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Processing of party symbols and names
predicts the results of 2019 Indian parliamentary election:
Analysing psycholinguistic behavioural incongruency effects

The response time and accuracy of processing verbal and nonverbal stimuli may predict the desired outcome of an event. Few studies have examined the psycholinguistic evidence of the speed-accuracy trade-off in the processing of political information to predict the outcome of an election. Therefore, we analysed the perceptual time and accuracy of two major political party names: the Indian National Congress (INC) and Bharatiya Janata Party (BJP), and their respective symbols before the Indian election 2019. Our results demonstrated that the pre-election perceptual accuracy to party symbol and name was positively linear to the index of high proportional vote share of the winning party, BJP. The high response accuracy and time for the BJP name correlated with voters' familiarity of it, thereby establishing a link between response results and parties' vote shares.

Key words: information processing, response time, parliamentary election

Introduction

Voters' sociodemographic characteristics that have a psychological link to the parties or candidates have been widely studied to examine the individual vote choices, including the outcome of elections (Campbell et al., 1960). For example, the heuristic belief system of the voters' ideology based on the party's support for a specific ethnicity, race, religion, caste, and creed influences the rational

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judgment of voting patterns and determines election outcome (Anderson et al. 2020). Political scientists largely predict the outcome of an election by analysing the voters' sociocultural traits (Klofstad, 2017). However, the psycholinguistic processing of political information - party symbols and names - has rarely been examined to predict election outcomes. Therefore, the aim of the current study was to examine the outcome of the 2019 Indian parliamentary election through the lens of psycholinguistic evidence on political information processing. Analyzing psycholinguistic behavioural incongruency effects, the study examined differences between pre-election perceptual accuracy and response time to party symbols and acronyms of party names. The study examines how people's ability to correctly and quickly perceive a party's symbol and name predict the party's ability to win in an election. Behavioural psychology measures the selection, retrieval, and processing of information in terms of response time (in ms) and accuracy (in %, Kahneman, 2011; Taber & Young, 2013). The response time (RT) and accuracy can be used to study cognitive processes (Heitz, 2014). In a conflicting situation, the RT and accuracy can predict the real-life goal in business as well as politics (Torrens-Burton et al., 2017). Indeed, predicting election results based on voters' information processing has attracted the attention of scholars of political and social psychology (Schildkraut, 2004).

Previous studies predicted election outcomes either by asking voters to evaluate the candidate's face, voice, and ethnicity or by analysing party posters, symbols, slogans, names, ideologies, manifestos, voter's attitudes, sentiments, and emotions (Anderson et al. 2020; Laustsen & Petersen, 2018; Klofstad 2017; Banai et al. 2017; O'Connor & Barclay 2017). For example, right-wing candidates get more votes when they appear or sound more dominant than liberal candidates when they persuade such dominant characters (Laustsen & Petersen, 2018; Laustsen et al., 2015). Similarly, the election outcome is predicated on how long the party posters are displayed. Displaying posters for long periods is significantly associated with the large proportion of favourable election results (Boen and Vanbeselaere, 2002). Cialdini et al. (1976) observed that party posters supporting a victorious party stayed up longer after the election than those associated with a defeated party. There is a proportional positive linear relationship between the win or loss of each party and the post-election display of posters (Boen et al., 2002). Further, most pre-election studies projected the election results by employing either qualitative or quantitative survey methods asking voters which party or candidate do they want to vote for, or why do they prefer a specific party or candidate?

A few studies have examined the psycholinguistic evidence on the processing of political information that correlates to the voters' choice and election outcome. For example, voters react to the familiar faces that show the characteristics of reliance and trustworthiness (Lenz & Lawson, 2011). This effect is visible within 100 ms exposures to the candidate's faces because the face indicates traits including ethnicity, gender, and physical attractiveness (Olivola & Todorov, 2010;

Willis & Todorov, 2006). These facial variables determine the voting patterns and predict the outcome of an election (Banducci et al., 2008). In the current study, we examined whether the processing of political party names and symbols could predict the outcome of an election. To this end, we conducted psycholinguistic experiments before the Indian general election in 2019 to measure the response accuracy and time towards the processing of party names (Bharatiya Janata Party, BJP, and Indian National Congress, INC) and their associated symbols: (the BJP lotus and the INC right palm). We expected that the response accuracy and time would predict the election outcome and correlate to the proportion of the winning party's overall vote share. Further, we anticipated that the response accuracy and time would predict the Indian voters' preference towards the political parties before the 2019 general election.

Factors Influencing Voters' Decisions: Candidates' and Parties' Attributes

Evaluation of Candidates' Faces

Previous studies have shown that the racial appearance of the face influences the social and judicial decisions in sentencing (Hassin & Trope, 2000). In the electoral domain, a questionnaire-based survey has shown that the candidates' personal attributes, political background, credibility, communications, and contact influenced the voters' selection decisions in the Jordanian context (Alsamydai & Khasawneh, 2013). Good-looking candidates with politically incompetence have a higher chance of losing elections than candidates with more attractive and competent traits (Mattes et al., 2010). However, candidates with a high level of competence comprising intelligence, reliability and effectiveness have greater chances of electoral success (Brooks, 2011; Teven, 2008; Todorov et al. 2005; Judd et al., 2005). An experimental study has shown that participants accurately judged the faces of winning candidates as more competent than the faces of runners-up candidates in 2006 US gubernatorial elections, predicting the outcome of elections from rapid and unreflective faces judgments within 100 ms (Ballew & Todorov, 2007). Political candidates who are more competent-looking receive larger vote shares and are more likely to win elections (Antonakis & Eubanks 2017; Chen et al. 2014; Laustsen, 2017; Lenz & Lawson 2011). The high rating of candidates' facial competence predicts a greater chance of winning elections than the low rating of facial competence (Sussman et al., 2013). This effect of facial competence ratings is tested in virtual and actual election contexts when the candidates' faces are evaluated by adults and children (Antonakis & Dalgas, 2009; Atkinson et al., 2009). In this sense, the facial attributes of candidates referring to competence, maturity, attractiveness, and familiarity emerge as determinant factors for predicting their electoral success better than chance (Gabriel et al., 2018; Olivola & Todorov, 2010; Todorov et al., 2005). From among the facial expressions of candidates that represent more competence, threat, attractiveness, and deceitfulness, participants accurately choose the candidates with threatening and attractive faces who have

lost the election (Mattes et al., 2010). This finding supports the idea that faces perceived to be threatening and incompetent diminish the winning chance of a candidate in an election (Mattes et al., 2010). The candidate's competence, which voters evaluate based on the facial expression (Todorov et al., 2005), but not other traits such as trustworthiness, attractiveness, and likeability, are considered an important attribute and a source of social information to predict an election outcome (Ballew & Todorov, 2007). Accordingly, we assumed that the processing of political party symbols and names before the election would predict the results.

