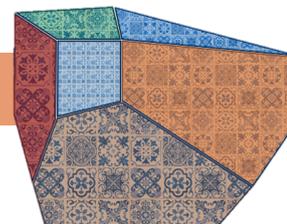




12º Encontro Nacional Associação Portuguesa Psicologia Experimental

Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto
5 e 6 de Maio de 2017

Programa - Posters



Sexta-feira, 5 de Maio de 2017

09h00 - Afixação de Posters

18h00/19h45 – Sessão de Posters

1. The effects of alexithymia in the experience of emotional situations

Marta Rocha, Joana Ribeiro, Sandra Pinheiro, Ana Raquel Oliveira, and Sandra C. Soares
Universidade de Aveiro

Alexithymia is a multifactorial personality trait associated with a deficit in the cognitive processing of emotional states. The present study aims to investigate how 26 individuals with high levels of alexithymia (HA) compared to 37 individuals with low levels of alexithymia (LA) rated their emotions (e.g., confusion, fear, happiness) after an emotional inducing context using neutral, horror and comedy film clips. Results showed that both groups rated all the films as expected in terms of positive and negative emotions, although HA individuals rated both horror and comedy films as more negative compared to LA individuals. Moreover, HA participants rated all the films as more confused compared to LA, which can possibly be explained by the difficulty in understanding emotional situations by HA.

2. Resting-state functional connectivity indexes individual differences in emotional prosody recognition in children

Ana Isabel Correia, Paulo Branco, Marta Martins, Ana Mafalda Reis, Nuno Martins, São Luís Castro, and César Lima
Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto

Resting-state fMRI was used to examine whether functional connectivity patterns predict emotional prosody recognition in children. Fifty-three children ($M = 8.30$ years; 23 female) completed a resting-state fMRI sequence, and an offline forced-choice recognition task comprising four emotions (happiness, sadness, anger, fear) and neutrality in prosody. Resting-state data were analysed using independent component analysis. A dual regression approach showed that connectivity between left executive network and left superior temporal sulcus predict better emotion recognition performance. Furthermore, the connectivity between these regions and emotion recognition performance were correlated with a behavioural measure of executive functions: the backward digit span (WISC-III). This provides converging network-level and behavioural evidence for a role of executive processes in predicting vocal emotional processing abilities in children.

3. Words that are salient: Dimensional and categorical norms for affective words

António Fernandes and Ana P. Pinheiro
Faculdade de Psicologia, Universidade de Lisboa

The Affective Norms for English Words (ANEW; Bradley & Lang, 1999) is a battery of words rated on their affective dimensions (valence, arousal, and dominance). This dataset was previously validated for the European Portuguese by Soares and collaborators (2012). However, no previous study has assessed those words in terms of their affective categories (e.g. anger, sadness, fear, disgust, pleasure, happiness, or neutral). We present an extension of the ANEW for European Portuguese, adding a set of 192 words assessed both on their affective dimensions (using the Self-Assessment Manikin; Bradley & Lang, 1994) and categories (using 5-point Likert intensity scales) by 117 participants. These norms aim to stimulate experimental research on emotional language processing.

4. Perception of emotional nonverbal vocalizations

Carla Barros (1), R. Mariana Silva (2,3), Ana Pinheiro (1,4), Sandra Mouta (4), and Jorge A. Santos (2,4,5)
(1) *Neuropsychophysiology Lab (NPL), CIPsi, School of Psychology, University of Minho*
(2) *Laboratory of Visualization and Perception (LVP), CIPsi, School of Psychology, University of Minho*
(3) *Centre for Computer Graphics (CCG), Guimarães, Portugal*
(4) *Voice, Affect and Speech Lab (VAS Lab), Faculty of Psychology, University of Lisbon*
(5) *Centro ALGORITMI, University of Minho*

Non-verbal vocal emotional expressions represent a more primitive expression of emotion, and they are easily recognized by humans and less affected by cultural differences. Understanding how Montreal Affective Voices (MAV) acoustical properties are related with their perception is pertinent in auditory processing studies, and it remains unclear. The present study aimed recognition of each vocalization emotion through a 2-AFCT, recording the reaction time of the participant and the answer. The results showed that higher pitch stimuli were better identified, and the higher pitch variation corresponded to the lowest recognition accuracy rate. These results suggest the pitch can play a crucial role in non-verbal vocalizations perception, although there were no correlations between the different affective categories recognition and their acoustic cues.



5. How quickly do listeners recognize emotions from nonverbal vocalizations?

Paula Castiajo and Ana P. Pinheiro

Neuropsychophysiology Lab, School of Psychology, University of Minho, Braga

Whereas the time needed to accurately recognize vocal emotions from speech prosody has long been established, it remains to be clarified how much temporal information is necessary to accurately decode nonverbal affective vocalizations. This study aimed to probe the time course of vocal emotional recognition with nonverbal vocalizations. Fifty-two participants (mean age = 23.42, SD = 7.80 years; 27 females) rated 58 nonverbal affective vocalizations equally shortened to encompass seven temporal intervals (100-700 ms). Overall, listeners needed less time to accurately recognize happiness, sadness and disgust (400 ms) than anger and fear (700 ms). Results suggest that nonverbal affective vocalizations are more rapidly and reliably detected than other means of emotional expression (e.g., faces or prosody).

6. Probing the effects of speaker's age and participant's age on vocal emotional processing

Augusto J. Mendes (1), Maria Amorim (1), César F. Lima (2), and Ana P. Pinheiro (1,3)

(1) *Neuropsychophysiology Lab, School of Psychology, University of Minho*

(2) *Neurocognition and Language Group, Faculty of Psychology and Education Science, University of Porto*

(3) *Voice, Affect & Speech Lab, Faculty of Psychology, University of Lisbon*

The capacity to decode emotions from the voice is critical in social interactions. However, the experimental study of vocal emotions is constrained by the lack of validated and controlled stimuli. This study collected categorical (i.e., forced choice categorization task) and dimensional ratings (i.e., valence) of non-verbal vocalizations produced by speakers of different ages, and evaluated by listeners of different ages. Disgust and amusement were associated with the highest accuracy, whereas fear and achievement had the lowest accuracy across the age groups. Further, older adults presented a "negativity bias" when assessing the valence of positive emotions, and a "positive bias" when assessing negative emotions. This suggests that participant's age needs to be considered in studies probing vocal emotional recognition.

7. Emotions in space: the effects of emotion and stimulus type on space processing

Maria Amorim and Ana Pinheiro

Faculty of Psychology, University of Lisbon

The expression "I am feeling down" translates an association between emotion and space in which spatial terms ("down") are used to convey affective information (sadness). This association is conceptualized as positive emotions being associated with superior/right locations and negative emotions with inferior/left locations. To study this association, we used a spatial target detection task, in which the participants were first presented with a neutral, positive or negative stimulus (vocalization, face or word) and then had to discriminate the location of a spatial target. Our results support the existence of an emotion/space association that is dependent of axis, stimulus type and emotion and that, contrary to previous studies, mainly facilitates the discrimination of inferior targets when presented after negative stimuli.

8. Vocal Emotions Influence Auditory Spatial Recognition

Diogo Lima (1), Ana P. Pinheiro (1, 2), and Pedro B. Albuquerque (1)

(1) *Universidade do Minho; (2) Universidade de Lisboa*

In a dynamic multisensory environment, human beings prioritize emotionally salient stimuli. However, how the emotional salience of a stimulus modulates the processing of different spatial locations in our surroundings is still unclear. This experiment aimed to understand how emotion, conveyed through non-verbal emotional vocalizations, influences spatial discrimination of stimuli presented at eight different locations. Results show an advantage when the vocalizations were presented at the left side and back side of the participant. A higher accuracy was also observed for anger compared to neutral vocalizations, when they were presented in the back. This facilitative effect may be related to the survival value of a rapid detection of anger.

9. Will I remember I read aloud or in silent? Exploring the role of valence in judgments of learning and recognition in an internal source memory task

Diana R. Pereira (1), Adriana Sampaio (1), and Ana P. Pinheiro (1,2)

(1) *School of Psychology, University of Minho; (2) Faculty of Psychology, University of Lisbon*

Source monitoring, the ability to correctly attribute something we remember to its source, is essential to guide our behavior and to avoid common memory lapses (e.g., to be uncertain whether we said something silently or aloud). We examined the role of stimulus valence in judgments of learning and recognition using an internal source memory task. 22 participants read silently or aloud a set of positive, neutral, and negative words. The stimuli read aloud were evaluated as more memorable than the words read silently, and both positive and negative words were regarded as more memorable than neutral words. For item memory, words read aloud were better recognized than words read silently; however, no differences emerged in the case of source memory.

10. Film clips as emotional inducers in the laboratory

Marta Rocha, Sandra Pinheiro, Joana Ribeiro, Ana Raquel Oliveira, and Sandra C. Soares

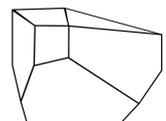
Universidade de Aveiro

The use of film clips is growing as emotional inducers in the laboratory given their dynamic and ecologically valid nature, compared to other types of emotional stimuli (e.g., images). The present study was designed to select neutral, positive (i.e., amused, happy and joy) and negative (i.e., fear and anxiety) emotional film clips. For this purpose, we selected 15 films for each emotional category, resulting in a total of 45 film clips. Sixty participants were divided in 3 sessions and asked to view and rate the films on multiple dimensions. The results of the subjective ratings indicated that we were successful in selecting films capable of inducing specific emotional states (neutral, positive and negative).

11. Does mirror-image invariance still occur for single letters?

Eduardo Xavier, Margarida Cipriano, and Tânia Fernandes

Faculdade de Psicologia, Universidade de Lisboa



To examine whether mirror-image invariance (d and b processed as equivalent percepts) still occurs during letter recognition, participants performed a masked priming, cross-case letter matching task on which primes were control (nine-dot pattern), or identical, mirror-image, plane-rotation (e.g., d, b, and p, respectively) of the target letter (e.g., D). For reversible letters (for which orientation is a diagnostic feature; e.g., D), the two orientation-contrasts led to slower performance than the control prime. For both reversible and non-reversible (e.g., R) letters, mirror-image and plane-rotation primes were both less effective than identical primes. These results seem to be due to competition for reversible letters and to whole-shape compatibility for non-reversible letters. Thus, mirror-image invariance is not a robust phenomenon in letter recognition.

12. dase facilita mais BASE do que bose DOSE: Efeitos de assimetria à direita no reconhecimento visual de palavras com letras em espelho

Alexandrina Lages, Helena Oliveira, and Ana Paula Soares

Laboratório de Cognição Humana, Centro de Investigação em Psicologia (CIPsi), Universidade do Minho

Reconhecer palavras com letras espelho (b/d), como BASE ou DOSE é mais difícil do que reconhecer palavras que não as contêm (FASE). Este efeito é explicado pelo facto de as palavras com letras espelho conduzirem não só à ativação das letras b ou d, mas à inibição simultânea das letras espelho correspondentes (d e b, respetivamente). Neste trabalho testámos efeitos de assimetria à direita no reconhecimento-visual de palavras b (BASE) e d (DOSE) numa tarefa de decisão-lexical combinada com o paradigma de priming mascarado. Palavras b e d foram antecedidas de três tipos de primes: identidade (base-BASE/dose-DOSE), espelho (dase-BASE/bose-DOSE) e controlo (lase-BASE/lose-DOSE). Os resultados revelaram efeitos de priming inibitório restringidos às palavras d, confirmando assim a hipótese de assimetria à direita.

13. Look right: Visual attention orienting as a function of script direction

Rita Duarte Mendonça, Gün R. Semin, and Margarida V. Garrido

William James Center for Research, ISPA - Instituto Universitário

Eye-gaze discrimination is critical for human communication. When seeing a person looking at a particular direction our attention is shifted to the same location. However, literature has suggested that visual attention orienting is susceptible to cultural determinants like the reading and writing direction. For European languages, this is a left-to-right bias. A face-cueing paradigm was employed to investigate how horizontal asymmetries derived from script trajectory shape automatic attention shifts and influence detection decisions. Across three distinct response intervals, right-facing head cues produced shorter reaction times in detecting a target letter appearing in the right visual field relative to left-facing cues with the target appearing on the left. These results suggest that a rightward bias is driving the orientation of attention.

14. The role of written word form in second language vocabulary learning

Marie Leckerf (1), Montserrat Comesaña (2), and Séverine Casalis (1)

(1) University of Lille, Lille, France; (2) Universidade do Minho, Braga, Portugal

Several studies on the effect of written word form on learning new vocabulary in one's native language have highlighted a facilitative effect of orthographic cues. However, whether this effect can be observed during second language (L2) vocabulary learning is debated. The objective of this study was to examine the effect of written word form on L2 vocabulary learning. To this aim, 7 and 10-year-old French children learned 20 German words. They heard each word along with its corresponding picture. Only half of these words were accompanied by their written form. The children were then tested in Written/Auditory Lexical Decision Tasks, and in a Picture Matching Task. The results and their implications for current models of bilingual word recognition are discussed.

15. Can musical abilities predict phonological awareness and reading in young children?

Carolina Cordeiro, Leonor Neves, Marta Martins, Teresa Limpo, and São Luís Castro

Neurocognition and Language Group, Faculty of Psychology and Education Science, University of Porto

Evidence indicates that musical abilities may impact early language and reading acquisition, but the nature of this relationship remains unclear. We examined the contribution of musical aptitude to phonological awareness (PA) in Grade 1 ($n = 72$), after controlling working memory (WM) and reasoning; and the contribution of musical aptitude to reading fluency and accuracy in Grade 4 ($n = 64$), after controlling WM and PA. In Grade 1, musical aptitude contributed to implicit and explicit PA (respectively, $R^2_{\text{change}} = .13$ and $.38$). In Grade 4, musical aptitude did not contribute to reading fluency and accuracy above and beyond WM and PA. These findings indicate that musical aptitude impacts differentially reading-related skills as reading acquisition proceeds.

16. The impact of bilingualism in lexical processing in bilingual children with specific language impairment

Florian Salomé (1), Montserrat Comesaña (2), and Séverine Casalis (1)

(1) University of Lille, Lille, France, (2) Universidade do Minho, Braga, Portugal

Specific language impairment (SLI), defined by Leonard (1998) as a delay and/or a disorder in the acquisition of language with no added cognitive, neurological or emotional disorder, is a widely discussed diagnosis. Besides, reduced lexical access in bilingual children with typical development (TD) compared to monolinguals might be mistaken for SLI, due to the lack of standardized clinical testing in the second language. A worsening effect of bilingualism on morphosyntactic difficulties was questioned in bilingual children with SLI. The aim of this study was to investigate the impact of bilingualism on lexical processing in bilingual children with SLI. Receptive and expressive linguistic tasks were administered to four groups of participants (TD-monolinguals|TD-bilinguals|SLI-monolinguals|SLI-bilinguals). Results are discussed through the extended receptive expressive gap.

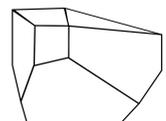
17. It's all about me: The role of self-reference in a masked affective priming task

Joana Macedo (1), Helena Oliveira (1), Ana Pinheiro (2 & 3), and Ana Paula Soares (1)

(1) Laboratório de Cognição Humana, Centro de Investigação em Psicologia (CIPsi), Universidade do Minho

(2) Laboratório de Voz, Afeto e Falta, Faculdade de Psicologia, Universidade de Lisboa

(3) Laboratório de Neuropsicofisiologia, Centro de Investigação em Psicologia (CIPsi), Universidade do Minho



Experiments showed that individuals process information differently depending on the level on which the self is implicated. However, studies aiming to explore the extent to which self-reference information affects early-stages of visual-word recognition are inexistent. Participants performed an affective-categorization task, in which positive and negative target words were preceded by a briefly presented prime that could be self-related, other-related or a control. Results showed that words preceded by self-related primes produced faster Reaction Times (RTs) than other-related primes, but not control primes. Furthermore, other-related primes produced longer RTs than both self-related and control primes. Results showed a clear advantage in the processing of self-related information irrespectively of the target valence, thus asking for amendments in current models of visual-word recognition.

18. A PAEDL: coping e resiliência

Lina Castanho, Paulo Rodrigues, Fátima Simões, e Luís Maia
Universidade da Beira Interior

A Perturbação da Aprendizagem Específica com Défice na Leitura (PAEDL) afeta entre 5 a 10% da população. O DSM-5 já reflete a ideia desta perturbação não se limitar ao contexto escolar, perpetuando-se ao longo da vida. Estudos mostram que indivíduos com PAEDL conseguem ter uma vida de sucesso, gerindo as dificuldades e apresentando níveis de resiliência similares a sujeitos sem PAEDL. Neste estudo avaliámos potenciais diferenças nos estilos de coping (adaptativo e desadaptativo) e na resiliência entre portadores de PAEDL (N=25) e normativos (N=306). Os participantes com PAEDL pontuaram significativamente mais baixo nos estilos Planear e Utilizar Suporte Social Emocional (adaptativo) e mais alto em Negação e Desinvestimento Comportamental (desadaptativo) e apresentam menor resiliência. Discutimos os potenciais motivos deste achado.

19. Ansiedade e Autoconceito em Adultos com Perturbação Específica da Aprendizagem - Leitura

Bruno Alexandre Tomás dos Santos, Paulo Joaquim Rodrigues, Fátima Simões, e Luís Maia
Universidade da Beira Interior

Pretendemos estudar se os participantes com Perturbação Específica da Aprendizagem – Leitura (PEAL) se apresentam mais ansiosos e com menor autoconceito do que um grupo de controlo. A nossa amostra é constituída por indivíduos adultos com e sem PEAL que responderam a um questionário on-line. A comparação de médias mostra que os participantes com PEAL apresentam menor auto-conceito global e menor auto-eficácia dos que os participantes do grupo de controlo. Não encontramos diferenças significativas na ansiedade. Estes resultados estão parcialmente em desacordo com outros estudos que indicam a ansiedade como o sintoma emocional mais relatado em adultos disléxicos e o baixo autoconceito como reflexo de acontecimentos negativos na história de vida dos indivíduos.

20. Pigeons trade food for information

Valeria V. González, Alejandro Macías, Armando Machado, and Marco Vasconcelos*
*University of Minho; *University of Aveiro*

Under some laboratory preparations, animals are willing to pay a price for information that they cannot use. This behavior has been labeled as irrational because it leads to lower net return. However, we propose a different account. In this study, pigeons chose between one alternative leading to two stimuli perfectly correlated with the presence and absence of food, and another alternative leading to stimuli mildly correlated with food. Pigeons preferred the perfectly correlated alternative even though that option yielded less food. This behavior can be seen as rational if the information about the presence or absence of food allows the animal to optimize the time and energy spent foraging in the natural environment.

21. Motivação e pró-socialidade em ratos

Nathércia Lima Torres, Jéssica Maria Pessoa Gomes, Susana Silva, and Francisco Bruno Costa Ceppi
Universidade Federal do Ceará

Este trabalho objetiva estudar pró-socialidade em um paradigma de escolha, cuja evidência comportamental é a ação de libertar um coespecífico aprisionado. A amostra foi constituída de 24 ratos machos Wistar; metade prisioneira e metade distribuída de acordo com o estado motivacional: restrição alimentar (RA), privação de contato social (PS) e contato social livres ou não-privados (NP). O grupo experimental foi submetido a três situações: coespecífico vs incentivo de alta qualidade, coespecífico vs incentivo de baixa qualidade e coespecífico vs nenhum incentivo. Foram coletados dados de atividade locomotora (tigmatotaxia), ansiedade, motivação por cada caixa, comportamento de escolha e aprendizagem. Os resultados mostram efeitos do estado motivacional, do tipo de incentivo e da interação entre essas duas variáveis.

22. Effect of negative valence sounds in human timing

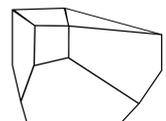
Nicole Félix, Renata Cambraia, Armando Machado, and Marco Vasconcelos
Universidade do Minho and Universidade de Aveiro

Experiments on time perception have shown that the subjective duration of a stimulus can be influenced by many variables. We investigated the effect of sounds with negative valence on human timing. Forty female participants performed a bisection task on a computer, in which they heard a sound stimulus (obtained from the International Affective Digitized Sounds/IADS-2), and chose the option related to the stimulus duration: "short" – 1000 ms; "long" – 2200 ms. During testing, five intermediate durations were also presented (spaced by 200 ms). Each participant went through two counterbalanced experimental conditions: negative and neutral valence. Results show, according to the literature, that the negative sounds were overestimated.

23. Performance in the midsession reversal task according to the probabilities of reinforcement

Cristina dos Santos, Catarina Soares, Armando Machado, and Marco Vasconcelos
Universidade do Minho and Universidade de Aveiro

In the midsession reversal (MSR) task pigeons are required to learn a simultaneous discrimination with a predictable change of contingencies midway through the session: responses to S1 are reinforced in the first half of the session and responses to S2 in the second half. Typically, pigeons' miss reinforcers due to errors around the point of contingency reversal. In order to evaluate if the errors depend on the current probabilities of reinforcement, three groups of pigeons were trained in a MSR task with different reinforcement rates in each half. Results suggest that performance is strongly biased by the local probability of reinforcement.



24. Timing in variable interval schedules

Mehdi Bugallo, Marco Vasconcelos, and Armando Machado
School of Psychology, University of Minho and Universidade de Aveiro

Experimentation with rats has shown that a combination of peak procedure and variable interval (VI) schedule, with criteria drawn from a uniform distribution (15 to 45s), elicits peak-shaped response function centered on the mean of the VI values (30s). Thus, suggesting averaging of the memories of intervals. We replicated the experiment with pigeons and manipulated the range of intervals. Consistent with the Learning-to-Time (LeT) model, we observed that the width of the peak adapted to the broadness of the VI range. Accordingly, rather than calling for complex operations on temporal memories, the phenomena can be parsimoniously accounted for by associative learning principles assumed by LeT. This study leads to the question of whether timing is an on/off or constant process.

25. Behaviour systems and causal reasoning

Robert Bowers
University of Minho

Whether and how to apply theories of causal reasoning to the behaviour of rats in standard food conditioning experiments remain controversial. I highlight an attempt to situate a specific analysis of causal reasoning within the independent conceptual framework of behaviour systems. Assumptions of theories of causal reasoning are challenged, and behavioural variables beyond those theoretically accessible to standard approaches are shown to be relevant to the behaviour of rats solving causal problems. Behaviour systems is neutral to typical assumptions of theories of rationality, and permits interpretation of a broader range of behaviour, and so provides an apt theoretical context in which to understand how rats deal effectively with cause and effect in causal reasoning experiments.

26. Vestibular stimulation interferes with the dynamics of an internal representation of gravity

Nuno De Sá Teixeira, Heiko Hecht, Ana Diaz Artiles, Kimia Seyedmadani, and Laurence R. Young
Instituto de Psicologia Cognitiva, Universidade de Coimbra

The remembered vanishing location of a moving target is displaced downward in the direction of gravity (Representational Gravity) and more so with time. The present experiment aims to ascertain the role of vestibular information in this phenomenon while keeping the observers' bodies unchanged in relation to physical gravity using a short-radius centrifuge. Observers were shown, while accelerated to varying degrees, moving targets and required to indicate the perceived vanishing location after a variable interval. Increases of the gravito-inertial force (up to 1.4G), orthogonal to the idiotropic vector, did not affect the direction of Representational Gravity, but significantly disrupted its time course. The role of an internal model of gravity for visual spatial perception is discussed in light of the results.

27. “Be reminded-to-reject”: A specific strategy to avoid false memories

Sara Cadavid (1), Pedro B. Albuquerque (2), and María Soledad Beato (3)
(1) Pontificia Universidad Javeriana, Bogotá, Colômbia; (2) Universidade do Minho, Braga, Portugal; (3) Universidad de Salamanca, Salamanca, Espanha

Recall-to-reject processes allow rejecting a dubious event through the recollection of collateral information. We explored the “recall-to-reject” strategy to avoid false memories in a variant of the Deese/Roediger-McDermott (DRM) paradigm. Specifically, we aimed to provide evidence on the existence of recall-to-reject processes where the logic of mutual exclusivity cannot be applied. After encoding three-critical-lure DRM lists, participants were administered a recognition test. The memory test could include all the three critical words per list or just one per list. We found that when collateral information is provided at test, participants are more likely to engage a specific recall-to-reject strategy that we called “be reminded-to-reject”, thereby reducing their rates of false memory.

28. To do or not to do: The role of the motor system in immediate memory for objects

Diana João (1), Sara Carvalho (1), Camila Seixas (1), Maria João Godinho (1), Daniela Martins (1), Pedro Bem-Haja (2), and Isabel M. Santos (2)
(1) University of Aveiro, Department of Education and Psychology; (2) CINTESIS.UA - Center for Health Technology and Services Research, University of Aveiro

The objective of the present study was to investigate the role of the motor system in immediate memory for objects. The task consisted in recalling the order of presentation of six objects that were preceded by motion videos displaying hand movements that were either congruent or incongruent with the movement needed to grab those objects. Participants in the experimental group were asked to imitate the movement, whereas the control group did not make any movement. The control group was marginally better at recalling the order of the objects. No other significant differences were found. Although not supporting the initial hypotheses, this study presents an additional contribution to the understanding of the relation between motor actions and memory.

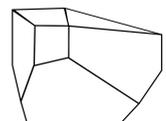
29. Do distractors in the surrounding environment influence cognitive performance? A study with young adults

Diana João, Camila Sousa, Sara Carvalho, Daniela Martins, Pedro F. Rodrigues, Josefa N. S. Pandeirada, and Isabel M. Santos
Departamento de Educação e Psicologia, Universidade de Aveiro & CINTESIS.UA

Cognitive performance in elderly and learning ability in children can be affected when the surrounding environment contains many visual elements. We investigated this phenomenon in young-adults. In two sessions, participants completed visual memory and attentional tasks. In one session, the surrounding environment contained distracting images and, in the other, no images were present. Furthermore, some participants performed these tasks in horizontal and others in vertical position. The results revealed no effect of the environment or of the position in which the task was performed. These results are in line with the idea that young-adults are at the peak of their abilities allowing them to more effectively concentrate on the task and to inhibit irrelevant stimuli.

30. False memories in a Portuguese-English study

Pedro B. Albuquerque (1), María Soledad Beato (2), and Sara Cadavid (3)
(1) Universidade do Minho, Portugal; (2) Universidad de Salamanca, Espanha; (3) Pontificia Universidad Javeriana, Colômbia



False recognition (FR) within- and across-language was explored with DRM lists. Native Portuguese speakers studied sixteen lists: eight Portuguese (L1), eight English (L2). The recognition test included studied, critical and unrelated words in both languages. Critical words could match (within-) or mismatch (across-) the language used to present their lists at study. Participants were instructed to recognize studied words only when presented in the same language at study and test. Results showed FR in both within- and across-language conditions. Specifically, false memories were higher in the within-language condition than in the across-language condition. Furthermore, Portuguese-Portuguese (L1) FR was higher than English-English (L2) FR. Also, there were significant differences between the low rates of FR in across-language conditions (Portuguese-English > English-Portuguese).

31. Efeitos da fluência do processamento e intervalo de retenção na ilusão de verdade

Daniela Rosendo and Pedro B. Albuquerque
Universidade do Minho

A Ilusão de Verdade traduz-se em afirmações repetidas serem avaliadas como mais verdadeiras do que afirmações não-repetidas. A exposição repetida a frases faz com que estas sejam processadas mais fluentemente, produzindo julgamentos de veracidade superiores. No nosso estudo os participantes começaram por ler frases - apresentadas na totalidade ou palavra-a-palavra - e fizeram julgamentos de aprendizagem das mesmas. Sete ou 14 dias depois, foi pedido aos participantes que realizassem uma tarefa de reconhecimento e avaliassem frases (repetidas vs. não-repetidas) quanto à sua veracidade. Os resultados evidenciaram o efeito de Ilusão de Verdade e também o efeito do intervalo de retenção na memória. Mostraram ainda a inexistência de efeito de fluência do processamento na avaliação da veracidade.

32. Gender differences in the processing of romantic versus sexually explicit stimuli: findings from an automatic attention task

Joana Carvalho (1,2), Oleg Czop (2,3), Marta Rocha (4,5), Pedro Nobre (2), and Sandra Soares (4,5,6)
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The aim of the present study was to test gender differences in the processing of sex stimuli and to evaluate if such differences emerge during the automatic or controlled phase of assessment. The current study further tested the mediating role of sociosexuality in expected gender differences. Twenty-six women and 30 men performed an automatic attention task, with sexually explicit stimuli versus romantic stimuli displayed as distractors. The experiment was followed by the subjective evaluation of the pictures (valence, arousal, and subjective sexual arousal). Findings revealed that gender differences emerged at the controlled phase only. Also, gender differences were mediated by sociosexuality, excepting for sexual arousal to explicit pictures, where men reported significantly higher scores, regardless of sociosexuality.

33. A relação entre o ciúme sexual e emocional e a violência nos relacionamentos íntimos

Maria Mariana Afonso and Joana Arantes
Universidade do Minho

A violência nos relacionamentos íntimos é um assunto que tem bastante destaque na literatura, uma vez que uma grande parte da população é vítima de agressões por parte dos seus parceiros (e.g., Nguyen et al., 2013). O nosso estudo pretende relacionar o ciúme sexual e emocional com a violência nos relacionamentos íntimos. Para isso, cada participante preenchia um questionário demográfico, a Escala de Violência nas Relações Íntimas, a Escala de Ciúme Sexual e Emocional (ECSE) e um conjunto de Dilemas (Shackelford et al., 2004). A amostra foi constituída por 714 participantes, com idades compreendidas entre os 18 e os 82 anos. Os resultados mostraram, entre outras coisas, que os homens apresentavam níveis mais elevados de ciúme sexual e as mulheres níveis mais elevados de ciúme emocional.

34. A terceira pessoa num relacionamento íntimo: o papel da personalidade, infidelidade e auto-estima

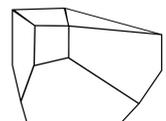
Tânia Perdigão e Joana Arantes
Universidade do Minho

Estudos mostram que uma percentagem significativa dos indivíduos são infiéis quando se encontram num relacionamento amoroso (Barros & Arantes, 2017). Numa relação extradiádica estão envolvidos três indivíduos, sendo eles o infiel, a vítima e a terceira pessoa. Porém, são escassos os estudos que se debruçam sobre a terceira pessoa num relacionamento amoroso. No nosso estudo recrutamos 1117 participantes, com idades compreendidas entre os 18 e os 63 anos. Além de responderem a questões sobre o seu historial de envolvimentos amorosos, os participantes eram também questionados sobre as suas atitudes em relação à infidelidade, personalidade e auto-estima. Os resultados mostraram que aproximadamente 1/3 dos participantes já tinha sido a terceira pessoa num relacionamento amoroso, sendo que estes eram mais extrovertidos e abertos à experiência mas menos amáveis. Além disso, relatam atitudes mais positivas em relação à infidelidade. Não se encontraram diferenças no que diz respeito à auto-estima.

35. O efeito da atratividade na percepção temporal: um estudo de speed dating

Margarida Pinto and Joana Arantes
Universidade do Minho

Estudos anteriores sugerem que existe um efeito da atratividade física na percepção temporal (e.g., Arantes et al., 2013). O objetivo deste estudo é analisar a relação entre a atratividade e a percepção do tempo utilizando uma metodologia mais realista, o speed dating. Para isso, realizamos duas sessões de speed dating, perfazendo um total de 374 encontros. Os participantes avaliaram a atratividade dos potenciais parceiros antes e depois de cada encontro. Além disso, no final de cada encontro era também pedido aos participantes que estimassem a sua duração. Os resultados sugerem que, para as mulheres, quanto mais atraente o parceiro é, maior a duração percebida do encontro. Pelo contrário, para os homens, os encontros com parceiras muito atraentes são percebidos como mais curtos do que encontros com parceiras pouco atraentes. Estes resultados podem ser explicados à luz da perspetiva evolutiva.



36. Translation and validation of Attitudes Regarding Bisexuality Scale – Female/Male Version (ARBS-FM) to the Portuguese population

Verónica Gomes and Joana Arantes
University of Minho

The discrimination against individuals with non-traditional sexual orientations has become a major problem in our society. The manifestations against certain sexual orientations contribute as negative attitudes towards sexual minorities (Rye & Meaney, 2010). The purpose of this article is to translate and validate the Attitudes Regarding Bisexuality Scale – Female/Male Version (ARBS-FM) for the Portuguese society, which allows the assessment of attitudes about bisexuality, in homosexual and heterosexual individuals (Mohr & Rochlen, 1999). We collected a sample of 571 participants, who answered an online questionnaire with demographic questions, ARBS-FM, Emotional Promiscuity Scale and the revised Sociosexual Orientation Inventory. The validation of the ARBS-FM was successful and results showed, among other things, that older individuals tend to have more negative attitudes toward bisexuality.

37. Further explorations on the effect of attractiveness on attention, memory and time perception

André Silva, António Filipe Macedo, Pedro B. Albuquerque, and Joana Arantes
Universidade do Minho, Liverpool John Moores University

Our research has shown that attractive faces are attended more and produce more truthful and false recognitions; and that presentation duration of attractive males is overestimated. But do attention, memory and time perception work independently or constitute a united system to enhance human reproductive success? Participants were first presented with matrices of opposite-sex faces while their eye-movements were recorded. Then, participants completed a recognition task and had to estimate the duration of either a neutral stimulus or a face that could be attractive or unattractive, and a new or previously seen face. Results show no effect of attractiveness on both attention and time perception, but attractive faces still produce higher number of recognition responses regardless of attention.

38. The development of a Portuguese Face Database

Mafalda Alves and Joana Arantes
Universidade do Minho

Many studies use photographs of human faces to investigate basic human processes. However it is not always easy to find a face database that suits our research questions. Therefore, the main aim of this study was to develop a Portuguese face database to be used in scientific research. We collected more than 150 high-resolution and standardized photographs of male and female faces. In addition to a neutral face, participants were asked to smile, laugh, do an angry face, a sad one. All photos were then assessed in terms of their attractiveness.

39. Measuring personality traits with short scales: Examining the psychometric properties of the Portuguese Ten-Item Personality Inventory

Andreia Nunes, Teresa Limpo, César Lima, and São Luís Castro
Neurocognition and Language Group, Faculty of Psychology and Education Science, University of Porto

Experimental research requires control of variables that may threaten the internal validity of experiments. The importance of controlling participants' personality traits prompted the development and cross-language validation of brief scales, such as the Ten-Item Personality Inventory (TIPI). Our study examined the psychometric properties of the Portuguese version of TIPI (N = 333). The results revealed (1) acceptable reliability coefficients (alphas > .39); (2) high convergent validity with the Big-Five Inventory ($r_s > .60$); (3) correlations with other constructs (viz., self-esteem, aggressiveness, positive/negative affect) in the expected direction; and (4) good 4-week test-retest reliability ($n = 81, r > .71$). Overall, the Portuguese TIPI seems a reliable and valid alternative to long personality measures, and thus a valuable instrument in experimental research.

40. Análise dos padrões de movimento ocular numa tarefa de pesquisa visual "Onde está a Wally"

Pedro J. Rosa (1,2,3), Ana Cerqueira (1), Mafalda Gomes (1), Joana Matos (1), e Daniel Holmes (1)
(1) EPCV/UULT; (2) COPELABS; (3) CIS-ISCTE/IUL

A tarefa de pesquisa visual permite avaliar processos cognitivos básicos, tais como a atenção e memória. O presente estudo teve como objetivo avaliar o comportamento ocular durante a apresentação da tarefa "Onde está o Wally" e analisar a capacidade preditora de métricas temporais (duração média sacádica, desvio-padrão médio sacádico e duração média de fixação) na performance da tarefa. O comportamento ocular de 30 voluntários foi registado, de forma contínua, durante a apresentação de dois cenários de semelhante complexidade visual. Os resultados revelaram que os indivíduos que extraíram mais informação durante a fixação realizaram a tarefa mais rapidamente, embora com um direcionamento similar do foco atencional. A análise dos movimentos oculares pode, implicitamente, fornecer informação mais detalhada sobre os processos atencionais.

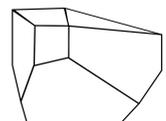
41. A análise do esforço cognitivo através da atividade pupilar em tarefas de pesquisa visual "Onde está o Wally?"

Pedro J. Rosa (1,2,3), Andreia Costa (1), João Fiúza (1), Ana Cerqueira (1), e Joana Matos (1)
(1) EPCV/UULT; (2) COPELABS; (3) CIS-ISCTE/IUL

Estudos com a tarefa de pesquisa visual "Onde está o Wally" têm permitido entender, como a informação de um cenário, com diversos elementos distratores, é extraída. No entanto, os estudos têm centrado a sua análise nos movimentos extraoculares, com enfoque reduzido nos movimentos intraoculares (atividade pupilar). O incremento da complexidade, de acordo com a teoria do esforço cognitiva, exige maiores recursos atencionais e mnésicos, podendo ser quantificada através da pupila. O presente estudo teve como objetivo analisar a atividade pupilar, de 31 voluntários, durante a apresentação aleatória de três cenários "Onde está o Wally" com diferentes níveis de complexidade (objetiva e subjetiva). Os resultados revelaram que o pico de dilatação e a amplitude pupilar variam em função da complexidade.

42. Análise oculométrica na deteção de ameaça biologicamente relevante: um estudo com imagem morphing combinado com eye tracking

Pedro J. Rosa (1,2,3), António Gonçalves (1), Rita Santos (1), Domingas Moreira (1), e Teresa Araújo (1)
(1) EPCV/UULT; (2) COPELABS; (3) CIS-ISCTE/IUL



De acordo com Eysenck (1992), indivíduos com maior ansiedade tendem a detetar facilmente potenciais estímulos ameaçadores, uma vez que o campo perceptivo é automaticamente varrido e atenção é atraída para uma potencial ameaça. Com base nisso, um paradigma de image morphing, combinado com eye tracking, foi aplicado a 80 voluntários para perceber a importância dos movimentos oculares na deteção de ameaça biologicamente relevante. Os resultados revelaram um menor tempo de latência e menor percentagem de acertos no grupo com maior ansiedade a cobras, no entanto, não se verificou um padrão ocular diferente entre grupos. Em conjunto, os resultados sugerem que a deteção de ameaça pode estar mais relacionada à sensibilidade a características específicas de estímulos relevantes do que a hipervigilância.

43. Sistema de Realidade Aumentada na avaliação psicofisiológica do medo

Susana Brás, Sandra C. Soares, Telmo Cruz, Bernardo Marques, Cláudia Dantas, Nuno Fernandes, e José Maria Fernandes
IEETA/ DETI CINTESIS-UA/ DEP Universidade de Aveiro

Augmented Reality (AR) has been used in exposure-based treatments of anxiety disorders. However, other studies don't measure the physiological correlates of the fear response. We tested the AR system's feasibility integrated in a mobile and wearable device for assessing the psychophysiological mechanisms involved in fear responses in real life contexts. Specific phobia was used as a model. We presented stimuli using AR and measured the physiological response (heart rate, reaction and recovery). Our results suggest that physiological correlates of the fear response are reflected both in the intensity of heart rate as well as in the time needed to react and recover after exposure. This was especially evident in the physiological responses of phobic individuals when reacting to phobic stimulus.

44. Psychophysiology assessment tool using Virtual Reality

Bernardo Marques, Susana Brás, Sandra Soares, and José Fernandes
IEETA/DETI CINTESIS-UA/DEP Universidade de Aveiro

The treatment of specific phobias is gradually changing and there are works, which report Virtual Reality exposure to be as effective, when compared to in vivo exposure. We propose Veracity, a system for the monitoring of individuals. The selected case study was the phobias, more specifically, spider phobia. The system implementation allows the acquisition of multimodal information, when the individuals are confronted with a scenario that uses hand gesture combined with Virtual Reality, to force stimulus and capture the related data (ECG, HR, VIDEO) using external resources and a smartphone application. In a one participant trial, it was possible to observe the alterations induced in the HR median and dispersion when faced a scenario with and without the spiders.

45. Picking up an innocent at 100 ms: The P100 component as a neuromarker of false positives in eyewitness testimony

Pedro Bem-Haja (1), Isabel M. Santos (1), Hugo de Almeida (2), Mariana Carrito (3), Beatriz Oliveira (1), and Carlos F. Silva (1)
(1) CINTESIS.UA - Center for Health Technology and Services Research, University of Aveiro; (2) Instituto Superior de Contabilidade e Administração de Aveiro; (3) William James Center for Research - ISPA

Errors in eyewitness testimony are frequent and problematic, due to the ethical and social impact of false positives. As an attempt to reduce the number of errors, it has been suggested that identification markers based on methodologies like ERPs should be developed. Twenty-nine participants viewed crime videos, each followed by an interference task and a sequential lineup. The identification of a distractor elicited a greater amplitude of the P100 than the correct rejection of a distractor. Source estimation analyses indicated that the act of identifying a distractor is, in the P100 latency, related to a stronger activation of the ventromedial and middle frontal cortices, areas usually involved in false memories, suggesting an early neural detection of false positive identifications.

46. It's time to track the thief: The effect of synchrony effect in dwell time on criminal faces during a theft video

Pedro Bem-Haja (1), Isabel M. Santos (1), Hugo de Almeida (2), Mariana Carrito (3), Beatriz Oliveira (1), and Carlos F. Silva (1)
(1) CINTESIS.UA - Center for Health Technology and Services Research, University of Aveiro; (2) Instituto Superior de Contabilidade e Administração de Aveiro; (3) William James Center for Research - ISPA

The influence of the synchrony effect (congruence between chronotype and time-of-day) on the mnemonic and attentional performance is well documented. However, studies that relate the synchrony effect with identification performance on lineups are few and focused on recognition. Thirty-four participants watched eight theft videos, each followed by an interference task and suspect recognition on a simultaneous lineup at their optimal time-of-day (synchronized) or at their non-optimal time-of-day (unsynchronized), coupled with eyetracking recordings. The synchrony between chronotype and time-of-day proved to be a significant predictor of the dwell time on the suspect's face at encoding. Importantly, synchrony and dwell time were significant predictors of accuracy in recognition. This result alerts to the importance of the synchrony effect on eyewitness performance.

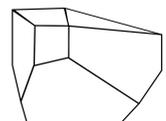
47. Exploring the relation between chronotype and training schedule in elite football players

Pedro Bem-Haja (1), Sandro Carriço (2), Francisco Calvete (2), Bruno Mendes (2), Pedro F. S. Rodrigues (1), Josefa N. S. Pandeirada (1), and Carlos F. Silva (1)
(1) Departamento de Educação e Psicologia, Universidade de Aveiro; (2) BenficaLab

Humans present circadian fluctuations—an individual difference that has been termed “Chronotype”—that influence their physical and mental health. This work explored how chronotype interacts with the physical performance of players from an elite football team. Specifically, we explored the performance of two players with similar age and training demands but with opposite chronotypes. Objective measures of performance were obtained using GPS technology during four consecutive days of morning training. Chronotype was assessed via a self-report questionnaire. Performance of the morning-type player was better than that of the evening-type player, even when considering other relevant variables. The results suggest that the synchrony between the player's chronotype and the period when the training occurs might have an effect on his performance.

48. Rumination Room: Um procedimento que combina ativação do controlo executivo e exposição a pensamentos ruminativos

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Centro de Investigação em Psicologia (CIPsi), Escola de Psicologia, Universidade do Minho



A ruminação consiste em longas cadeias de pensamento auto-focado, negativo, cíclico e repetitivo. Este processo cognitivo desadaptativo pode ser mantido por défices no controlo executivo que comprometem a capacidade dos indivíduos para ignorar informação emocional. Neste estudo pretendemos testar o impacto na ruminação de um procedimento que combina ativação do controlo executivo e exposição auditiva a pensamentos ruminativos. 120 participantes foram distribuídos aleatoriamente por três condições: 1) ativação do controlo executivo e exposição a pensamentos ruminativos; 2) ativação do controlo executivo e exposição a pensamentos neutros e 3) ativação do controlo executivo. Resultados preliminares parecem indicar que potenciar a capacidade para usar o controlo executivo poderá reduzir a tendência ruminativa e que o conteúdo dos estímulos auditivos tem efeito diferenciado.

49. Wild Children And Civilized Adults: Studies on the infrahumanization of children

João O. Santos and Sara Hagá

Faculdade de Psicologia Universidade de Lisboa

Children are not (yet) fully mature human beings. Does this mean that children are perceived as less human than adults? We tested this hypothesis using 3 different paradigms. In Study 1, participants considered typically human (vs. typically animal) words to be more related with adults than with children, $r=.71$. In Study 2, participants tended to attribute more human words to adult faces than to child faces, $F(1,59)=3.28$, $p=.07$. In Study 3, using a mouse-tracking paradigm, participants' speedy categorizations of adult and child faces as "person" (vs. "chimpanzee"), if anything, revealed that, at this level, children are not perceived as less human than adults, $F(1,44)=4.33$, $p=.04$. Implications for the infrahumanization of children hypothesis and new directions for research will be discussed.

50. O impacto da presença de outros no uso de estereótipos

Pedro Figueira and Teresa Garcia-Marques

William James Center for Research - ISPA, Instituto Universitário

Desde Triplet (1898) que a literatura tem demonstrado que contextos sociais afectam o comportamento e mais recentemente as características do processamento cognitivo. Entre estes estudos procurou-se perceber se a presença de outros tem impacto quer na activação quer na monitorização da activação dos estereótipos. Dados obtidos têm sido contraditórios sugerindo que na presença de outros existem mais erros induzidos pelo estereótipo de negro numa tarefa de identificação de pistola vs ferramenta (Lambert et al. 2003) e menores índices de preconceito medido por um IAT (Castelli & Tomelleri, 2008). Nesta comunicação confrontamos estes dois resultados num mesmo estudo, focando o papel que a presença dos outros pode ter na activação de normas igualitárias.

51. O processamento privilegiado de estímulos evolutivamente relevantes depende de informações de baixa frequência espacial

Nuno Gomes (1), Samuel Silva (2), Carlos F. Silva (3), and Sandra C. Soares (1) (3) (4)

(1) *William James Center for Research, ISPA – Instituto Universitário, Portugal*; (2) *DETI / IEETA – Universidade de Aveiro, Portugal*; (3) *Departamento de Educação e Psicologia, Universidade de Aveiro, Portugal*; (4) *Departamento de Neurociências Clínicas, Divisão de Psicologia, Instituto Karolinska, Suécia*

Estímulos ameaçadores apresentam acesso privilegiado à consciência. Esta vantagem foi relacionada com uma via subcortical ("low-road") que conduz informações de baixa frequência espacial (LSF), encontrando-se relacionada com o processamento de estímulos com elevado peso evolutivo (e.g., cobras). Contudo, dados com estímulos sociais (faces evidenciando medo) mostraram que esta vantagem assenta em informações de alta frequência (HSF), questionando a relevância da "low-road". Este estudo avaliou se este efeito se estende a estímulos biologicamente relevantes (cobras e aranhas; vs. pássaros), filtrando os estímulos em LSF e HSF e investigando em que tipo de informação assenta a vantagem referida. Os resultados evidenciaram que apenas a vantagem das cobras se encontra relacionada com LSF, arguindo a favor da importância evolutiva da "low-road"

52. Crossmodal modulatory effect on the perception of a bistable image: the conveyance of semantic congruency by using tones as modulators

Guillermo Andrés Rodríguez (1), Henry Castillo (2), and Pedro J. Rosa (3,4,5)

(1) *Universidad de Bogotá Jorge Tadeo Lozano*; (2) *Universidad de San Buenaventura de Medellín*; (3) *CIS-ISCTE/IUL* (4) *EPCV/ULHT*; (5) *COPELABS*

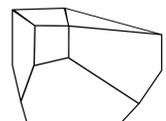
Bistable images provide two possible interpretations. It is possible to modulate the perception of those images by providing auditory stimulation. Thirty-five healthy volunteers had to view the bistable image 'My wife or my mother-in-law' whilst listening to voices of two women. The bistable image was presented on the monitor of an Eye-Tracker device with a refresh rate of 60 Hz. Basically the study had the aim of establishing the effect of auditory stimuli on the perception of the bistable image. The results show there was a modulatory effect that impacted the perception of the bistable image. Basically, the viewers perceived for a longer time the percept that was congruent with the semantic content of the voice they were listening to.

53. Rhythm skills in 5- to 6-year-old children: The role of cognitive functions

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Recent studies indicate that the rhythmic skills of adults are not unitary: rhythm sequencing dissociates from synchronization with a beat, suggesting that different cognitive functions subtend these two skills. We examined the performance of 72 children (6.32 +/- 0.35 years) in rhythm sequencing (discrimination and reproduction) vs. synchronization tasks, as well as in global cognition and auditory working memory tests. Although rhythm sequencing correlated with synchronization, the underlying cognitive functions dissociated: rhythmic sequencing correlated with auditory working memory, while synchronization did not. Our results suggest that working memory demands may subtend the dissociation between rhythmic skills that becomes visible in adulthood.



54. Staying focused: Cognitive performance impaired by the environment in elderly but not in young-adults

Pedro F. S. Rodrigues (1) and Josefa N. S. Pandeirada (1,2)

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Our work aimed to investigate the effect of the visual surrounding environment in the cognitive performance of elderly and young adults. For this end, in individual sessions, 64 elderly and 64 young adults participated in two sessions with an interval between 14-23 days: One in a high-load and the other in a low-load visual environment. In each session, participants performed two attentional and two memory visuospatial tasks. The order of the tasks and of the environmental manipulation was counterbalanced across participants. Overall, the elderly performed worse than the young-adults, and their cognitive performance was impaired in the high-load environment in three of the four tasks. No such effect was obtained in the young-adults. Potential applications of this more ecological paradigm are discussed.

