

Looking is Liking. Or Not? Eye-tracking as a Measure of Intergroup Attitudes¹

Feddes, A.R., Monteiro, M.B., & Esteves, F.G.

Department of Social and Organizational Psychology, ISCTE-IUL - Lisbon University Institute, Portugal
Centre for Social Research and Intervention (CIS/ISCTE-IUL), Lisbon, Portugal

Abstract

One of the leading contemporary debates among social psychologists studying intergroup relations focuses on measures. More specifically, measures of implicit (uncontrolled) and explicit (controlled) attitudes towards social groups (i.e., Hofmann et al., 2005; Wittenbrink & Schwarz, 2007). The present research investigates the potential of eye-tracking as a method for examining intergroup attitudes within both children and adults. A learning and recognition paradigm is proposed.

Introduction

- *Socio-normative approach toward prejudice development.* Anti-racist norms affect expression of explicit but not implicit attitudes (i.e., Monteiro, França, & Rodrigues, 2009).
- Existing measures for implicit attitudes among children (i.e., IAT; Rutland, Cameron, Milne, & McGeorge, 2005) are problematic due to limitations in children's cognitive abilities.
- Examining intergroup attitudes using eye-tracking as it is unobtrusive and can be used within both adults and children.
- **Main Research Question:** How to interpret gazing data?
- Location and duration of fixations (pauses between saccades) indicate attention and information processing (Karatekin, 2007).

Hypotheses

- **Visual Search Hypothesis:** Attention (longer gaze) to Correct Face when present, if not present, attention divided over four faces.
- **Facility Hypothesis:** Well-learned compared to not well-learned associations between persons and traits are indicated by longer fixation duration;
- **Valence Hypothesis:** People correctly distinguish (longer gaze duration) previously learned "positive" vs. "negative" persons.

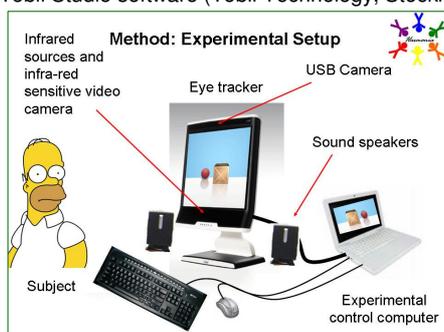
Method

Participants

Psychology students at the Lisbon University Institute ($N = 51$; 87% female; mean age = 20.03 yrs, $SD = 4.62$).

Apparatus

Tobii T60 eye-tracker (1024x768 pixel resolution, 60-Hz Frame rate) with Tobii Studio software (Tobii Technology, Stockholm, Sweden).



Design

2 (association: well learned vs. not well learned) X
2 (valence: positive vs. negative traits) X
2 (answer: incorrect face but correct emotion vs.
incorrect face and incorrect emotion) within participant.

Measures

Fixation duration.

Procedure

Part I: Learning Task

- Pairing 16 words with 16 faces
- 8 positive words (intelligent, clean, ...)
- 8 negative words (stupid, dirty, ...)
- Manipulation of the association:
well learned (*easy task*)
vs. not well learned (*difficult task*)
- 4 of the pairs (2 pos, 2 neg) are shown 6 times
- 12 of the pairs (6 pos, 6 neg) are shown 2 times

Part II Recognition Task

- A word (pos/neg) is presented surrounded by 4 faces (2 "positive" and 2 "negative" persons)

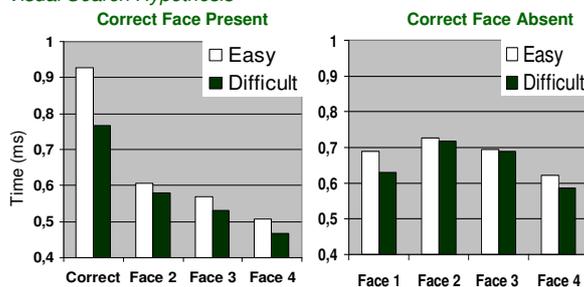
- 4 conditions to compare:
 - Correct face present + easy task
 - Correct face present + difficult task
 - Correct face absent + easy task
 - Correct face absent + difficult task

- Total 40 trials



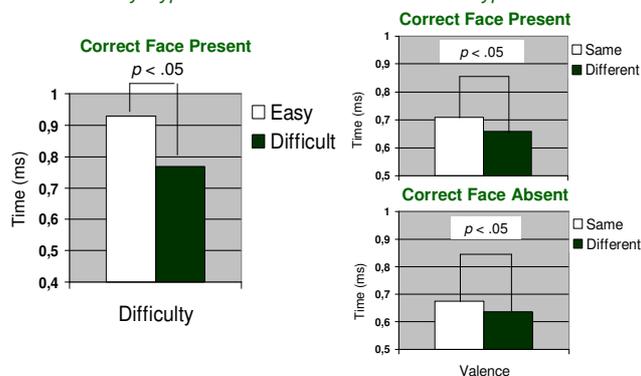
Results

Visual Search Hypothesis



GLM repeated measures;
2 (Correct/Face 1 vs. Faces 2, 3, & 4) x 2(Present vs. Absent)
* Main effect of Presence: $F(1, 50) = 66.66, p < .001, \eta^2 = .57$
* Interaction between Face & Presence: $F(1, 50) = 71.51, p < .001, \eta^2 = .59$

Facility Hypothesis



Discussion

- When Correct Face present, people focused more on correct compared to incorrect faces (**Visual Search Hypothesis**);
- Well-learned associations were fixated on longer than not well-learned associations (**Facility Hypothesis**);
- When Correct Face present/absent, people focused more on same-valence faces (**Valence Hypothesis**);

Currently, studies are designed incorporating gender (agency) and ethnicity (status) as factors. Furthermore, a child-friendly version is being developed. Correlations with implicit (i.e., IAT) and explicit measures will be examined as well.

References

- Hofmann, W., Gschwendner, T., Nosek, B.A., & Schmitt, M. (2005). What moderates implicit explicit consistency? *European Review of Social Psychology, 16*, 335-390.
- Karatekin, C. (2007). Eye tracking studies of normative and atypical development. *Developmental Review, 27*, 283-348.
- Monteiro, M. B., França, D. & Rodrigues, R. (2009). The development of prejudice in childhood: How cognitive and normative factors can hide children's racial prejudice. *International Journal of Psychology, 44*, 23-39.
- Rutland, A., Cameron, L., Milne, A., & McGeorge, P. (2005). Social norms and self-presentation: Children's implicit and explicit attitudes. *Child Development, 76*, 451-466.
- Wittenbrink, B., & Schwarz, N. (2007). *Implicit Measures of Attitudes*. New York: The Guilford Press.

For more information please contact:

Dr. Allard R. Feddes
Lisbon University Institute (ISCTE-IUL); Centre for Social Research and Intervention (CIS/ISCTE-IUL); Av. das Forças Armadas; 1649-026 Lisbon, Portugal
Email: a.r.feddes@iscte.pt; Website: http://harmonia.cis.iscte.pt



Harmonia

Projecto de Investigação "Harmonia"
Diversidade social na escola:
Compreender, gerir e agir

Research Project "Harmonia"
Social diversity in schools:
Understanding, managing and acting



cis
centro de investigação e intervenção social

FCT

Fundação para a Ciência e a Tecnologia