



PROGRAMA E RESUMOS X ENCONTRO APPE 2015

Universidade do Algarve, 17 – 18 de abril de 2015

COMUNICAÇÕES ORAIS

Sexta-feira, 17 de abril de 2015

08:30 – 09:00 Abertura do Secretariado

09:00 – Afixação de Posters

09:00 – 09:30 Boas Vindas

Pedro Ferré da Ponte, Vice-Reitor para a Ciência, Cultura e Internacionalização da Universidade do Algarve

Miriam Tavares, Diretora da Faculdade de Ciências Humanas e Sociais, Universidade do Algarve

Maria São Luís Castro, Presidente da Associação Portuguesa de Psicologia Experimental

Alexandra Reis, Comissão organizadora do X Encontro da Associação Portuguesa de Psicologia Experimental

09:30 – 10:45 Sessão 1, moderada por Tânia Fernandes

Brain morphology substrates of preserved vocal emotion recognition in ageing. César Lima, Nadine Lavan, Samuel Evans, São Luís Castro & Sophie Scott. *Centro de Psicologia da Universidade do Porto e Institute of Cognitive Neuroscience, University College London.*

Thirty-four older adults (Mage = 59.2 years) and 23 younger ones (Mage = 29.6 years) completed an emotion recognition task in nonverbal vocalizations (e.g., laughter). Age-related decrements were observed for positive and negative emotions, but older adults' performance varied considerably: those performing above the median reached youth-like accuracy levels. Participants underwent a structural MRI scan, and voxel-based morphometry revealed neuroanatomical differences between older adults showing preserved emotion recognition and those showing decline: they have increased grey matter volume in bilateral temporal systems known to support vocal communication, and attenuated structural decline in relation to younger adults. These differences do not include the primary auditory cortex – they are likely to reflect inter-individual variability in ageing trajectories of systems supporting emotion-specific processes. *E-mail* de correspondência: cflima@fpce.up.pt

(Não)extinção da resposta de medo a estímulos biologicamente relevantes apresentados subliminarmente, após condicionamento Pavloviano supraliminar. Pedro Joel Mendes Rosa^{1,2}, Francisco Esteves³ & Patrícia Arriaga⁴. ¹Copelabs/ULHT, ²ISMAT, ³Mittuniversitetet, Suécia e ⁴CIS/ISCTE-IUL.

As respostas de medo condicionado a estímulos biologicamente relevantes (e.g. cobras), são mais difíceis de extinguir do que a estímulos irrelevantes. Contudo, são raros os estudos que avaliam este efeito a um nível

subliminar. ERPs foram registados utilizando 20 eléctrodos, em 20 participantes, divididos em dois grupos experimentais [Grupo I (cobras CS +; neutra CS-) vs Grupo II (cobras CS-; neutras CS +)]. A extinção da resposta de medo foi avaliada através da amplitude em N1. Após uma fase de condicionamento supraliminar, 320 imagens foram, subliminarmente, apresentadas. Os resultados revelaram maior amplitude em N1 nas cobras condicionadas do que nas cobras não condicionadas. No entanto, não foi encontrado um efeito de extinção, em qualquer das imagens, nos grupos experimentais. *E-mail* de correspondência: pedro.rosa@ulusofona.pt

Social Presence and Emotional Stroop Performance. Alexandre Fernandes, Teresa Garcia-Marques, Ricardo Fonseca & Marília Prada. *William James Centre for Research, ISPA - Instituto Universitário; Department of Social and Organizational Psychology, ISCTE - Instituto Universitário de Lisboa.*

The impact of social presence on our behavior is well document. Supposedly because others' presence consumes our cognitive resources executive functions of our working memory system are increased in such contexts. Here we address this hypothesis using two emotional stroop tasks that change targets and irrelevant stimuli from emotional words to emotion face expressions. Data from two experiments, the second with electromyographic (EMG) measures, replicates and extends evidence suggesting an increase cognitive control over interference, such that index of stroop like interference is reduced. Delta functions show control to be exerted in more late processing stage than what would be assumed by a mere focus of attention assumptions. EMG data supports the assumption that executive control acts over emotional processing. *E-mail* de correspondência: alexandre_fernandes@live.com.pt