Perception of Candidates' Voices

In electoral politics, the candidates' faces and voices can help predict their electoral success. A study that manipulated the pitch of nine US presidential candidates showed a significant result, revealing voters' preference for candidates with lower-pitched voices (Tigue et al., 2012). Most of the voters largely favor leaders with lower-pitched voices because they are subjectively perceived as stronger, having greater integrity, physical prowess, and more competent than candidates with higher pitch (Klofstad et al., 2012; Aung & Puts, 2020). In addition, lower-pitched voices associated with older candidates are perceived as wiser and more experienced than younger ones (Klofstad et al., 2015). In a public opinion survey, participants gave a higher percentage of the popular vote to candidates with lower-pitched than higher-pitched voices (Gregory & Gallagher, 2002). This preference of vote choice was quite evident in the 2012 US House of Representatives candidates with lower voices, who won a larger vote share (Klofstad et al., 2012). Candidates with lower-pitched voices were found to have the highest electoral and public opinion success (Anderson & Klofstad, 2012; Gregory & Gallagher, 2002). Though the preference of voice is always subjective, the candidates' voices are indirectly linked with the preferential electoral success. However, none of these studies have looked at the processing of political information such as party names and symbols. Accordingly, we investigated whether the processing effect of the political party's name and symbol is proportional to the party's vote share in the 2019 Indian parliamentary election.

Perception of Party Ideology, Colors, and Names

In electoral politics, some voters make a well-informed decision based on the political party's ideology, beliefs, and socio-cultural issues (Redlawsk, 2002; Gilbert, 2006; Dalton & Klingemann, 2007). Though the party's ideology does not provide cues to take any rational choice, it justifies the voters' subjective decisions based on their ideological belief systems. In analysing the party color, symbol, and name, one study showed that the Kenyan political parties gain public approval when the party color matches with the color of the Kenyan national flag (Malande, 2018). Under this hypothesis, the name that represents a mixed code of Kiswahili and English would be significantly relevant for the voters' electoral decisions (Malande & Masiolo, 2013). These verbal and nonverbal communicative

strategies are followed by politicians to persuade the voters' attitudes. In other words, the outcome of an election, whether winning or losing, can be predicted based on the parties' verbal and nonverbal communicative strategies.

Several studies have predicted election outcomes by analyzing the textual content of social media (Chaudhary et al. 2021; Yaqub et al.2020; Antonakaki et al. 2017; Colladon, 2020). Sentiment analysis of Twitter and Facebook has been employed to determine election outcomes worldwide (Liu et al., 2021). One study showed that the presence of high volume and size of social media text is correlated with the predictive and actual result of a high vote share of the political party in the Irish General election (Bermingham & Smeaton, 2011). In the 2009 German Federal election, the emotional sentiment analysis of micro-blogging on Twitter reflected the association between positive emotional content and the election outcome (Tumasjan et al., 2011). Analysing the growing usage of social media, studies have forecasted election outcomes based on the web popularity and familiarity of political leaders in France and Italy (Ceron et al., 2014).

Further, a study has shown that European voters' intention to evaluate their Prime Ministers (PMs) during the pandemic is based on positive keywords (Fredén & Sikström, 2021). This study revealed that describing the PM with positive words was strongly associated with the voters' positive intention. Further, the analyses of linguistic trends of USA presidential candidates' speeches in 2016 revealed that Donald Trump's language represented confidence and certainty about the long-term trends in politics and culture (Jordan et al., 2018). The analysis of Australian Federal election speeches of successful and unsuccessful PM candidates revealed that the victors used more collective pronouns such as "we" and "us" than their unsuccessful counterparts (Steffens & Haslam, 2013). The Twitter-based predictions of pre- and post-electoral results, vote shares, and public opinions against political leaders or parties have largely used the method of textual, sentiment, and lexical analysis (Gayo-Avello, 2013). However, the compulsory voting system has severely weakened the quality of voting because the uninterested voters do not spend enough time to gather political information about electoral candidates or parties. The lack of political knowledge among voters affects the quality of voting and creates an obstacle to predicting election outcomes. Mandatory voters who have less electoral knowledge usually take more time to process the information and make a poor voting (Dahlberg & Hartevel, 2016; Singh & Roy, 2014). Therefore, the election manifestos promise to provide ideological awareness to the prospective voters before the election (Budge et al., 2001). Voters acquire, store, and process most of these types of verbal and nonverbal information to enhance their voting decisions (Krouwel, 2012).

Further, voters prefer parties that are ideologically similar to their demands, interests, ideas, and belief systems (Lau et al., 2008). Self-attachment toward a stimulus liked by an individual increases the involvement and attraction towards a political party (Konijn & Hoorn, 2005). Wagner et al. (2012) examined the quality of vote choice by analysing the ideological congruence between voters

and the parties. They found that the greater the ideological similarity between the voter and the party, the higher the quality of vote choice. Thus, the processing of political party symbols and names may activate the voters' ideological knowledge. However, direct psycholinguistic evidence for predicting election outcomes based on political information processing seems to be lacking in the current literature. Therefore, the voters' judgment favouring political parties before or during the election may potentially be predicted by processing parties' symbols and names, which may ultimately predict the parties' vote shares.

Theory of Political Information Processing

The processing of political information, including party symbols and names, demands cognitive resources. Social cognition theory asserts that certain decisions are processed quickly and accurately without much cognitive effort, whereas other decisions demand more effortful and deliberate cognition (Todorov & Uleman, 2003). The effortless emotional system operates quickly and automatically, whereas the effortful cognitive system operates slowly, with deliberate allocation of attention (Kahneman, 2011). Further, political psychology explains the dual processes such as political information searching and processing (Schreiber, 2017). According to the dual-process theory, emotion and cognition are considered two modes of information processing rather than two antagonist forces. Though emotion demands less effort as compared to cognition, emotional involvement is consistent in information processing. Thus, political information processing is not possible without the involvement of an emotional belief system (Lodge & Taber, 2013). Furthermore, the processing of political stimuli demands past sociopolitical background knowledge, which is affectively charged, either positively or negatively, towards a political party (Lodge & Taber, 2005). However, it is unclear whether the absence or presence of attentional cognitive load catalyzes the RT of political information processing. How is information processing relevant for predicting the win or loss of a political party in a general election? Specifically, how does the processing effect of party name and symbol in congruence correlate to the proportion of vote sharing? It is interesting to explore how the participants process the congruence and incongruence between the symbols and names of political parties before the Indian general election 2019.

The automatic emotional and behavioural judgements of voters in favour of political parties are largely motivated by their beliefs and attitudes grounded within sociocultural and environmental factors (Smith & Warren, 2020; Hyde, 2015). The allocation of memory, whether short-term or long-term, plays a vital role in storing and retrieving political information and sociocultural background knowledge at the time of decision-making. Emotional beliefs are automatically activated in long-term memory, and short-term memory is accessed for making a decision (Taber et al., 2001). This hot-cognition hypothesis states that sociopolitical knowledge is activated in long-term memory. The storing and retrieving of political beliefs and predispositions about political leaders, parties,

and issues from long-term memory demands more time and cognitive resources (Read & Miller, 1998). The information that is retrieved from working memory is processed faster and accurate with conscious interpretation (Taber et al., 2001). This behavioural-cognitive architecture establishes a link between long-term and short-term working memory and enhances the information-processing mechanisms (Lodge et al., 2011). Voters often use their associative memory not only to establish an association between old and new information, but also to change the old information into new by following the process of imputation (Smith & DeCoster 2000). This computational change demands more cognitive resources to choose between voting in favour of a political party.

