

Arcurs et al / a/b DU = voting intent, actual voting  
STUDY 2

(10) DOMAIN: A/1 = race, B/2 = ethnicity C/3 = gender-sex D/4 = food or drink

E/5 = other consumer F/6 = political G/7 = drugs or tobacco

H/8 = self esteem J/9 = personality/self K/10 = clinical

L/11 = relationships M/12 = other? (not a tony category) pg 2

(11) BEHAVIOR: single=1, average=2 pg 12

(12) IAT TYPE: attitude=1, belief=2, self=3, not reported = 4 pg 13

(13) EM TYPE: attitude=1, belief=2, self=3, not reported = 4 n/a

(14) OVERALL METHOD: not=0/observed=1 pg 13

(15) METHOD: RepPast=1, future=2, emotion=3, judge=4, obs=5, neuro=6, other=7 pg 13

(16) SCORE: millisecond=0, log=1, algorithm=2, NotReported=3 pg 14

(17) words=0, pictures=1, NotReported=2, p 13

(18) number of IATs: 1 p 13

(19) IAT ORDER: NotReported=0, iatfirst=1, iatsecond=2, iatthird=3 pg 12

(20) EXPLICIT ORDER: NotReported=0, explicitfirst=1, expsecond=2, explthird=3 n/a

(21) BEHAVIOR ORDER: NotReported=0, behfirst=1, behsecond=2, behthird=3 pg 12 & 13

(22) IAT vs. behavior: NotReported=0, before=1, after=2, counter=3, pg 12 & 13

(23) EXPLICIT vs. beh: NotReported=0, explicitfirst=1, expsecond=2, counter=3 n/a

(24) IAT SESSION: same=0, different=1 pg 13

(25) EXPLICIT SESSION: same=0, different=1 n/a

(26) IAT SOCIAL DESIRABILITY 1-7 3, pg 13

(27) EXPLICIT SOCIAL DESIRABILITY 1-7 n/a

(28) BEHAVIOR CONTROLLABLE: 1-10 10, pg 13

(29) IAT SPECIFIC 1-7 4, p 13

(30) EXPLICIT SPECIFIC 1-7 n/a

(31) OPPOSITION 1-5 5 (1-5), 8 (1-8), pg 13

(32) RACIAL 0=not 1=racial pg 2

(33) type of iat: single=1, dual=2, personalized=3, pg 13

intent

1st for intent  
3rd for voting

after vote intent

same for voting  
intent  
different for actual  
voting

before  
for  
voting

# Arcuri et al Study 2

- (10) DOMAIN: A/1 = race, B/2 = ethnicity C/3 = gender-sex D/4 = food or drink  
E/5 = other consumer F/6 = political G/7 = drugs or tobacco, pg 2  
H/8 = self esteem I/9 = personality/self K/10 = clinical  
L/11 = relationships M/12 = other? (not a tony category)
- (11) BEHAVIOR: single=1, average=2, pg 17-18
- (12) IAT TYPE: attitude=1, belief=2, self=3, not reported = 4, pg 18
- (13) EM TYPE: attitude=1, belief=2, self=3, not reported = 4 n/a
- (14) OVERALL METHOD: not=0, observed=1, pg 17-18
- (15) METHOD: RepPast=1, future=2, emotion=3, judge=4, obs=5, neuro=6, other=7 pg 17-18
- (16) SCORE: millisecond=0, log=1, algorithm=2, NotReported=3, pg 18
- (17) words=0, pictures=1, NotReported=2, pg 18
- (18) number of IATs: 4, pg 17-18
- (19) IAT ORDER: NotReported=0, iatfirst=1, iatsecond=2, iatthird=3
- (20) EXPLICIT ORDER: NotReported=0, explicitfirst=1, expsecond=2, explthird=3 n/a
- (21) BEHAVIOR ORDER: NotReported=0, behfirst=1, behsecond=2, behthird=3 pg 17-18
- (22) IAT vs. behavior: NotReported=0, before=1, after=2, counter=3
- (23) EXPLICIT vs. beh: NotReported=0, explicitfirst=1, expsecond=2, counter=3 n/a
- (24) IAT SESSION: same=0, different=1
- (25) EXPLICIT SESSION: same=0, different=1 n/a
- (26) IAT SOCIAL DESIRABILITY 1-7 3, pg 18
- (27) EXPLICIT SOCIAL DESIRABILITY 1-7 n/a
- (28) BEHAVIOR CONTROLLABLE: 1-10 10, pg 17-18
- (29) IAT SPECIFIC 1-7 5 ~~8-10~~, pg 17-18
- (30) EXPLICIT SPECIFIC 1-7 ~~8-10~~ n/a
- (31) OPPOSITION 1-5 5 (if 1-5), 8 (if 1-9), pg 17
- (32) RACIAL (0=not, 1=racial) pg 2
- (33) type of iat: single=1, dual=2, personalized=3, pg 17