Is there a sunk cost effect in intimate relationships? Sara Rego, Joana Arantes & Paula Magalhães. *Universidade do Minho.*

The sunk cost effect occurs when a prior investment leads to a continuous investment in a failing option. Our aim was to study the role of the sunk cost effect in intimate relationships. In Experiment 1, participants (N=902) were presented with an unhappy relationship scenario in which they needed to make a choice: stay or end the relationship. Results showed that participants tended to stay more in the relationship when money and effort, but not time, had been previously invested. In Experiment 2 we manipulated the time investment using a different methodology. Specifically, instead of having a dichotomous decision, participants (N=275) choose how much time they would be willing to invest in the relationship. Results revealed a sunk cost effect. *E-mail* de correspondência: joana.arantes@psi.uminho.pt

10:45 – 11:15 Intervalo

11:15 – 12:30 Sessão 2, moderada por Pedro Albuquerque

Temporal discrimination and the role of stimulus frequency and response payoff. Armando Machado, Marco Vasconcelos, Thais Ribeiro & Catarina Vila Pouca. *Universidade do Minho.*

How animals and people discriminate stimulus duration remains controversial. In this talk, we summarize a set of studies that examined how stimulus frequency and response payoff affect temporal discrimination. We exposed pigeons to a temporal bisection task wherein after a short or long stimulus sample the bird chose between a Red and a Green comparison key; it received food for choosing Red after the Short, or Green after the Long, sample. Then, we manipulated the frequency of each stimulus and the payoff probability following each correct response. We were interested in how these two manipulations affected the temporal generalization gradient, in general, and the point of subjective equality, in particular. We will describe the results and discuss them in the light of two leading models of timing, the Scalar Expectancy. *E-mail* de correspondência: arandom@psi.uminho.pt

Function and mechanism in the study of decision making. Marco Vasconcelos. *School of Psychology, University of Minho.*

In this talk, I will illustrate how functional and mechanistic approaches to the study of animal behavior can and should be combined. I will focus in some functionally inspired models to illustrate how a functional approach to behavior complements rather than competes with the mechanistic approach prevalent in the psychological sciences. Indeed, I believe that cross-fertilization between evolutionary biology, particularly behavioral ecology, and animal psychology is the way forward to fulfill Tinbergen's (1963) desideratum. I will discuss three case studies that illustrate my claim: the classical optimal foraging model known as the Marginal Value Theorem, the self-control problem, and choice. *E-mail* de correspondência: mvasconcelos@psi.uminho.pt

Subcortical influences in tool processing - the case for the magnocellular processing under high temporal frequencies. Jorge Almeida, Bradford Mahon, Frank Garcea & Stephanie Kristensen. *Proaction lab, Faculty of Psychology and Educational Sciences, University of Coimbra.*

Parvocellular (P) and magnocellular (M) pathways differ in their temporal resolution: M-cells prefer fast moving stimuli, whereas P-cells prefer static or slow moving stimuli. Here, we investigated the role of M and P-pathways on manipulable object recognition. We collected fMRI data using rapid serial visual presentation of tool and animal images at different presentation rates to bias processing towards the M or P-pathways. Previously we showed that tool preferences in the inferior parietal lobule (IPL) are driven by P-inputs, whereas in the superior parietal lobule (SPL) are driven by M-input. We will discuss how IPL and SPL respond to the different presentation rates. These findings will illustrate how these anatomical pathways influence the organization of the tool processing networks. *E-mail* de correspondência: kristensen@fpce.uc.pt

Motivated reasoning in the prediction of sports outcomes and the belief in the "hot hand". João Braga, André Mata, Steven J. Sherman, & Mário B. Ferreira. *Faculdade de Psicologia da Universidade de Lisboa.*

Past research has shown that whether a streak of binary outcomes is predicted to continue – hot hand (e.g., Gilovich, Vallone & Tversky, 1985) – or to reverse – gambler's fallacy – depends on several variables such as the perceived intention of the generating mechanism. In two studies explore the role of predictors' motivation to observe a certain outcome after a streak in the context of a basketball game. We found that positive streaks lead participants to predict the streak's continuation. However, negative streaks lead to predictions of its end. The effect of motivation on predictions of the next outcome seems to be mediated by a serial path via the belief in the hot hand and the causal attributions to the teams at play. *E-mail* de correspondência: jobraga@fp.ul.pt

12:30 – 14:00 Intervalo

14:00 – 15:30 Sessão 3, moderada por Selene Vicente

Processamento Holístico de Palavras. Paulo Ventura, Isabel Leite, Alan Wong & Tânia Fernandes. *Faculdade de Psicologia da Universidade de Lisboa.*

Estudou-se o processamento holístico de palavras escritas utilizando um paradigma de emparelhamento sequencial das metades esquerdas de palavras bi-silábicas de quatro letras com manipulação da congruência das metades direitas das palavras. Mais concretamente, avaliou-se se o processamento holístico de palavras é um fenómeno atencional abstracto (atenção para todos os componentes da palavra) ou, pelo contrário, é um fenómeno dependente de características superficiais das palavras. Contrastaram-se duas fontes: notera, que simula a escrita manuscrita vs. courier. Utilizou-se ainda uma manipulação de alternância minúsculas/maiúsculas. Os resultados apontam para o carácter abstracto do processamento holístico de

palavras. Num outro conjunto de experiências, verificou-se ainda que este fenómeno não depende das características fonológicas das palavras. *E-mail* de correspondência: paulo.ventura@gmail.com

A cultural side effect: Mirror suppression in object recognition is triggered by letter knowledge in preschoolers. Tânia Fernandes¹, Isabel Leite² & Régine Kolinsky^{3,4} *Universidade de Lisboa¹, Universidade de Évora², Université Libre de Bruxelles³ e Fonds de la Recherche Scientifique-FNRS⁴*

Since when, during reading development, does literacy impact object recognition and orientation processing? Is this impact specific to mirror images (e.g., d - b) or also apparent for other transformations (e.g., plane-rotations: d - p)? To answer these questions, forty-six 5-7-year-old preliterate preschoolers and first graders performed two same-different matching tasks tapping explicit (orientation-based) vs. automatic (shape-based) orientation processing of geometric shapes. On orientation-based judgments, first graders outperformed preschoolers. Preschoolers had the strongest difficulty in discriminating mirrored pairs. On shape-based judgments, first graders were slower for mirrored than identical pairs, and even slower than preschoolers. This mirror cost, a side-effect of learning to read, was allied with letter knowledge in preschoolers. Thus, mirror suppression emerges even before formal literacy instruction and generalizes to non-linguistic material. *E-mail* de correspondência: tpfernandes@fp.ul.pt

On the nature of consonant/vowel differences in letter position coding: Evidence from developing and adult readers. Montserrat Comesaña, Manuel Perea & Ana Paula Soares. *CIPsi, School of Psychology, University of Minho.*

Several experiments on visual-word recognition reported sizeable transposed-letter priming effects for consonants (caniso-CASINO<caviro-CASINO), but not for vowels (anamil-ANIMAL=anomeI-ANIMAL). If this effect originates early in orthographic processing, this would pose problems for the front-end of leading computational/mathematical models of visual-word recognition. The aim of the present experiments was to examine whether the consonant/vowel dissociation in letter position coding could be explained by phonological influences. To that end, four masked priming experiments at 50-ms stimulus-onset asynchrony were conducted with adults and children. The rationale was that, unlike adults, phonological influences do not arise with a 50-ms prime duration in children, thus the obtained priming effects would be orthographic. The results revealed that the consonant/vowel dissociation is phonological rather than orthographic in nature. *E-mail* de correspondência: mvila@psi.uminho.pt

Parafoveal preview benefit and parafoveal load cost in adult dyslexics. Susana Silva, Luís Casaca, Lóide Carvalho, Karl-Magnus Petersson, Luís Faisca & Alexandra Reis. *Universidade do Algarve.*

Skilled readers preprocess word n+1 while fixating word n. This allows them to shorten gaze times for word n+1 and it is called a parafoveal preview (PP) benefit. Dyslexics seem to lack PP benefit, but it is unclear whether parafoveal input is ignored, or if it is attended but generates visual-attentional interference (crowding). In the latter case, dyslexics' gaze times should suffer the cost of parafoveal input (parafoveal load). We measured the PP benefit and the parafoveal load cost of dyslexic and non-dyslexic subjects in a modified rapid automatized naming paradigm. The PP benefit differed across groups and correlated with word reading speed, while the parafoveal load cost did not. The results suggest that dyslexics have a narrow attention window. *E-mail* de correspondência: zanasilva@gmail.com

Different Languages, Different Processing: The native and the second languages cases. Catarina Azevedo, Margarida Garrido & Gün Semin. *CIS/ISCTE-IUL.*

In the present study we explore the assumption that language influences thought (Boroditsky, 2001). We argue that different languages (L1 Native vs. L2 Second-Learned) are related with different levels of processing, because they are embodied in different ways. L1 contextualized learning and use is associated with sensorimotor experiences to be encoded and further simulated (Pavlenko, 2005), and these experiences constitute a low-level feature of a situation (Maglio & Trope, 2012). Thus, L2 is expected to

trigger a higher-level of processing compared with L1. Ninety undergraduates wrote about a normal day in their lives either in L1 or L2 and completed the Behavior Identification Form (Vallacher & Wegner, 1989). Results revealed, as expected, a higher-level of processing in L2 (vs. L1). *E-mail* de correspondência: catarina.melo.azevedo@gmail.com

15:30 – 16:00 Intervalo

16:00 – 16:50 Conferência Plenária
Moderador: Karl Magnus Petersson

Peter Indefrey

(Heinrich Heine Universität Düsseldorf, Alemanha)

The twofold role of cognitive neuroscience in the study of bilingualism.

17:00 – 19:00 Sessão de Posters

18:30 – 19:30 Assembleia Geral da APPE

20:00 Jantar de Convívio (Tertúlia Algarvia – Praça Afonso III, Faro)

Sábado, 18 de abril de 2015

09:30 – 11:00 Sessão 4, moderada por Luís Faisca

New insights on false memories and associative processes. M.S. Beato, S. Cadavid & I. Rivas. *Universidad de Salamanca*.

The Deese/Roediger-McDermott (DRM) paradigm is often used to produce false memories. We examined whether the backward associative strength (BAS) would influence this false memory effect in lists of six words associatively related to a nonpresented critical word. The results showed that, even with only six words, lists produced high false recognition (FR) ($M=48\%$) and some of them showed very high FR (81%, IGLESIA: campana, parroquia, ermita, párroco, católica, capilla). Moreover, a significant positive correlation between BAS and FR was found. Furthermore, there were differences in FR according to the BAS. Particularly, High-BAS lists produced higher FR rates than Low-BAS lists. These findings suggest that BAS influences the magnitude of false recognition obtained in DRM paradigm, even in very short lists. *E-mail* de correspondência: msol@usal.es

Eliminação do efeito de inibição colaborativa: Estudos sobre a uniformização das estratégias de recuperação. Magda Saraiva, Pedro Albuquerque & Joana Arantes. *Universidade do Minho*.

A interrupção das estratégias de recuperação é usada para explicar o efeito de inibição colaborativa traduzido numa pior recordação dos grupos colaborativos face aos grupos nominais. Este estudo teve como objetivo perceber se o treino dos participantes numa estratégia de recuperação anulava a inibição colaborativa. Começamos por comparar o desempenho dos grupos colaborativo e nominal em tarefas de evocação livre e serial; e depois treinamos os participantes na mnemónica dos lugares. Os resultados revelaram a eliminação do efeito de inibição colaborativa na tarefa de evocação serial; e um aumento da evocação nos grupos nominal e colaborativo associado ao uso da mnemónica de lugares. Os resultados fornecem evidência para a interrupção das estratégias de recuperação como explicação da inibição colaborativa. *E-mail* de correspondência: magda.saraiva@gmail.com

"It's not the cards you're dealt, it's how you play the game": On the adaptive impact of retrieval on encoding. Pedro R. Marques, Leonel Garcia-Marques & Diana Orghian. *Faculdade de Psicologia da Universidade de Lisboa*.

We propose that repeated retrieval fosters learning of test requisites and guides subsequent encoding towards stimuli dimensions that better fulfill those requisites, boosting performance when test structure is stable or hindering it when it changes. In a Memory game participants had to study word pairs, being shown two cards at a time on their locations, and were tested on their memory with the requisites (manipulated between participants) being semantic (word recall) or spatial (card location), three times. If in a final test the requisites switch, a performance drop emerges (study 1) and response time advantage for studied words in free-association appears only for the semantic condition (study 2), due to the learnt disregard of semantic information in spatial condition. *E-mail* de correspondência: pedro.a.r.marques@gmail.com

Temporal dynamics of verbal fluency tasks in Autism Spectrum Disorder: Is there an initiation processes impairment? J.C. Carmo¹, E. Duarte¹, S. Pinho², F. Marques¹ & C. Filipe^{2,3}. ¹Faculdade de Psicologia da Universidade de Lisboa, ²CADIn - Centro de Apoio ao Desenvolvimento Infantil, ³Faculdade de Ciências Médicas da Universidade Nova de Lisboa.

We aim at evaluating the hypothesis that the reported discrepancy in the performance on verbal fluency in individuals with Autism Spectrum disorder (ASD) characterized by an overall word productivity impairment with yet normal clustering and switching abilities, may be due to an initiation deficit. In the present study we evaluate in two time intervals (0-30s and 31-60s) verbal fluency tasks in high-functioning ASD individuals and a matched comparison group as it is our main interest to evaluate the functioning of the initial automatic component of word retrieval. Directly supporting the idea that the discrepancy reported is due to an initiation deficit, we have found an abnormal performance for the ASD group only in the first time period. *E-mail* de correspondência: joanacostadocarmo@gmail.com

Volumetric analysis of cortical and subcortical regions in congenital deafness. Lénia Amaral, Ana Ganho-Ávila, Óscar Gonçalves & Jorge Almeida. *Universidade do Minho e Universidade de Coimbra*.

It has been shown that in congenitally deaf humans the Auditory Cortex (AC), predominantly on the right hemisphere, can be co-opted to process visual input. But how is visual information rerouted to AC? We performed a volumetric analysis of cortical and subcortical regions in deaf and hearing participants in order to find structures that could be responsible for the neuroplastic changes. The Heschl's Gyrus (i.e., primary AC) in deaf individuals was smaller than in hearing. More importantly, we show hemispheric asymmetries in the deaf but not in the hearing for the Thalamus and the Inferior Colliculus, such that the right counterpart was larger than the left. These subcortical regions may be responsible for neuroplastically rerouting visual information to the AC. *E-mail* de correspondência: lenia.alexandra@gmail.com

11:00 – 11:30 Intervalo

11:30 – 12:15 Conferência Prémio APPE 2014
Moderador: São Luís Castro

Jorge Almeida

(Faculdade de Psicologia e Ciências da Educação da Universidade de Coimbra)

Macroscopic organization of manipulable object knowledge: a window into semantics

12:30 Encerramento