The Current Study: Processing of Political Parties' Acronyms and Symbols

None of the previous studies examined the processing effect of congruence and incongruence of party symbols and names on the percentage of the votes of a winning or losing party in an election. This research gap motivated us to conduct experiments on the acronymic names of two major national parties: the Bhartiya Janata Party (BJP) and the Indian National Congress (INC) in conditions of congruence and incongruence with their party symbols. Previous studies on the processing of acronyms (Brysbaert et al., 2009; Laszlo & Federmeier, 2007; Slattery et al., 2006) generally focused on different groups of nonpolitical acronymic words such as BBC, NATO, WHO, and so forth, which are lexically stored and accessed via whole-word orthographic, phonological, and semantic representations. For the first time, our study incorporated acronymic forms of party names which were superimposed on party symbols to make both congruent and incongruent stimuli that could create Stroop-like and picture-word interference paradigms. The Stroop-like paradigm was used to examine and compare accuracy and RTs for the two party symbols and their interference with acronyms and vice versa. We focused on how participants processed the congruence and incongruence of party symbols and names three days before the 2019 Indian parliamentary election.

Since the study was conducted before the general election, there was no manipulation of experimental variables. We simply measured whether participants were familiar with the parties that could gain public approval in terms of a high vote share. Therefore, participants were asked to recognise the party symbols ignoring the party names and vice versa. We assumed that participants would use their heuristic party ideology and symbolic knowledge to judge the parties' symbols and names. The accurate selection and fast response may predict the participants' higher engagement with the party. We anticipated that the lotus symbol of the BJP and its name derived from the nation's past cultural context may enhance the larger nationalistic ideological perception than the hand symbol and name of the INC. Further, we aimed to investigate whether the behavioral processing of the parties' names and symbols in terms of faster RT and higher accuracy is associated with a higher percentage of party votes at the national level. In light of the theoretical

observations, the current study proposed the following hypotheses.

Hypothesis 1. The BJP lotus symbol, which has been derived from past cultural customs and perceptions, would take more time to process.

Hypothesis 2. The processing advantage of the acronymic name BJP would produce faster RTs and higher accuracy than the processing of the INC acronymic name.

Hypothesis 3. The high RT and high accuracy for the BJP party name would be associated with a higher percentage of the vote at the national level.

We anticipated the effortless and automatic processing that may reflect high accuracy and RT. Furthermore, this automatic processing would be correlated with the positive attitudes of voters towards the victorious political party. In this sense, the high RT and accuracy of recognizing the party stimuli would positively correlate to the high percentage of the victorious party's votes.

Methods

Participants

Forty-three young adults ($N = 43$; females = 18) pursuing Bachelor of Technology, Masters of Technology and PhD degree ($M_{\text{age}} = 28$; $SD = 4.02$) at NIT Raipur, India, willingly gave their written consent to participate in Experiment 1. The response accuracy (%) and RT (ms) data of three male participants were removed from the analysis due to extremely low accuracy (less than 60%) of correct trials, leaving data from forty participants for the analysis. Similarly, forty young adults ($N = 40$, females = 13) with the same educational background ($M_{\text{age}} = 27.40$; $SD = 4.05$) voluntarily agreed to participate in Experiment 2. Some of them had also participated in Experiment 1. All participants were eligible for voting in the 2019 Indian parliamentary election. The participants were self-reported to be right-handed and healthy. None of them reported any pathological hearing, visual, or neurological impairments or mental health disorders. The ethical guidelines prescribed by the Indian Council of Medical Research (ICMR, 2017) were followed.

Stimuli

Experimental stimuli consisted of two major Indian party symbols and acronymic names, namely, the BJP and the INC. Two printed black-white symbols representing the lotus flower for the BJP and the right-hand palm for the INC were collected from the image depository of Wikipedia (https://en.wikipedia.org/wiki/Indian_National_Congress; https://en.wikipedia.org/wiki/Bharatiya_Janata_Party). These symbols were officially approved by the Election Commission of India to identify the BJP and the INC in the election campaign (<https://eci.gov.in>). The size of these two symbols was cropped to 366×286 pixels with 24 bit to

avoid any kind of effect that could arise due to the differences in size and colour of the symbols. The BJP and INC acronyms were written in English (Times New Romans; 24 pt, black, bold) on a white background. The size and color of the symbols and acronym words were counterbalanced based on the clarity ratings on a 7-point Likert scale. Participants ($N = 15$) were asked to judge the visual clarity of the symbols and acronym words considering their size and color. Only one symbol along with its respective acronym word was selected for each party based on high ratings. Symbols and words with low ratings were excluded from the final experiments. A balance between symbols and words of the two parties was maintained to keep the homogeneity in terms of color and size (see Table 1).

Stimuli Design

We used the Stroop-like paradigm to compare the accuracy and RTs for the two party symbols and acronyms in a conflicting behavioral task. Instead of using the direct task to measure the perceptual time-accuracy trade-off, the indirect conflicting Stroop task could reveal the interference effect between symbol and acronym. We used two black-and-white party symbols and acronym words to design congruent and incongruent stimuli. These were made by pasting the acronym word “BJP” on the lotus symbols (i.e., BJP congruent) and the right-hand palm symbol (BJP incongruent). Similarly, the acronym word “INC” was pasted on the right-hand palm symbol (i.e., INC congruent) and the lotus symbol (i.e., INC incongruent). Four experimental conditions were designed in total (see Table 1).

Table 1. The stimuli for four experimental conditions	
Experimental condition	Stimulus
BJP Congruent	
BJP Incongruent	
INC Congruent	
INC Incongruent	

Procedure: Stimuli Presentation and Tasks

Two experiments were designed using the four stimuli in the four experimental conditions. Both experiments contained a similar setup with two hundred trials each. The two experiments contained a total of 400 trials. Each experimental condition contained 50 trials ($50 \times 4 = 200$ trials). Equal numbers of congruent ($N = 100$) and incongruent ($N = 100$) trials were presented in both experiments. The presentation of all trials was controlled using the E-Prime (3.0) software.

In both experiments, each stimulus appeared for the duration of 500 ms, which was preceded by a fixation cross appearing for the duration of 250 ms. The stimulus was immediately followed by a response screen. This blank white screen appeared at the end of each stimulus as a hint to participants to perform their task (see Figure 1). The response window was kept infinite. Stimuli were randomised to avoid any sort of regular response patterns. During the experiments, participants sat in a dark, sound-attenuated room facing towards a 17 in. LCD screen, which was set 60 cm away. Thus, they were acquainted with the experimental setup and restricted from eye movements, blinks, and body movements.

In Experiment 1, participants were instructed to respond to party symbols. After each stimulus presentation, they were required to judge whether the symbol belonged to the INC or the BJP by pressing the left or right arrow key, respectively.

In Experiment 2, all the instructions and procedures were the same as in Experiment 1, except for the task. The participants were asked to respond to the party names while ignoring the symbols. Participants were instructed to respond

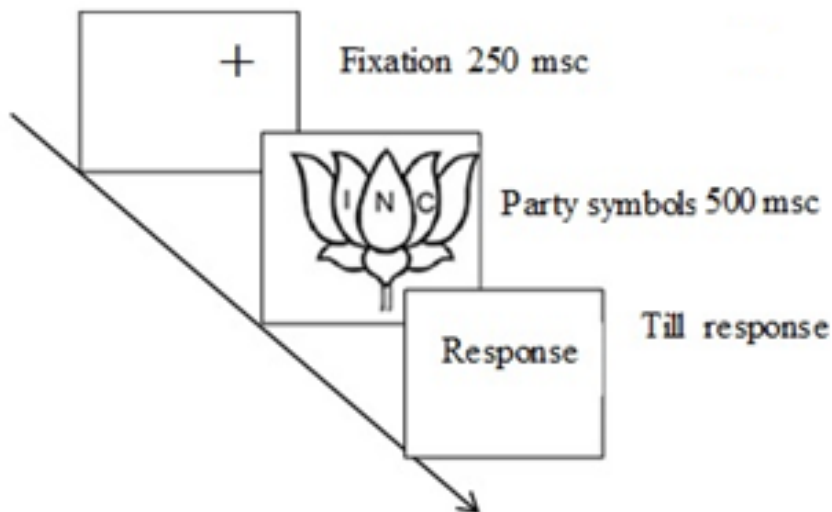


Figure 1. Time course of name and symbol trials. Time sequences of verbal (BJP, INC) and nonverbal (lotus, right palm) stimuli used in the psycholinguistic paradigms of congruency and incongruency. Participants visualised the names and symbols of political parties and recognised the parties one after another.

as quickly as possible. A practice session consisting of 10 trials was given to each participant to familiarize them with the task. We did not ask participants about their political affiliations and preferences for a party. Experiments were conducted between the first (i.e., 11th April 2019) and last phase (19th May 2019) of the 17th Indian parliamentary Lok Sabha election.

Behavioral Analysis Procedures

Response accuracy and RT of the correct trials were calculated and corrected by three SDs. Using this calculation, we found and removed the outlier. Data of each participant were calculated and entered into a series of two-way repeated-measures analyses of variance (ANOVAs, 2[party symbols] $\times$ 2 [congruent, incongruent]) using within-subject factors of BJP congruent/incongruent and INC congruent/incongruent ($\alpha = .05$). While the main effect of each party's symbol and congruence and their interaction effects were reported in Experiment 1, the main effect of words and their interactions with symbols were reported in Experiment 2. Post-hoc comparisons were carried out using the Tukey correction to determine the mean differences as a follow-up to a significant ANOVA effect relating to experimental conditions. We reported all the effects (e.g., significant and insignificant) related to RT.

Procedures for Analysing the Vote-Share of Parties

The 2019 Indian parliamentary election was held in seven phases (from 11th April to 19th May 2019), and the result was officially declared on 23rd May 2019. We extracted the election results of the BJP and the INC from the official website of the Election Commission of India (<https://eci.gov.in>). The vote share of these two parties was tabulated and analysed to establish an indirect proportional correlation with the RT and accuracy results. Similarly, the total vote share of these two parties was analysed and compared at the national level to test Hypothesis 3. Though testing this association between perceptual accuracy and RT with vote share would require data from multiple districts or accuracy-response time across elections, we only collected two data points from the overall vote share of the two parties at the national level. There was only one instance of an election in the current design, which means there would not be any anticipated variation in election outcomes. Thus, the design did not allow us to infer the relationship between vote share and perception directly. This was one of the limitations of the current study.

Results

Experiment 1: Response Time and Accuracy for Party Symbols

In Experiment 1, participants judged 94.77% of the trials correctly ($SD = 6.45$). Accuracy scores for the main effect of symbols were significant, $F(1, 39) = 4.13$, $p = .04$, $\eta^2_p = .09$, suggesting higher accuracy for the BJP lotus ($M = 95.47$, $SD =$

5.47) than the INC hand ($M = 93.85$, $SD = 8.51$, see Figure 2, Panel A). The main effect of congruence was also significant, $F(1, 39) = 12.70$, $p = .001$, $\eta_p^2 = .24$, revealing higher accuracy for congruent ($M = 95.55$, $SD = 6.35$) than incongruent ($M = 93.77$, $SD = 7.63$) trials (see Figure 2, Panel A). The party symbol (lotus, hand) $\times$ 2 party name (BJP, INC) interaction was significant, $F(1, 39) = 4.40$, $p = .04$, $\eta_p^2 = .10$, indicating higher accuracy for BJP congruent ($M = 95.90$, $SD = 5.22$) and incongruent ($M = 95.05$, $SD = 5.72$) than INC congruent ($M = 95.20$, $SD = 7.48$) and incongruent ($M = 92.50$, $SD = 9.55$) respectively (see Figure 2, Panel A). The post hoc analysis confirmed a significant accuracy difference between INC congruent and incongruent trials, $t(39) = 6.12$, $p = .0005$, $d = 0.30$, suggesting higher accuracy for congruent than incongruent trials. However, the differences between BJP congruent and incongruent trials were not significant, $t(39) = 1.92$, $p > .52$, $d = 0.10$. Further, the accuracy difference between BJP and INC incongruent trials was significant, $t(39) = 5.78$, $p = .001$, $d = 0.30$, showing higher accuracy for BJP incongruent than INC incongruent trials (see Figure 2, Panel A).

Concerning RT, neither the main effect of congruent trials, $F(1, 39) = 1.98$, $p > .16$, $\eta_p^2 = .04$, nor the two-way party symbols $\times$ 2 party names interaction, $F(1, 39) = 1.47$, $p > .23$, $\eta_p^2 = .03$, were significant. However, the main effect of party symbols was significant, $F(1, 39) = 6.07$, $p = .01$, $\eta_p^2 = .13$, suggesting a

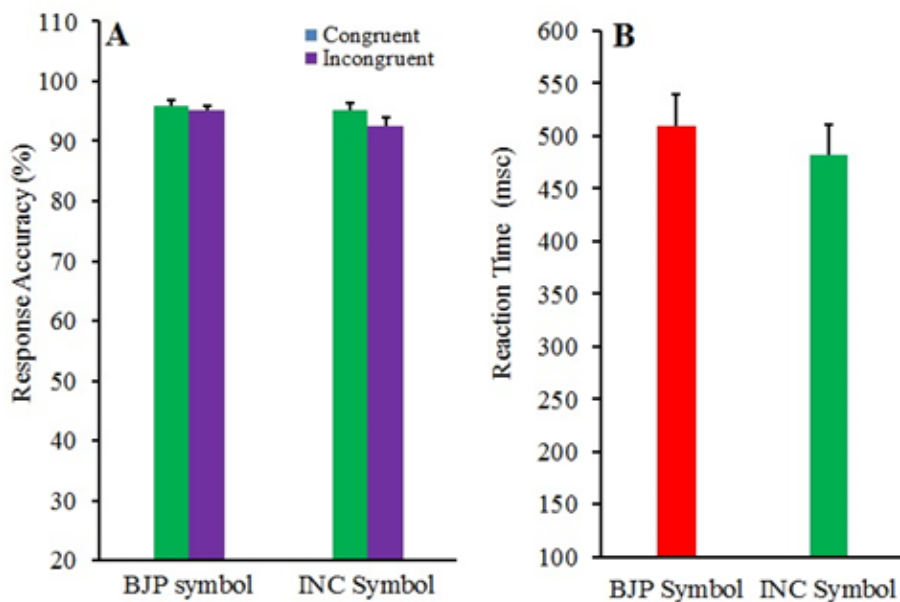


Figure 2. Mean response accuracy (%) and time (ms) during the recognition task of party symbols ignoring acronymic party names. Panel A: Mean response accuracy for party symbols as a function of congruency, demonstrating higher accuracy for the BJP lotus than the INC right palm. Panel B: Mean response time was slower for the BJP lotus than the INC right palm.

faster response time to the INC hand ($M = 481.64$, $SD = 201.76$) than BJP lotus ($M = 509.34$, $SD = 195.23$) symbols (see Figure 2, Panel B). Participants were slower judging BJP lotus than INC hand symbols when the task was to attend the symbols ignoring words. Overall, these findings indicated higher accuracy for BJP lotus symbols with a slower reaction time than for INC hand symbols with a faster RT.

Experiment-2: Response Time and Accuracy of Acronymic Party Names

In Experiment 2, the participants' ($N = 40$) accuracy across trials was 95.62% ($SD = 5.45$) when the task was to attend only to the party while ignoring party symbols. We conducted a two-way ANOVA between the party names and symbols. We found the main effect of accuracy for acronymic party names was significant, $F(1, 39) = 11.15$, $p = .002$, $\eta^2_p = .22$, demonstrating a higher mean score for the BJP ($M = 95.92$, $SD = 5.82$) than INC ($M = 94.20$, $SD = 7.93$) (see Figure 3, Panel A). Similarly, the main effect of congruence was significant, $F(1, 39) = 9.72$, $p = .003$, $\eta^2_p = .20$, showing higher accuracy for congruent ($M = 95.75$, $SD = 6.39$) than incongruent ($M = 94.37$, $SD = 7.36$) trials (see Figure 3, Panel A). Further, a two-way interaction between the accuracy for party names and symbols was significant, $F(1, 39) = 4.68$, $p = .03$, $\eta^2_p = .10$, showing that participants were more accurate in the BJP congruent ($M = 97.89$, $SD = 3.20$) than the INC congruent ($M = 93.60$, $SD = 9.58$) trials. However, they were more accurate in the INC incongruent ($M = 94.80$, $SD = 6.28$) than the BJP incongruent ($M = 93.94$, $SD = 8.44$) trials (see Figure

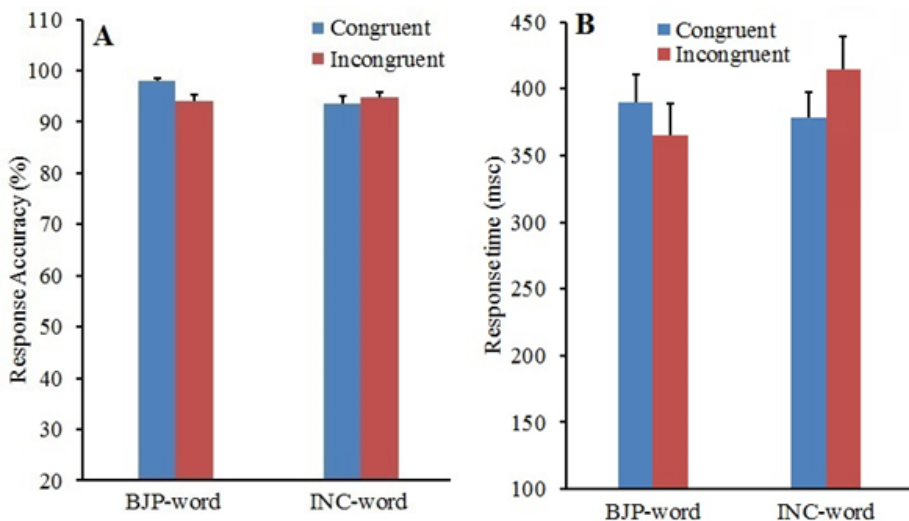


Figure 3. Mean response accuracy (%) and time (ms) for the recognition task of acronymic party names ignoring the symbols. Panel A: Mean response accuracy for acronymic names as a function of congruency, suggesting higher accuracy for BJP congruent than incongruent condition. Panel B: Mean RT of acronymic names as a function of congruency, suggesting faster RTs for BJP congruent than incongruent condition.

3, Panel A). The post hoc analysis confirmed no significant differences between the mean accuracy for BJP and INC congruent trials, $t(39) = 3.63$, $p = .06$, $d = 0.6$. Further, the accuracy comparison between the BJP congruent and incongruent trials, $t(39) = 3.31$, $p > .10$, $d = 0.6$, and the INC congruent and incongruent trials, $t(39) = 1.008$, $p > .89$, $d = 0.1$ did not reach significance. Participants were more accurate in judging the name of the BJP than the INC.

We performed a two-way ANOVA on RTs between the party and symbols. We found that the main effect of names was significant, $F(1, 39) = 4.44$, $p = .04$, $\eta_p^2 = .10$, meaning that mean RTs were faster for the BJP ($M = 377.24$, $SD = 141.14$) than the INC ($M = 396.42$, $SD = 139.17$, see Figure 3, Panel B). The main effect of congruence (Congruence: $M = 384.20$, $SD = 127.09$; incongruence: $M = 389.63$, $SD = 153.22$) was not significant, $F(1, 39) = .41$, $p > .52$, $\eta_p^2 = .01$. However, a two-way ANOVA interaction effect between the party names and symbols across participants was significant, $F(1, 39) = 7.51$, $p = .009$, $\eta_p^2 = .16$, yielding quicker RTs to the BJP ($M = 365.13$, $SD = 148.24$) than the INC ($M = 414.14$, $SD = 153.22$) incongruent trials (see Figure 3, Panel B). The post hoc analysis confirmed a significant comparison between the BJP and INC incongruent trials, $t(39) = 4.50$, $p = .01$, $d = 0.3$. However, the mean comparisons between BJP and INC congruent trials, $t(39) = .97$, $p > .89$, $d = 0.08$, and BJP and INC congruent and incongruent trials did not yield a significant interaction. Participants were quicker to recognise the name of the BJP than the INC. These behavioral results evidenced the automatic interference of political party symbols on party names, which lowered response accuracy for incongruent trials.

Correlations Between Behavioral Result and Election Results

Next, we analyzed the percentile of winning candidates and vote sharing of the BJP and the INC in the 2019 Indian parliamentary election and established a relationship with the RT and accuracy data. As per the data available on the website of the Election Commission of India (<https://eci.gov.in>), 303 candidates of the BJP out of 436 contestants won in the election. However, only 51 candidates of the INC won the election out of a total of 421 contestants. The candidate-wise winning percentile of the BJP was higher (69.52%) than the winning percentile of the INC (12.11%). Though the comparative relationship between RT-accuracy and vote share is weak from the point of view of the limited vote share data, the correlation between the two can help us predict the way voters process party information before the election.

Processing of Party Names Correlated with Election Results

Total votes secured were 54.72 % for the BJP and 28.54 % for the INC. Therefore, the BJP won the election by acquiring the highest gainful vote share of 37.76% compared to the vote share of 19.70% of the INC. These factual statistics of the highest secure vote (54.72%) and vote share (37.76%) percentile of the BJP are corroborated with the faster RTs ($M = 377.24$, $SD = 141.14$) and higher

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Table 2. Faster RT and higher response accuracy to the BJP acronym correlated with the high percentile of vote-share.

Party names	Candidates contested	Candidates won	Vote secured (%)	Vote shared (%)	Response time (ms)	Response accuracy (%)
BJP	436	303	229076879 (54.72%)	37.76	377.24	95.92
INC	421	52	119495214 (28.54%)	19.70	396.42	94.20

accuracy ($M = 95.92\%$, $SD = 5.82$, see Figure 3). Contrarily, the lower secure vote (28.54%) and vote share (19.70%) percentiles of the INC were associated with the slower RTs ($M = 396.42$, $SD = 139.17$) and lower accuracy ($M = 94.20\%$, $SD = 7.93$, see Figure 3).

Processing of Party Symbols Associated with Election Results

Though participants were slower ($M = 509.34$, $SD = 195.23$) to identify the BJP symbol, they were more accurate ($M = 95.47\%$, $SD = 5.47$, see Figure 2). The processing of the INC symbol was faster ($M = 481.64$, $SD = 201.76$) with lower accuracy ($M = 93.85\%$, $SD = 8.51$; see Figure 2). The slow RT with high accuracy is popularly known as the speed-accuracy trade-off (SAT, Chittka et al., 2009; see Figure 4). The SAT reveals that the performance of high accuracy demands more time in the case of BJP. The faster response also contributes to the high error rate, decreasing the response accuracy in the case of the INC symbol (see Figure4). Faster response during judgment entails less gathered background knowledge with a high rate of errors (Heitz, 2014).

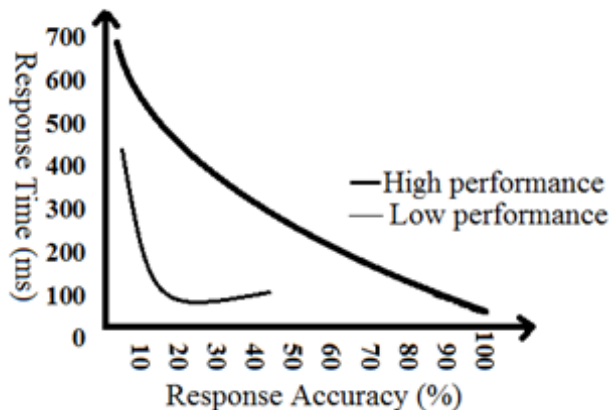


Figure 4. Representative curve of RT and accuracy trade-off reveals that high accuracy demands more time, whereas faster response results in more response errors.

Participants had higher accuracy for the BJP, thereby suggesting they might have taken more time to process its symbol. The processing of symbols was slower than the processing of party names. However, the accuracy was higher for the BJP, irrespective of its name and symbol.

This pre-election high accuracy ($M = 95.47\%$, $SD = 5.47$) for the BJP symbol was proportionally correlated with the high vote secured (54.72%) and share (37.76%) percentile. However, the low accuracy ($M = 93.85\%$, $SD = 8.51$) for the INC symbol correlated with the low vote secured (28.54%) and share (19.70%) percentile.

Discussion

This study aimed to predict the outcome of the 2019 Indian general parliamentary election based on the psychological processing of acronymic names and symbols of two major political parties: the BJP and the INC. The analysis of response accuracy and time revealed the pre-election perceptual accuracy towards party symbols and names, which was significantly higher for the BJP than for the INC, although the BJP’s symbol processing was slower. This result supports our first and second hypothesis that, though the BJP symbol took more time to be processed due to its cultural meaning stored in the long-term memory, the processing of the acronymic name of the BJP induced a faster response and higher accuracy than the INC name. This supports the idea that participants had better perceptual accuracy and faster RTs to the BJP that went on to win the general election because of its strong familiarity effects in India.

Furthermore, the interference effect revealed that the BJP symbol significantly affected the INC name, causing slower RTs and lower accuracy. The higher accuracy not only suggested a greater chance for the BJP to win the election, but it also emerged as a significant indicator for predicting the election outcome. Our psycholinguistic results, as anticipated, demonstrated that pre-election perceptual accuracy to the BJP symbol and name was positively linear to its high proportional vote-share. The consequential relative index of win and loss of candidates was also proportional to the response accuracy. This finding validated our third hypothesis that the short RT and high accuracy for the BJP name, irrespective of its congruence

Table 3. The high accuracy for the BJP lotus proportionally correlated with the high percentile vote of the BJP.						
Party symbols	Candidates contested	Candidates won	Vote secured (%)	Vote shared (%)	Response time (ms)	Response accuracy (%)
BJP lotus	436	303	229076879 (54.72)	37.76	509.34	95.47
INC hand	421	51	119495214 (28.54)	19.70	481.64	93.85

with the symbol, would be corroborated with the high percentage of the vote at the national level. Congruent stimuli were processed much faster and with higher accuracy than incongruent ones. These findings can be explained by the fact that effortless and automatic processing reflects high accuracy and short RT for the BJP, which correlates with the voters' positive attitudes and, therefore, an increase in vote share.

Higher Accuracy in Judging Acronymic Names Than Symbols of Parties

Our results revealed that the acronymic names of a political party were processed much faster and with higher accuracy than the party symbols when the participants were asked to process symbols ignoring words and vice versa in a recognition task. This implies that words or subwords like acronyms are processed automatically and effortlessly compared to the effortful processing of the nonverbal symbolic stimuli in a conflicting or mismatched context. This argument is well-defined in the symbolic linguistic distributional (SLD) theories, which suggest that words or subwords are derived from context. Therefore, word meaning recognition does not demand extra effortful perceptual mechanisms (Louwerse et al., 2006). In this sense, linguistic units like acronyms serve as a communicative shortcut to the perceptual system concerning world views (Louwerse, 2011). Thus, a linguistic task facilitating symbolic information of acronyms requires shallower processing than symbolic icons or pictures, which need deeper processing (Louwerse & Jeuniaux, 2010). In this regard, the integrated theories of symbolic and embodied information processing illuminate that, in a semantic judgment task, the rapid processing of language information occurs as linguistic factors facilitate to conceptualise the meaning represented by parties' acronym. However, in an iconicity task judgement for party symbols, the embodied factors involved therein resulted in slow processing (Louwerse & Connell, 2011). Therefore, the symbolic linguistic units were processed much faster with higher accuracy than iconicity pictures.

Words or acronyms are processed faster in the top-down hierarchy, with knowledge-based familiar meaning represented in the long-term memory (Jolij & Meurs, 2011). Conversely, the color and shape of the pictures are processed only through a bottom-up route (Awh et al., 2012), thereby judging the symbols demands larger cognitive, attentional, and thinking resources. Finally, we argued that the mixed level middle-out processing of acronyms accelerates the quick response and high accuracy: even combining both lower-level bottom-up processing of letters (part-to-whole, Eskey, 2005), and the higher-level top-down processing of words (whole-to-part, Smith & Tharp, 1979). Most of these claims support the argument that verbal units of language override non-verbal units of symbols during political information processing.

Alternatively, studies have shown that nonverbal means of symbolic representation are processed much faster than words (Blumenfeld & Adams, 2014; Kauschke et al., 2019). These studies have argued that words are incrementally

processed while interconnecting with a vast array of semantic networks. Therefore, words demand more time and cognitive resources as compared to symbols. Compared to text, pictorial forms of communication always draw more attention, communicate more information, and remain in memory longer (Adaval et al., 2019) due to the picture superiority effect (PSE; Childers & Houston, 1984). Pictures communicate information with little logical content, while written text establishes a reason-based argument to persuade consumers (Wyer et al., 2008). For example, a driver always processes road symbols and signs quicker than words. So far, there is no argument clarifying whether the processing of acronyms is faster and more accurate than of symbols, though symbols accelerate communication more than words (Izura & Playfoot, 2012). In the context of existing debates and discussions, though words are likely to be processed slower than symbols, we demonstrated that the acronyms of political party names are processed much faster and with higher accuracy than their symbolic representations.

Faster RT and High Accuracy for the BJP Acronym: National Connotations

The BJP acronym had a larger processing advantage with higher accuracy and faster RT than the INC acronym (Hypothesis 2), perhaps due to pronounceable frequency and familiarity. To substantiate the claim of unfamiliarity, we searched the use of the INC in the 2019 election manifesto and found no single use of it (Indian National Congress Election Manifesto, 2019). However, the BJP extensively used its acronym in its 2019 election manifesto (Bharatiya Janata Party Manifesto, 2019). Considering these distinctions between pronounceable and unpronounceable, familiar and unfamiliar forms of acronyms (Brysbaert et al., 2009; Crystal, 2008), the INC can be considered an unpronounceable initialism. This explanation also reconciles with the studies on the processing of familiar acronyms, which plays an important part in testing how some acronyms are influenced by the word superiority effect (WSE; Laszlo & Federmeier, 2007). According to the WSE, the meaningfulness and pronounceability of acronyms have a relative contribution to the processing effects, just like the processing of words via lexical pathways (Slattery et al., 2006).

Even the transliteration forms of acronyms in Indian languages complement the indigenous character to the party names. For example, the direct sound and meaning corresponding to the translation of the BJP as the Bharatiya Janata Party, which means "Indian People's Party" (Hansen & Jaffrelot, 1998), makes the acronym more popular, familiar, and catchy in most Indian languages. However, the acronym INC as "Indian National Congress" does not facilitate the same processing as it has no relevant indigenous sound or meaning. The study showed that phonological acronym relates to orthography and sound system of the indigenous language, and was therefore recognised faster and more accurately than other types of sublexical acronyms (Peleg et al., 2019; Playfoot & Izura, 2015).

This interpretive explanation is consistent with the interactive-connectionist model, which demonstrates that familiar orthographic strings interconnecting with corresponding phonological and semantic representations of lexical items are processed via direct lexical pathways (Coltheart et al., 2001; Harm & Seidenberg, 2004). According to this model, phonological units, which are simultaneously activated along with the corresponding orthography, are spontaneous, involuntary, and quick in recognising lexical items, including acronyms (Grainger & Holcomb, 2009). Moreover, quicker processing of the BJP acronym with high accuracy supports the argument of Slattery et al. (2006) and Playfoot and Izura (2015) that the processing of familiar acronyms occurs very fast due to their phonological activations. These interpretations also correlate with the lexical co-occurrence model, which suggests that word processing largely depends on its semantic association in which the target word or acronym interconnects with other units at the discourse level (Kintsch, 2000). These results suggest that the BJP acronym is considered a regular phonological pronounceable acronym accessible through sound-to-letter translation strings via direct lexical pathways with larger semantic and contextual associations. In contrast, the INC acronym is an irregular acronym processed through indirect sublexical letter-to-sound conversation pathways. Therefore, the BJP is recognised automatically and rapidly with higher accuracy than the INC. In this regard, the present study uniquely revealed the role of sound-to-letter translations of the acronyms that play a pivotal role in recognising a political party in a psycholinguistic task.

Another angle is the compositionality and letter-sound differences between the acronyms that contributed to the processing effect. Though both acronyms are made up of three letters, the expansion form of INC in terms of orthography ($N = 22$) and sound ($N = 18$) numbers is larger than the full form of the BJP's orthography ($N = 20$) and sound ($N = 17$). Further, the sequence of the letters in the BJP acronym is progressively incremental as it follows the ascending order of the alphabet, whereas the INC is regressively incremental in following both ascending and descending orders. Considering the incremental structural minimalism, we argue that the BJP has a greater advantage over the INC in terms of processing time and accuracy. Not only the numbers of orthography and sound but also the indigenous compositional form of the BJP acronym that combines the three words: Sanskrit "Bharatiya," Hindi "Janata", and English "Party" increase the rich semantic representation and hybrid cultural and multilingual imageability. On the other hand, the INC, which carries the second language compositionality, combines three English words, decreasing its semantic network in Indian languages. This interpretation accounts for the imageability effect, suggesting the high imageability pronounced acronyms are named much faster with higher accuracy than low imageability unpronounceable acronyms (Izura & Playfoot, 2012).

Slower Processing for the BJP Symbol

The current study also showed that the BJP party symbol was processed slower and with high accuracy than the INC symbol, which was processed faster and with lower accuracy. The slower RT enhanced the higher accuracy in the processing of the BJP symbol as per the SAT (Chittka et al., 2009; Heitz, 2014). The BJP lotus symbol is socioculturally, spiritually, and environmentally linked with Hindu mythology. Therefore, the conceptual derivation of the lotus from the mythology demands a slow RT. Furthermore, the lotus also represents the abstract notion of purity, love, and beauty, and is associated with the metaphorical meaning of rising upwards like a lotus in muddy waters. It is India's national flower. According to Hindu mythology, the lotus also represents Lord Maha Vishnu, known as Padmanabha or the lotus navel. This confirms our first hypothesis that the BJP symbol takes more time to process due to its past historical legacy. The slow RT is related to slow thinking.

However, the INC's right palm symbol was processed faster and with lower accuracy. The faster RT reduced accuracy, according to the SAT (Heitz, 2014; Pankratz et al., 2021; Vandierendonck, 2021). Further, the right palm symbol is conceptually linked with the brain and the body, as it implies work or action through the hand. The mind is a part of the body (Geertz, 2010), therefore, as a representation of the body, it facilitates action and fast thinking (Wilson, 2010). Considering the past sociocultural references, the lotus is far from the working memory, whereas the right palm is biologically closer to the participants' brain and body. Thus, to retrieve the sociocultural, spiritual, aesthetic, and pragmatic meaning of the lotus from the long-term memory, participants consumed more time and used more resources than when retrieving the meaning of the right palm symbol from short-term memory.

