

# PSYCHOLOGY AND AGEING RESEARCH LAB 2014 NEWSLETTER

SCHOOL OF SOCIAL SCIENCES AND PSYCHOLOGY  
UNIVERSITY OF WESTERN SYDNEY



## *Older adults more rational and less emotional in financial negotiations*

This research, published in the *Journals of Gerontology* (as well as DPS News), contributes to the field of behavioural economics, which assesses the way financial decisions are made by people as they interact with others.

Past research has found that older people have more control of their emotions, and the study set out to test whether this would mean that older adults make more rational financial decisions.

In the study, we asked a group of younger people with a mean age of 21 and an older group with a mean age of 74 to participate in the Ultimatum Game, an experiment where one participant is given the power to divide a set amount of money to share with someone else, who then decides whether to accept or reject the offer.



Critically, the players are aware that accepted offers – no matter how unfair – result in payouts, whereas rejected offers mean no-one is paid.

This is the first time this popular economic experiment has taken place where researchers have measured the responses of young and older adults while they interact with one another.

It's well known that young adults respond negatively to unfair offers and then reject them.

This study showed that older adults also report becoming angry at unfair monetary offers but do not act on this anger to the same extent as young adults.

The study finds older adults are more likely to accept unfair, or small, monetary offers, which means they are more likely to end up with some money rather than no money. According to economic game theory, these findings show the older adults acted more rationally than younger adults, who had less opportunity to make any money at all.

What this study suggests is that older adults are better at controlling their negative reactions, and as a result end up with more money in this financial negotiation.

More research is now needed to better understand the findings. It may be that older adults are being more generous because they know that accepted offers benefit not just themselves but also their negotiation partner. This would be consistent with socio-emotional selectivity theory, which holds that as people age they become more motivated to achieve emotionally fulfilling social goals. Alternatively, older adults may be making their decisions for more economically rational personal reasons because they realise that receiving some money, no matter how small, is better than receiving none. This would indicate that younger adults could learn a thing or two from seniors about financial decision-making.

Bailey, P. E., Ruffman, T., & Rendell, P.G. (2013). Age-related differences in social economic decision-making: the Ultimatum Game. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences*, 68, 356-363.



You have received this newsletter because you have generously volunteered your time to participate in one or more of our studies here at the University of Western Sydney.

Welcome to the first of our annual Newsletters to keep you up-to-date with the progress of our research. We hope you enjoy reading about some of what we have been doing. Please feel free to contact me if you wish to provide any feedback.

