

What's Wrong with the Implicit Association Test?

SESP Workshop

Spokane, Washington

October 19, 2001

Note: This outline contains very little detail.
Alas, there is no written version of this presentation.

Outline of Presentation

I. What is the IAT?

II. Brief history of the IAT

III. Top 10 things wrong with the IAT

I: What is the IAT?

What does the IAT measure?

(presumed) answer:

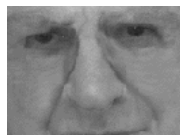
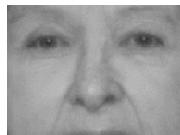
**strengths of automatic associations
between concepts**

Theory Underlying the IAT Effect

- When two concepts are associated it is easy to give the same response to their exemplars
 - When two concepts are not associated it is not easy to give the same response to their exemplars
- ∴ Ease of giving the same response to exemplars of two concepts measures the association between the two concepts

Sample Target Concepts

Old



Young



Sample Attribute Concepts

Unpleasant

pain
death
stink
grief
agony
filth
tragedy
vomit

Pleasant

gentle
happy
smile
joy
warmth
pleasure
paradise
rainbow

Create an IAT?

At this point, the audience had the opportunity to construct a novel IAT using the Generic IAT program that is available for download at:

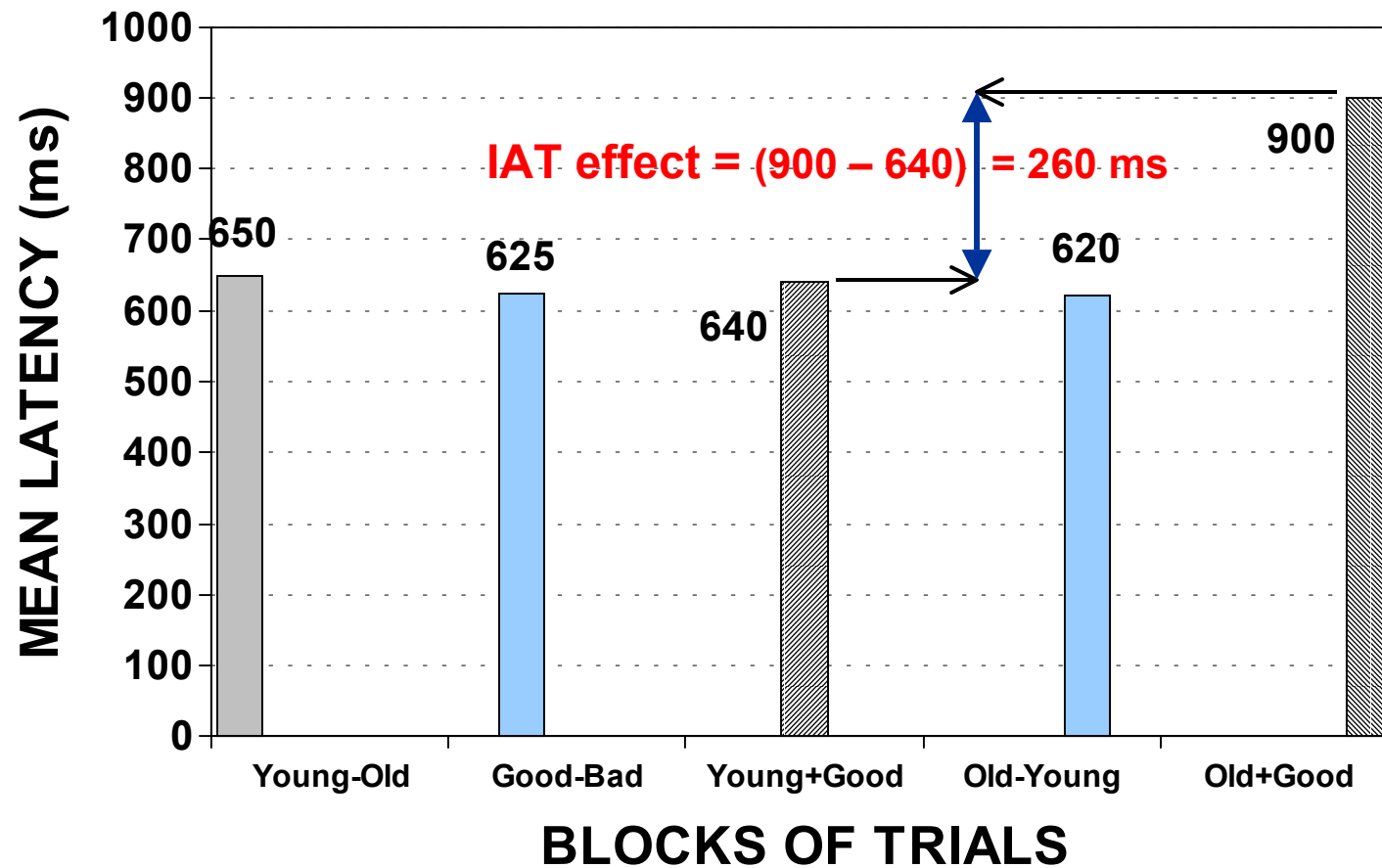
<http://faculty.washington.edu/agg/IATmaterials/GenericIAT.zip>

