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Report

The name-pronunciation effect: Why people like Mr. Smith more than Mr. Colquhoun

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ABSTRACT

Names are rich sources of information. They can signal gender, ethnicity, or class; they may connote personality characteristics ranging from warmth and cheerfulness to morality. But names also differ in a much more fundamental way: some are simply easier to pronounce than others. Five studies provide evidence for the *name-pronunciation effect*: easy-to-pronounce names (and their bearers) are judged more positively than difficult-to-pronounce names. Studies 1–3 demonstrate that people form more positive impressions of easy-to-pronounce names than of difficult-to-pronounce names. Study 4 finds this effect generalizable to ingroup targets. Study 5 highlights an important real-world implication of the name-pronunciation effect: people with easier-to-pronounce surnames occupy higher status positions in law firms. These effects obtain independent of name length, unusualness, typicality, foreignness, and orthographic regularity. This work demonstrates the potency of processing fluency in the information rich context of impression formation.

Introduction

Names carry a lot of information. They can be diagnostic of social categories such as race, ethnicity, gender, and class (Kasof, 1993); they can influence impression formation on a range of attributes including success, warmth, morality, popularity, cheerfulness, and masculinity–femininity (e.g., Mehrabian, 2001; Mehrabian & Piercy, 1993). Importantly, such name connotations matter: first name characteristics predict income and educational attainment (Aura & