recognition, evidence strongly supports a deficit in recognizing cross-race faces (CR), a phenomenon known as the Cross-Race Effect (CRE). One explanation for the CRE is that people rely on categorical information (rather than on individuated features) when learning these faces. In the current work, we tested whether presenting CR faces with behavioral information inconsistent with racial stereotypes increases recognition for the faces. Previous social cognition research suggests that incongruent information can improve recognition due to the unexpected effect of the incongruency. So, our aim was to understand whether incongruent information can improve CR faces (Black) recognition. Across 3 studies, participants formed impressions of Black and White faces paired with consistent and inconsistent behaviors. In study 1, behaviors were positive in valence, in studies 2 and 3, the valence was either positive or negative. Later, participants completed a face recognition test. We replicated the CRE in the three studies, where white faces were recognized better than black faces. However, in none of these studies we found consistent support for our hypothesis that inconsistent behaviors would improve recognition of CR faces. In an exploratory analysis in Study 2, though, we found an interaction between political orientation, race, and valence of behaviors such that more conversative participants had better recognition for black than white faces when these were paired with negative behaviors. We discuss these findings for the CRE literature.

B30 Mind wandering and musical creativity in expert jazz improvisation

Pedro T. Palhares, Diogo Branco, e Óscar F. Gonçalves
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Mind wandering is a prevalent and ubiquitous phenomenon. Several studies suggest that mind wandering benefits creativity if it occurs in the incubation period of a creative problem-solving task. However, it could be impairing real-time expression of creative behavior if it occurs during the course of a creative task. This dissociation between incubation and performance suggests that mind wandering poses a double-edged sword to creative cognition. Jazz improvisation provides an ecologically useful framework for studying the effects of mind wandering on creativity. Here we hypothesized that mind wandering during a musical improvisation task would be associated with higher levels of musical creativity, compared to on-task

attention. Nine experienced musicians performed several jazz improvisation tasks interleaved with the presentation of random thought probes. Results showed that musical improvisation during unintentional mind wandering was associated with higher musical creativity when compared with improvisation during on-task attention. However, mind wandering didn't impact the overall improvisational quality. Overall, these data suggest that the positive relationship between mind wandering and creativity also extends to artistic performance domains.

B31 A dual-process approach to cooperative decision making under uncertainty

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Cooperative behaviors are typically investigated using social dilemmas, with characteristics of the scenarios known with certainty. However, in real life, members of a group may be uncertain about what the others will decide (social uncertainty) and the characteristics of the dilemma itself (environmental uncertainty). Previous research has discovered that uncertainty reduces the willingness to cooperate. Applying the dual-process lens to cooperation, some researchers have concluded that deliberation is needed to overrule selfish motives, whereas others showed that intuition favours cooperation. Our study investigates the role of intuitive mental processing on cooperation in experimental games involving uncertainty. A total of 112 university students (88 females; 24 males), with ages ranging from 18 and 44 (M = 21.90, SD = 4.83), participated in the study. They were asked to play a 2 (type of game: stochastic vs. deterministic iterated prisoner's dilemma) by 2 (time pressure manipulation: intuition -time pressure (<10s) vs. deliberation -no time pressure) between-subjects design. Results showed that participants cooperated less with their counterparts as the number of rounds progressed and that intuitive mental processing in the first 50 rounds appears to favour cooperation under deterministic and stochastic conditions. These results may help clarify the mixed-effects found in the literature regarding the effect of cognitive processing manipulation on cooperation. Developing a better understanding of these effects may contribute to the development of strategies in social problems involving cooperation under uncertainty and cognitive constraints.

B32 The effects of direct current stimulation and random noise stimulation on attention networks

Alberto Lema, Sandra Carvalho, Felipe Fregni, Óscar F. Gonçalves, e Jorge Leite
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Objectives: Attention is a complex cognitive process that selects specific stimuli for further processing. Previous research suggested the existence of three attentional networks: alerting, orienting and executive. However, one important topic is how to enhance the efficiency of attentional networks. In this context, understanding how this system behaves under two different modulatory conditions, namely transcranial direct current stimulation (tDCS) and transcranial Random Noise Stimulation (tRNS), will provide important insights towards the understanding of the attention network system. Materials and Methods. Twenty-seven healthy students took part on a randomized single-blinded crossover study, testing the effects that involved three modalities of unilateral stimulation (tRNS, anodal tDCS, and sham) over the DLPFC, during the performance of the attention network test (ANT) in three different conditions: standard, speed and accuracy. Results: Results showed that tRNS was able to increase attentional performance during more complex situations, namely by increasing alerting and decreasing conflict effect in the executive network. Conclusion(s): Under the Speed condition, tRNS increased efficiency of the alerting network, as well as under the more demanding conflict network, tRNS overall increased the performance when comparing to sham. No effects of tDCS were observed. These results are compatible with the attention requiring the synchronization of pre-existing networks, rather the reinforcement or creation of new pathways.

B33 Portuguese validation of the Alcohol Craving Questionnaire – Short Form – Revised

Rui Rodrigues, Eduardo López-Caneda, Natália Almeida-Antunes, Adriana Sampaio, e Alberto Crego
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Alcohol craving has been described as a strong subjective desire to drink, being considered highly valuable in the clinical practice, as it is recognized as a strong predictor of alcohol relapse in alcohol-dependent individuals. However, to date, there are no multifactorial questionnaires for assessing short-term acute craving experience in Portugal. The aim of the present study was to validate a swift and efficient tool for the assessment of acute alcohol craving in a Portuguese sample. For that purpose, the Alcohol Craving Questionnaire – Short Form – Revised (ACQ-SF-R) was translated into European Portuguese and administrated to a sample of 591 participants with ages between 18 and 30 years. Results showed that a three-factor (i.e., Emotionality, Purposefulness, and Compulsivity) model revealed the best fit. Overall, the ACQ-SF-R exhibited good psychometric properties, having a good internal consistency both for the general craving index and each subscale, as well as an appropriate convergent validity with the Penn Alcohol

Craving Scale. In addition, the ACQ-SF-R also showed a good concurrent validity with the Alcohol Use Disorders Identification Test. Likewise, levels of alcohol craving were significantly higher in risky relatively to non/low drinkers. Collectively, these findings suggest that the Portuguese version of the ACQ-SF-R can accurately measure alcohol craving at a multifactorial level, being a valid and reliable tool to use in Portuguese samples within both clinical and research settings.

Posters P31-P42

P31 Cross-cultural adaptation: The effect of discrimination and disidentification on motivation to adapt

Nuno Fernandes, Kinga Bierwiaczonek, Sven Waldzus, Beatriz Borrego, Daniela Rocha, Maria Carmona, e Tiago Teixeira
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Sojourners deal with a lot of stressors during the period of their cross-cultural transition. They must adapt to a new culture, which has often different values, norms and ways of interacting with other people. So, cross-cultural adaptation is difficult, and sometimes not well-succeeded. The reasons behind this poor adaptation are linked to a perceived discrimination by sojourners and a low motivation to adapt. However, since this relation was never empirically tested, we lack to know the causal direction. To test if perceived discrimination leads to low motivation to adapt, through increased disidentification with the host culture, we ran an online survey on Qualtrics where we manipulated the perceived discrimination of international students (n = 119) and measured their disidentification and motivation to adapt. The study consisted of a 2 (high vs low discrimination) x 2 (control) between-subjects design. Subjects were randomly assigned to either one of the experimental conditions (remembering 3 or 12 situations in which they felt discriminated) or to one of the control conditions (remembering the name of 3 or 12 Portuguese cities). Our mediation model suggests that perceived discrimination reduces motivation to adapt by increasing disidentification with the host culture. We highlight the importance of addressing the mediating role of disidentification in further studies. In terms of practical implications, policymakers of insertion programs at institutions hosting international students, or even other international groups should explore the possibility of identification to act as a coping strategy for preventing poor cross-cultural adaptation.

P32 Does destination memory depend on facts interest?

Raquel Pinto e Pedro B. Albuquerque
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Several studies observed that the capacity of remembering to whom we transmit information - destination memory - is surprisingly worse when we generate and share personal facts. In Experiment 1, we intended to replicate these findings. To do so, we asked participants to transmit non-personal information (control condition) or personal information (experimental condition) to celebrities´ faces. Results have not been replicated. Although the destination memory performance when the participants shared personal facts was similar to that observed in previous studies, our participants had worse performance when transmitted non-personal facts. These findings can be justified by the characteristics of the non-personal facts used, which were the same "interesting facts" used in other studies. However, these facts may not be interesting for a Portuguese sample. Other possible explanation can be the higher number of stimuli used compared to the previous literature. In Experiment 2, we replicated the previous studies with the same number of stimuli and added a condition in which interesting facts for a Portuguese sample were shared to understand the influence of the interest of the information transmitted in the destination memory.