This interpretation is congruent with the argument of Taber and Lodge (2012) that upon the arrival of stimulus, the sociocultural and emotional beliefs, subjective evaluative thoughts, and thinking resources are activated and retrieved from long-term episodic memory. The hot-cognition hypothesis also supports this argument on political information processing, which suggests that all sociocultural, political, and economic concepts previously judged are activated and retrieved from long-term episodic memory (Lodge & Taber, 2005). Establishing a link between episodic and working memory demands more thinking resources. Therefore, participants take more time to compute the lotus than the right palm symbol. In addition, the unexpected information is affectively incongruent with prior evaluation and requires extra processing time (Lodge & Taber, 2005).

Higher Accuracy of Cross-Modal Congruent Trials

As anticipated, the results demonstrated that the congruent trials were judged with higher accuracy than the incongruent trials. This result supports previous findings that incongruent and unexpected information is judged inaccurately

(Adaval et al., 2019) when the past knowledge and schema do not match the current external stimulus (Erisen et al., 2018; Hölte et al., 2019). Thus, the slower processing of semantic incongruity enhances the magnitude of the interference effect in the case of classical color-word Stroop inhibition (Stroop, 1935; Menetre & Laganaro, 2019). In political communication, the current study contributes to the processing of incongruent information and its consequences by interpreting cross-model verbal and nonverbal cues.

Our result is consistent with a previous study showing that voters process the congruent stimuli much faster than incongruent stimuli (Redlawsk, 2006). People often derive political-ideological information from prior stored memory to defend congruent information and oppose incongruent information (Redlawsk et al., 2010). Political information deviating from prior political beliefs involves effortful and deeper cognitive processing besides increasing complexity of thought, thereby generating slower RTs and lower accuracy, whereas congruent information processing is quick, effortless, and automatic (Erisen et al., 2018; Meffert & Gschwend, 2011), according to one's prior convictions and expectations (Gottfried & Dolan, 2003; Kahneman, 2011). This indicates that humans are often satisfied when their behaviors are consistently matched with thought and attitude. If any mismatch arises, a lesson will be learned from the environment using more attentional and thinking resource (Simon et al., 2004).

Interference of the BJP Symbol in the INC Acronym

Our interference effect revealed that the BJP symbol significantly interfered with the INC acronym, causing a slower RT for the INC incongruent stimuli when participants responded to the parties' acronyms ignoring symbols. The symbol, as a nonverbal stimulus, interferes with the verbal stimulus when the former is irrelevant to the psycholinguistic task. Thus, the INC acronym was processed slower since the BJP symbol interfered with the acronym's processing, contrary to the noninterference of the INC symbol with the BJP acronym, which was processed quickly. Further, the BJP symbol was processed slower than the INC symbol. This implies that if the task-relevant information is processed slowly, the irrelevant information interferes with relevant information. This finding is consistent with the theory of interference, which explains that if the irrelevant information is retrieved from long-term memory, it interferes with relevant information in conflicting and competing contexts (Müller & Pilzecker, 1900). To overcome this interference, an executive control mechanism is employed to control and inhibit the conflict between relevant and irrelevant information, causing the slower response to the incongruent stimulus (Healey et al., 2013). This finding was also replicated in the study of the word-prosody Stroop effect, wherein the emotional prosody classified as a nonverbal component of communication interfered with word meaning. However, word meaning does not interfere with prosody because it is processed faster (Schirmer & Kotz, 2003). Psycholinguistic evidence also supports the picture-word interference (PWI) task,

which takes longer in terms of larger attention at the cost of executive control if the task-irrelevant stimulus is superimposed as a distracter on the task-relevant component (Costa et al., 2003; Collina et al., 2013).

High Accuracy and Fast RT Signify the Probability for the BJP to Win the Election

Our psycholinguistic results showed that the BJP acronym BJP was processed faster and with higher accuracy than the INC acronym. This result supports our third hypothesis that the higher accuracy and faster processing of political party names would be corroborated by the higher percentage of votes at the national level. In the 2019 parliamentary election, the BJP gained a higher percentile (54.72 %) of the vote than the voting percentile of the INC (28.54%). Even the percentile of the winning candidates was higher for the BJP (69.52%) than for the INC (12.11%). The 2019 election was marked as a historic victory for the BJP (Heath, 2020). As a result, the BJP gained more seats and a high vote share in the Lok Sabha election at the cost of the INC and the regional parties (Aiyar & Tillin, 2020).

Scholars have argued that voting behaviours are largely motivated by the voters' trust and belief towards the political party (Sircar, 2020). Trust and belief motivate voters to cast their votes in favour of a preferred political party. Voters often preserve the party posters and other ideological artefacts. Scientists predict that the presence of party posters after the election is linearly proportional to the win and loss of each party (Boen & Vanbeselaere, 2002). Posters of the victorious party stay longer than posters of the vanquished party (Cialdini et al., 1976). In line with these previous studies, the current study predicted the win and loss of major political parties and their vote shares, which were proportional to the processing of party names in India. The quicker the processing of party name, the higher the proportion of the vote share and winning candidates.

Conclusion and Implications

In this study, we showed that experimental behavioral paradigms of conflict could be applied in the domain of electoral politics to predict the proportional vote share of major political parties and their probabilities of winning or losing before the general election. The BJP symbol took more time to process because of the slow retrieval of its cultural meaning from the long-term memory. However, processing the BJP acronym resulted in a faster response and higher accuracy due to less thinking resources needed for its hybrid cultural and multilingual imageability, direct sound-meaning translation, and rich semantic network in Indian languages. We have uniquely tested the pre-election perceptual accuracy of recognizing the BJP symbol and name, which was positively linear to the index of its high proportional vote share at the national level. We argue that psycholinguistic evidence can be

considered one of the contributing indicators for predicting election outcomes. This type of prediction intends to direct political parties to invest resources and to model optimal cognitive strategies to gain the highest vote in an election.

Overall, the proposed experimental paradigms that point to the value of information processing in the domain of electoral politics predict voters' behavior before the election. Thus, the current study offers substantive and broad implications for designing a persuasive form of winning strategy and predicting election results. A significant theoretical contribution of this study thus concerns cognitive processing of party information, the theory of cognition, and attentional control in explaining behavioral mechanisms to predict election results in the context of polarised party systems. The current study has extended the scope of psycholinguistics and political psychology by applying cognitive and attentional theories to predict election results. The limitation of the study is the correlation between two average data points of vote share with RT-accuracy of party symbols and names. Testing any association or correlation would require vote share data from multiple states/districts. We could then test whether the accuracy or RT of a party in a district or state correlates with party success in the same district/state. In this direction, an experimental study is needed to investigate the correlation of the SAT for party symbols and names with vote shares across states or districts. Our future study will be focused on correlational variations of election outcomes and the processing of political information and the media coverage that the parties received across states. Further, considering the recent advances in the field of cultural neuroscience and brain imaging, our future study will involve the physiological states to investigate the neurocognitive mechanisms related to political beliefs, emotions, and attitudes of voters during the processing of political and ideological information before and after the general election.

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Authors don't have any conflict of interest regarding any parties to this study and the publication of this research article.

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Research Ethics Statement

Methodological techniques and procedures executed in this study concerning participants were in accordance with the ethical and moral standards of the Indian Council of Medical Research (ICMR 2017) guidelines. No ethical considerations were violated in this study. Participants were voluntarily given written consent for participating in the study.

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