Best wishes,

Dr Phoebe Bailey

Email: [p.bailey@uws.edu.au](mailto:p.bailey@uws.edu.au)  
Tel. 02 9772 6230



**Australian Government**  
**Australian Research Council**

*We wish to acknowledge financial support from the Australian Research Council*

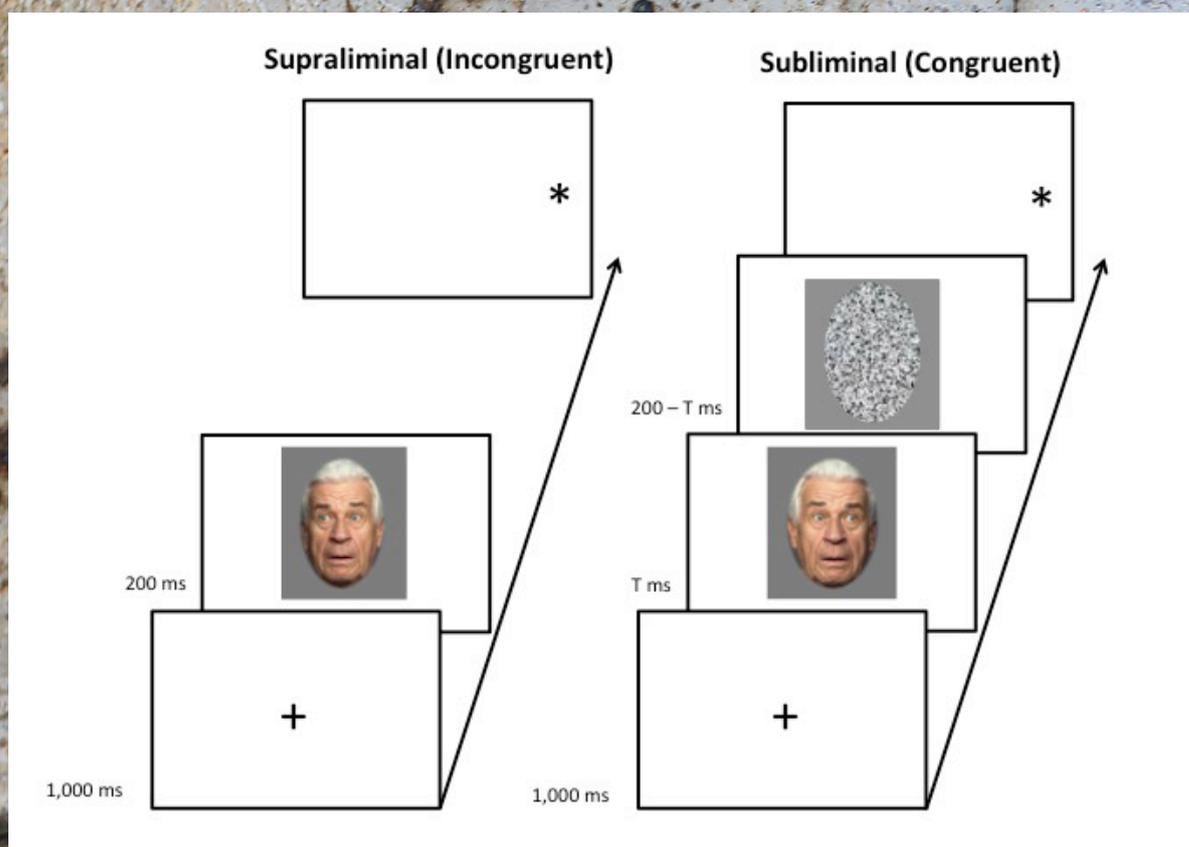
# SUBCONSCIOUS PERCEPTION

We naturally tend to look where someone else looks. This is called **gaze-directed attention** and is a ubiquitous component of everyday social interactions. It is also very important for achieving joint attention, which can be critical for successful social interaction.

Studies assess gaze-directed attention by showing participants a series of faces that are looking either to the left or to the right. Participants are then asked to indicate the location (left or right) of a subsequent target (see the asterisk in the Figure below).

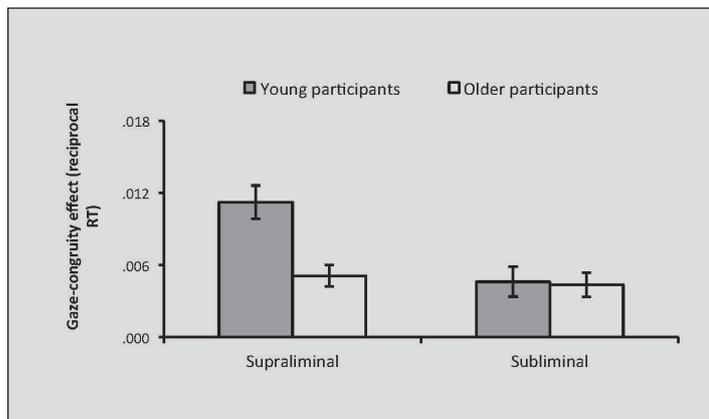
Sometimes the face looks towards the target (a congruent trial) and sometimes in the opposite direction (an incongruent trial). We can tell whether people are following gaze if they take longer to respond to incongruent relative to congruent trials. This is called the 'gaze-congruity effect'.

Taking into account reduced motor speed, and differing levels of visual acuity, previous research has shown that older adults are less likely than young to follow someone's gaze to achieve joint attention.



*The presentation time of the subliminal gaze-cue ( $T$ ) refers to 8.33 ms below each participant's individual threshold for awareness. In the supraliminal trial depicted, the target appears on the side incongruent with gaze direction, and in the subliminal trial, the target is congruent with gaze.*

# SUBCONSCIOUS PERCEPTION *continued*



We found that when the faces are processed automatically (i.e., subconsciously) and express emotion (i.e., fear and happiness), older adults do **not** have any difficulty following the gaze cue.

This is consistent with growing evidence that automatic processes are preserved with age relative to more cognitively demanding processes.

Interestingly, both age groups were more likely to follow the gaze of an older relative to younger face when the face had a neutral or happy (but not fearful) expression.



Among older adults, this joint attention with happy but not fearful faces is consistent with increased motivation to enhance mood and feelings of social connectedness, as posited by socioemotional selectivity theory. Participants might have also found the older faces to be more trustworthy.

Bailey, P. E., Slessor, G., Rendell, P. G., Bennetts, R. J., Campbell, A., & Ruffman, T. (in press). Age differences in conscious versus subconscious social perception: The influence of face age and valence on gaze following. *Psychology and Aging*, 29, 491-502.



---

# AUDITORY-VISUAL SPEECH PERCEPTION IN NOISE FOR YOUNGER AND OLDER ADULTS

---

One way we improve our ability to hear the person we are trying to speak with is by looking at their mouth as they talk. Generally, our brains are extremely good at combining the auditory (i.e. the sound of their speech) and visual speech information (e.g. their lip/mouth movements) we receive, which makes following a conversation (particularly in noisy environments) much easier to do.

## *Older adults **better** at using available auditory-visual speech information*

The primary aim of my research was to examine if the amount of benefit we receive from being able to hear and see the person talking is different for younger and older adults. Overall, I found that ageing had very little impact on our capacity to use the auditory and visual speech information. In fact, once differences in hearing loss were taken into account, I found that many of the older adults I tested were better at using the available auditory-visual speech information than the younger adults!



One theory to explain this result is that as we age, we accrue greater experience with using the auditory and visual input to support speech perception. As such, although hearing-loss might limit our ability to hear the person we are talking to, our brains become progressively better at using the combination of auditory and visual speech information to support speech perception overall.

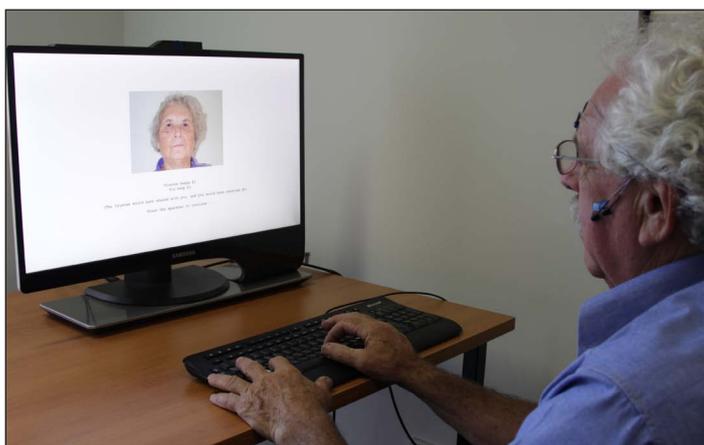
A conclusion to take from my research is that visual speech information has the potential to provide considerable benefit to support speech perception in noisy environments. So – be sure to look at the person you are talking to when conditions get noisy!

# FINANCIAL INVESTMENT STUDIES

*We have completed a series of studies that compare young and older adults' decisions to invest money. Here we describe the findings from just a couple of those studies:*

## **Study 1:**

Participants in this study were asked whether they would like to invest money with trustees who were shown to have a history of providing high versus low returns on investments. We found that older adults were more likely than young to invest with people who were not likely to provide a return on that investment. There was no age group difference in investing with trustees who were likely to provide a return. This finding was explained in terms of the age-related positivity effect, and particularly the reduced attention that older adults give to relatively negative information.



## **Study 2:**

This study, conducted by Honours student Bianca Webb, investigated the role of social closeness and trustworthiness in an investment task. It was found that young and older participants invest more money with socially close friends and family than socially distant people who are only acquaintances. Participants were also more likely to invest with trustworthy than untrustworthy individuals across repeated interactions. Most notably, however, older adults were more likely than young to invest in untrustworthy people (averaged across all of the social distance conditions). In addition, relative to younger adults, older adults were more likely to invest with more socially distant individuals. Both instances of increased investing with age were accounted for not by self-reported levels of generosity, but rather self-reported financial well-being. It appears that when people feel more financially secure they are more willing to take risks by investing money that may increase in value, but that might also result in a loss. Worryingly, this was particularly the case when older adults were investing with people who were showing themselves to be untrustworthy, or who they did not know well.

---

# BEING OVERWEIGHT ASSOCIATED WITH BETTER COGNITION AMONG OLDER ADULTS

---

**Dr Evelyn Smith** completed this research for her Clinical Masters in Psychology thesis at UWS in 2012. Evelyn had already completed her PhD in psychology at The University of Sydney, and will be commencing as a lecturer in the School of Social Sciences and Psychology at UWS in 2015.

Evelyn examined the link between body mass index and cognitive functioning in 406 individuals aged 74-94. The data for this study was drawn from the Sydney Memory and Ageing Study, and is published in *Journal of the American Geriatrics Society*.

## *The 'survivor effect'*

An association was found between being overweight, relative to normal-weight, and better cognitive function in older age. One potential explanation for this finding is that overweight individuals retain testosterone or estrogen in the body fat, which in turn is beneficial for cognitive functioning. It might also be that there is a 'survivor effect' in the sample whereby overweight and obese people are more likely to die at a young age, and the participants in this study might therefore have been healthier relative to younger overweight individuals.

---

Smith, E., Bailey, P. E., Crawford, J., Samaras, K., Baune, B. T., Campbell, L., Kochan, N., Menant, J., Sturnieks, D. L., Brodaty, H., Sachdev, P., & Troller, N. (2014). Adiposity estimated by dual energy x-ray absorptiometry and body mass index and its association with cognition in the elderly. *Journal of the American Geriatrics Society*, 62, 2311-2318.

---

## THE 2012 LAB



*Left to Right: Dr Ahmed Moustafa (co-supervisor), Agatha Trefeletti (Masters student), Brad Bowen (Masters student), Dr Phoebe Bailey (supervisor), Dr Evelyn Smith (Masters student), Shannon Gostelow (Honours student), and Caiti Lynch (Honours student).*

# GROUP TESTING

We recently completed our first large group testing sessions, with seven sessions involving 168 participants! Here are some snaps from just a couple of those sessions.

We are currently entering the huge amount of data that we collected for this study and we're looking forward to reporting on the findings in our next annual newsletter.



---

# NEW RESEARCH

---



*Left to Right: Tarren Leon, Michelle Maiuolo, and Gülten Benedek.*

2014/15 Summer Interns, Tarren Leon, Michelle Maiuolo, and Gülten Benedek, will be working on **Gambling Research**. These studies are being run together with UWS Clinical Psychology Professor **Craig Gonsalvez**.

The research will assess how physiological responses such as heart rate and skin conductance might differentially influence young and older adults' gambling choices. Tarren and Michelle are UWS Psychology students (2<sup>nd</sup> and 3<sup>rd</sup> year, respectively) experiencing research first hand in our lab over the Summer months. They will be presenting their findings to the School at the end of February.

Gülten is visiting to complete an internship in the lab from Fernuniversitaet in Hagen, Germany.

## THANK YOU!

Thank you to all of our Volunteers.

This research would not be possible without your kind support.

We hope you all had a Merry Christmas and we wish you health and happiness for the New Year.



*Phoebe, Brooke, and Marreta after one of the group testing sessions in October, 2014.*

---

## NEW VOLUNTEERS ALWAYS NEEDED

We are always looking for new volunteers aged **65 and over**.

To volunteer or to find out more about our new studies:

Tel. Phoebe **9772 6230** or  
Email [p.bailey@uws.edu.au](mailto:p.bailey@uws.edu.au)