(uppercase letters need to be uppercase)

Typical Methods of Data Collection & Analysis

- Practice at combined tasks before data collection (20-30 practice, 40 data collection)
- Subject's correction of errors is required (latency is recorded from stimulus to correct response)
- First two trials of data collection blocks are not analyzed
- Latencies of trials with errors are included in data analysis
- Latencies are log-transformed before analysis
- Outlier latencies are recoded to boundary values (e.g., 300ms and 3000ms)
- Subjects who respond very slowly or with error rates over 25% are dropped

IAT Effect Computation



II: Brief History of the IAT

June, 1994: First IAT pilot experiment

June, 1998: First IAT publication

Sept, 1998: IAT website opened

May, 2001: Special issue of *Zeitschrift für Experimentelle Psychologie*

III: Top 10 Things Wrong with the IAT

(and what might be done about them)

6 measurement problems

4 conceptual problems

10

Order of combined tasks influences the measure

Band-aid solution: Counterbalance the
order of administration of combined
tasks

Better solution: Develop procedures
that eliminate the effect

measurement problem

9

**IAT effects are smaller with
picture stimuli than with
word stimuli**

Solution: ??????

measurement problem

8

IAT effects are reduced with repeated administrations

Band-aid solution: Adjust statistically for number of prior tests

Better solution: Develop scoring algorithms that avoid this influence

measurement problem

7

No strong rationale for standard data cleaning procedures

Band-aid solution: Examine data with multiple procedures

Better solution: Develop scoring procedure with theory-based rationale

measurement problem

6

IAT effects tend to increase with age of respondent

Band-aid solution: Use age as a covariate when age is not focal

Better solution: Understand the basis for the age effect and model it in data analyses

measurement problem

5

IAT measures are influenced by measurement context variables

Solution: Use standard administration contexts; be cautious in comparing IAT effects across studies

measurement problem

4

**IAT appears to be slightly
fakeable**

Solution: ???????

conceptual problem

3

**IAT must measure more than
just association strengths**

**Solution: Research to identify other
components of IAT effects; develop a
theoretical model of determinants of
IAT effects**

conceptual problem

2

IAT actually only measures relative strengths of pairs of associations

Weak solution: Limit the IAT to use with naturally bipolar-opposed concept pairs

Stronger solution: Develop IAT variant procedures that measure single associations

conceptual problem

1

**How the IAT measures
association strengths is not yet
well understood**

**Solution: Develop a theoretical model of
components of IAT effects**

conceptual problem

CONCLUSIONS

There is a good deal of evidence for construct validity of the IAT as a procedure for measuring automatic association strengths.

The IAT is therefore presently quite useful in research on group differences, and even as a measure of individual differences.

Nevertheless, there is room for substantial improvement in the IAT as a measure of automatic association strengths.