## Abstract

Two studies aimed at assessing the predictive validity of implicit political attitudes in relation to voting behaviour. In Study 1, we demonstrated the validity of the adopted measure (i.e., the IAT; Greenwald, McGhee, & Schwartz, 1998) with a sample of voters who clearly sided with one of the opposing parties. In Study 2, implicit political preferences were measured in a sample of undecided voters one month before the elections, and actual voting behaviour was assessed immediately after the elections. Results demonstrated that implicit political attitudes were good predictors of future voting behaviours. These findings provide support for the hypothesis of the presence of embryonic and unconscious attitudes even in the case of those voters who at the explicit and conscious level deny any preference for one of the two opposing candidates.

## Key Words:

implicit processes, affect, IAT, decision making, political choice

undecided voters, that is of those respondents who in the pre-electoral interview reported that they still had to make a choice.

#### Study 1: The general elections, 2001

*Overview and main hypotheses.* The aim of this first study was to investigate the predictive validity of the IAT as an instrument for the detection of political attitudes and for the forecast of voting behaviours. In the Italian General Election of May 13, 2001, most parties were allied in two coalitions, called 'Casa delle Libertà' (the right-wing political coalition) and 'Ulivo' (the left-wing political coalition), headed respectively by Silvio Berlusconi and Francesco Rutelli. Since the whole electoral campaign of the two coalitions was focused on the two leaders, we investigated the relative preference for either Berlusconi or Rutelli. A sample of voters was contacted for a pre-electoral interview, approximately 4 weeks before the election, and the participants were administered an IAT that assessed the relative preference for the two political leaders. They were re-contacted after the election and asked for which coalition they had voted. This allowed us to test the relation between implicit political attitudes and the subsequent voting behaviour.

#### Method

##### Participants

Seventy-four participants (47 male and 27 female) aged between 18 and 65 years, and living in the urban districts of Milan, were recruited thanks to the assistance of a national survey agency, that had already sampled them for participation in focus groups.

##### Procedure

One month before the election (Time 1), participants were asked whether they had already decided for whom to vote and, if they had already made up their mind, to report their preferred coalition. ~~Next~~, they were administered the IAT, aimed at detecting the relative preference for Silvio Berlusconi (leader of the right-wing coalition) or Francesco Rutelli (leader of the left-wing coalition).

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Pictures and names of the two candidates were used as stimuli in the IAT, together with 6 positive and 6 negative words (see Greenwald et al., 1998). As discussed in the introduction section, the whole IAT procedure consisted of a series of five blocks of trials (see Table 1 for a detailed presentation of the sequence of phases). In the first block of trials participants were required to categorize positive and negative words. In the second phase, the task required to categorize pictures of the two political leaders, Berlusconi and Rutelli. In the third phase, both evaluative words and pictures of the two candidates had to be categorized. The fourth phase required again to categorize pictures of the two political leaders, but this time the meaning of the response keys was reversed with respect to the second phase. In the fifth and last phase, there was again a double categorization task, but this time the pairing between a given candidate and evaluative words was reversed in comparison to the third phase. Whether the left-wing candidate shared the response key with positive words in the third or fifth phase was counterbalanced across participants, so as to avoid eventual order effects (see Greenwald et al., 1998).

A week after the election (Time 2) all participants were contacted again and invited to report their actual voting behaviour. Finally they were fully debriefed.

### Results

#### Pre-electoral intentions and voting behaviour

Forty-four respondents had already made up their mind at the time of the pre-electoral interview (Time 1). Specifically, 12 of them intended to vote for the right-wing coalition, 22 for the left-wing coalition, and the other 10 were scattered among minor parties that were not allied with the major coalitions. The remaining 30 respondents reported to be undecided.

Seventy-two participants were again contacted after the election (Time 2), whereas two undecided participants could not be reached. Fifty-two participants went to the polls (19 voted for the right-wing, and 33 for the left-wing coalition) and 20 did not vote. Of the 12 participants who intended to vote for the right-wing coalition, 11 behaved according to their stated intention, and one

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did not go to the polls. Of the 22 participants who intended to vote for the left-wing coalition, 18 voted according to their stated intention, and 4 did not go to the polls. Out of the 10 respondents who stated that they intended to vote for other parties, 1 gave the preference to the right-wing coalition, three to the left-wing coalition, and six did not vote for either coalitions (they voted for other parties, or choose not to vote). Out of the remaining 28 participants who described themselves as 'not yet decided' in the pre-electoral interview, 7 voted for the right-wing coalition, 12 for the left-wing coalition, and 9 did not vote or voted for parties that did not belong to one of the two major coalitions.