P33 If I decide with whom I share my stories, will I remember it better? The importance of a decision component on destination memory

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Destination memory is defined as the association between the information we share and the correspondent recipient. The study of destination memory consists of telling facts to celebrities and measuring item and associative memory regarding the previous interactions. However, when thinking of a normal conversation, we usually can choose the person to whom we wish to share the information. A sample of 60 participants took part in this study, sharing Portuguese proverbs with celebrities (International and Portuguese), intending to understand the effects of a decision component on a destination memory task. The participants were divided into two conditions. In decision condition, a decision of the recipient (two different celebrities) of

the fact occurred and, in no-decision condition, the fact was simply shared with the celebrity, without the possibility of choosing. Since adding a choice will shift attentional resources to the recipient, we expected presenting a decision will lead to higher destination memory scores. Results showed a better destination memory when a decision of whom the information was shared occurred (i.e., decision condition) than in no-decision condition. In sum, adding a decision component to a destination memory task seems to lead to a shift of attentional resources into the recipient, which improves memory for past interactions.

P34 Innocent until proven child? Adults' assumptions about children's and adults' behaviors

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Everyone [...] has the right to be presumed innocent until proved guilty" (Universal Declaration of Human Rights). Thus, presuming someone's guilt based solely on their social category membership (e.g., ethnicity) undermines their basic rights. Across three experiments, we tested if people presume children are guilty of making age-ambiguous misconducts. In Experiment 1, 63 adults read scenarios describing age-ambiguous misconducts (e.g., breaking a glass at a party) or other behaviors (e.g., throwing a banana peel in the trash can), indicating which of two agents, an adult or a child, most likely performed each behavior. Participants more frequently attributed the misconducts to children than to adults, and more of the other behaviors to adults than children. Experiments 2a (N = 69) and 2b (N = 93) tested if the age-biased expectations detected in Experiment 1 would lead participants to overestimate the amount of misconducts supposedly done by children. In an expectancy-based illusory correlations paradigm, adult participants read the same amount of scenarios performed by children and adults, which now indicated the agents' age-group. After a distractor task, participants estimated the number of misconducts performed by children and adults. Participants' estimates showed no age-biases. Results suggest adults have stereotypical views of children (as performing misconducts) but can restrain these expectations when estimating the number of misconducts children performed. I'll discuss possible explanations for why adults apparently can restrain their expectations in Experiments 2a and 2b. Then, I'll propose a follow-up to test if adults can also restrain their expectations in another experimental paradigm.

P35 Perceiving others' faces: The impact of Covid-19 concerns

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Covid-19 is an ongoing global pandemic that has resulted in significant changes in socio-behavioural norms. Unlike most infectious diseases, Covid-19 poses an unprecedented threat since typical infection cues are absent. Accordingly, transmission from asymptomatic individuals is estimated to account for more than half of all transmissions. However, it is still unclear whether the current pandemic context can alter the way we perceive faces without any discernible disease cues. The present study investigated if priming disease concerns about Covid-19 would change people's perception of neutral faces; this condition was compared with other infectious/non-infectious diseases and a control non-disease priming condition. When compared to the non-disease control condition, results show that participants in the Covid-19 group perceived neutral faces as sicker; a tendency to view them as eliciting more discomfort in a possible social interaction was also observed. No significant difference was found for perceived arousal between these two conditions. Furthermore, the remaining infectious and non-infectious disease conditions did not differ from each other, the Covid-19 or the control conditions on perceived disease, discomfort or arousal. These findings suggest that the pandemic context can shape the way we perceive others' apparent sickness and alter our motivation to socially interact with them. Overall, these might reflect evaluative and cognitive adaptations possibly intertwined with the flexibility of the behavioural immune system's defence mechanisms.