#### *Implicit political preferences and voting behaviour*

For each respondent, we computed a Diat index of preference for the two candidates. Latencies outside the 300-3000 ms. window were excluded and data were then treated in accordance to Greenwald's scoring algorithm (Greenwald, Nosek, & Banaji, 2003). The computation of the Diat index requires several steps that are fully described by Greenwald and his colleagues (2003). This recently proposed index basically takes into account several different aspects of the performance, namely the mean response latencies in the two critical phases, the number of errors in such phases, as well as the overall variability in the responses of the participant. In this way, for each participant it is possible to verify whether pairing a given candidate to positive rather negative words corresponds to faster responses and a lower number of errors. In addition, the index takes into account individual differences in response time, so that the emerging implicit attitude score is not artificially influenced by the participant's overall speed of response (i.e., larger index for slower participants). We arbitrarily calculated the Diat index in such a way that higher values indicated a relative preference for Rutelli over Berlusconi.

The validity of IAT-measured implicit attitudes was first investigated by comparing the implicit attitudes of those participants who had a well-formed explicit preference for the right-wing and for the left-wing coalition at the moment of attitude assessment, as expressed by their voting

The aim of study 2 was to examine the implicit attitudes of those voters who described themselves as still undecided in the pre-electoral interview, and to further investigate the validity of the IAT as a means of predicting of the electoral choice of those voters. Hence, only voters who described themselves as 'not yet decided' were eligible for this second study, in which we assessed the relative implicit preference for one of the two leading candidates (one month before the election) and actual voting behaviour in the Italian local election of 2005.

### *Method*

#### *Participants*

Several hundred people were contacted and asked whether they had already made their voting decision, that is whether they could identify a preferred candidate if the election were to be held the following day. When they were approached, these people were informed that we did not want to know for whom they intended to vote, but only whether they had already made up their decision, and that only those who described themselves as 'undecided' were eligible for the present study. In this way, we could be confident that our sample comprised only truly uncertain voters, because those who usually describe themselves as 'undecided' in order to conceal their political position in this case could have easily responded 'yes' without needing to disclose their choice. No credits, gifts or money were given to the participants.

Fifty-eight undecided voters were recruited approximately one month before the Local Election (Time 1) that was held in Veneto (Italy) in April 2005. All participants lived in the urban districts of Padova.

#### *Procedure*

At Time 1, participants who self-reported being undecided for the coming election performed an IAT to assess their implicit preference for either Galan (the right-wing candidate) or Carraro (the left-wing candidate). They were then given a questionnaire and a pre-stamped envelop and asked to

Handwritten notes and circled numbers:

- 15b
- 14b
- 11b
- 28b
- 29b
- 19-25b
- 33b
- 18b
- 31b



send it back after the election with the indication of their actual vote. In order to guarantee complete anonymity no socio-demographic data were collected and anonymity was further guaranteed by using numerical codes rather than names.

As in the previous study, to represent the two candidates in the IAT, six different pictures of the right-wing-coalition candidate, Giancarlo Galan, and six pictures of the left-wing-coalition candidate, Massimo Carraro, were used. Six positively valenced and six negatively valenced words (e.g., joy, love, ugly, death) were used to represent the two poles of the attitudinal dimension. The structure of the IAT was similar to the first study, and the order of administration of the two critical double-categorization blocks was counterbalanced between participants to avoid order effects. A detailed presentation of the various phases of IAT employed in the present study is provided in Table 2.

At the beginning of the session, every participant was given a different numerical code. This code was used to identify their performance on the IAT. Participants completed the IAT, and were subsequently given a short questionnaire on their voting behaviour, which they were asked to complete and send to the researchers after the election day (Time 2). The numerical code assigned to the participant was printed on the questionnaire, and this enabled to match the IAT performance with the questionnaire.

### Results

Fifty-one participants (88%) returned the questionnaire. Thirteen of these voted for Galan, 24 voted for Carraro, 8 did not go to the polls, and 6 voted for other candidates. Data from the IAT were treated as in Study 1, and higher values on the Diat index indicated a preference for Carraro over Galan.

A logistic regression analysis on the data from those participants who either voted for Carraro or for Galan, revealed that individual differences in the IAT index were significantly associated with voting behaviour,  $\chi^2(1)=6.329, p<.02$ . The ROC analysis yielded an AUC=.734. Therefore, the