P36 Visual attention bias to reproduction-related stimuli in young women with breast cancer

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Anticancer treatments may lead to fertility loss and pose challenges related to disruption of family building projects. Evidence suggests that cancer survivors reported fertility-related concerns. These concerns might be associated with enhanced processing of relevant stimuli. Thus, this study aimed to explore whether there was a bias in the allocation of attention toward reproduction-related stimuli among breast cancer survivors and its relationship with fertility concerns. Cancer survivors (N=38) and presumably fertile healthy women (N=37) aged 18 to 40 completed a dot-probe task using reproduction-related pictures and self-report measures assessing fertility-related concerns. All participants responded faster in trials with reproduction-

related stimuli in comparison to trials that included images with unrelated content. An examination of how attentional biases predict the fertility concerns suggested that women diagnosed with breast cancer with increased cognitive bias toward reproduction-related cues had higher levels of concerns related to partner disclosure about fertility status. Thus, hypervigilance mechanisms may be maladaptive among cancer survivors. Interventions focused on goal-oriented attention self-regulation can improve the adjustment in the course of the disease.

P37 Visual movement has no advantage over audition in duration perception

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"Temporal processing includes two subsystems – beat-based and duration-based – and two major processes – production and perception. Classic findings regarding modality effects point to the advantage of audition over vision in temporal processing, but recent findings argue that a particular class of visual stimuli – those with apparent motion (e.g., bouncing balls) – not only outperform static visual stimuli (flashes) but also match auditory ones (beeps) in driving beat-synchronization (production). Nevertheless, beat-based perception showed no advantage from visual movement, suggesting that such an advantage is production-specific. To clarify whether the lack of advantage of visual movement extends to duration-based perception, we asked 64 participants to discriminate between slowing-down and speeding-up sequences using the three stimulus types (bouncing balls vs. flashes vs. beeps). Since previous studies indicated that modality effects in duration perception are restricted to short intervals, we also used two base lengths – short vs. medium. Results showed a significant interaction between stimulus type and base length: for medium base length, stimulus type effects were null, implying no modality effects; for short base length, moving visual stimuli underperformed auditory and static visual stimuli. Our findings indicate that visual stimuli with movement not only seem more akin to production than perception, but also, within perception, they seem more efficient in a context that allows prediction, such as beat-based timing.

P38 What do my eyes say? Attentional bias in behavioral inhibited children

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Behavioral inhibition (BI) is considered a risk factor for the development of anxiety disorders. Attentional bias to threat has been described as a possible influence on the stability of behavioral inhibition during childhood, promoting the later development of social anxiety. In this sense, we tried to study the attentional process in children with high and low BI towards pictures of emotional faces, using the measurement of pupil dilation as a physiological manifestation of attention. In addition, we tried to understand if pupillary response varies according to the type of emotion (angry, happy, and neutral) and the child's age. Method: Sixty-eight children aged between 5 and 11 years participated in the study. The evaluation of child BI was made through parent report (Behavioral Inhibition Questionnaire). Pupil dilation was measured during an eye tracking free-viewing paradigm, where the child must look at pairs of happy, angry, and neutral facial images. Results and Discussion: Children with high levels of BI presented a larger pupil dilation amplitude when confronted with social visual stimuli, while children with low BI did not show such an increase in pupil diameter. These results did not differ with the emotion expressed depicted by the stimulus or with the child's age. We can conclude that children with high BI have a more sensitive pupillary response to social stimuli than children with low BI, regardless of the emotion of the stimulus. Implications for theory and practice are discussed.

P39 "Do I know you?": The impact of surgical masks on face recognition during the COVID-19 pandemic

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Due to the COVID-19 pandemic, the use of face masks in public places was defined as mandatory in several countries. Despite being effective in reducing virus transmission, the use of face masks may impair social interaction, namely face recognition. In our study, based on a 2 (mask at encoding: present, absent) × 2 (mask at retrieval: present, absent) within-participants design, we decided to investigate the effect of surgical masks on face recognition. In the procedure, participants saw faces of men and women, with and without masks at encoding and, in a counterbalanced way, at the retrieval phase. Results revealed that the recognition (d-prime) was higher when participants saw the faces without a mask on both phases. Additionally, the recognition was worse when faces had masks at encoding but not at retrieval. Finally,

when faces at retrieval matched the encoding condition (with-with and without-without), recognition improved.

P40 Dual-task cost: Setting up a reliable cognitive motor interference protocol

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Dual-task cost (DTC) implies a decrement in performance when subjects are required to execute two tasks simultaneously, as opposed to performing them separately. Dividing attention between two concurrent tasks can result in a decrement performance in one or both, especially when the attentional demands of one are high. Despite the variability in DTC paradigms, the "dual-task gait" model has been widely used to assess the cognitive-motor interaction, by quantifying the change in motor and/or in cognitive performance while dual tasking. Moreover, cognitive-motor dual-tasking is representative of real-life situations as most daily activities involve its simultaneous performance. Our study aimed at validating a simple DTC protocol, confirming the cost of cognitive-motor dual tasking, and ensuring the protocol's stability over time, therefore certifying that it is measuring subject-dependent characteristics. Gait parameters (walking at a regular pace) and cognitive performance (counting backwards by 7) where compared between single and dual tasking across three different experiments. Across trials we manipulated the worn footwear (regular versus controlled shoes) between assessments, and the task prioritization instructions (distance priority versus no task priority). Our results confirmed that healthy participants were more likely to prioritize cognition with a significant impact in gait parameters while dual tasking, across all experiments. We also found that, under the use of controlled footwear (crocs-like) and with no specific instructions regarding task prioritization, DTC over motor performance proved to be a stable measurement (ICC=0.91) when cognitive loading is sufficient. These results endorse our protocol as significantly reliable and subject-specific under single and dual-task conditions.

P41 Effects of valence and self-reference on source memory: Behavioral and electrophysiological insights

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Stimulus emotion and self-referential processing are known to modulate episodic memory. Nonetheless, their interactive effects on source memory (SM), i.e., memory for the origins of an event, remain underexplored. In this study, twenty-two participants (19 females; Mage = 25.07) completed a SM task with negative, neutral and positive words that could be encoded self-referentially or non-self-referentially, while event-related potentials (ERPs) of the electroencephalogram were registered. Behaviorally, whereas better SM performance was found for positive and neutral than for negative words studied self-referentially, SM performance was better for neutral than for positive words studied non-self-referentially. Also, SM performance for negative words did not differ between encoding conditions. Electrophysiologically, even though self-reference granted a processing advantage during encoding (increased positivity of the ERPs - 700-1200 ms) and during recognition (emergence of the early frontal old/new effect - 300-500 ms), negative self-referential words were subjected to a greater mobilization of post-retrieval monitoring processes (enhanced mean amplitude of the late frontal old/new effect - 800-1200 ms). Furthermore, negative words studied non-self-referentially did not elicit a typical parietal old/new effect. Overall, these findings suggest that negative information interferes with SM.

P42 Efeitos da comunicação presencial e via Facebook na solidão subjectiva: resultados preliminares

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Estudos prévios mostram associações entre solidão subjectiva e uso problemático da internet que se manifesta grandemente pelo uso de redes sociais. Esta associação verifica-se independentemente da frequência de contactos face-a-face e da qualidade do suporte social. Para além disso, um estudo experimental anterior mostrou que a comunicação online pode aumentar a solidão subjectiva. Estes estudos sugerem sugeren que algo de intrínseco à comunicação online poderá aumentar sentimentos de solidão em quem não está objectivamente só. O presente estudo teve como objectivo comparar o impacto da comunicação online através do Facebook e da comunicação face-a-face nos sentimentos de solidão. A amostra preliminar de um estudo presentemente em curso foi composta por 68 participantes que passaram por um procedimento de indução de solidão subjectiva e que foram posteriormente alocados para uma de três condições: 1) comunicação online via Facebook, 2) comunicação face-a-face e 3) leitura de um artigo online. A solidão subjectiva foi avaliada pela University of California

Loneliness Scale (UCLA-3), a qual foi passada imediatamente após a indução de solidão e posteriormente após cada uma das condições experimentais. Os resultados demonstraram que somente a comunicação face-a-face causou uma melhoria estatisticamente significativa nos sentimentos de solidão. Estes resultados preliminares são discutidos em termos de o organismo humano ter evoluído para se sentir acompanhado quando recebe uma riqueza de informação sensorial que está parcialmente ausente na comunicação online, a qual por isso não tem a mesma capacidade de suprimir sentimentos de solidão que a comunicação presencial.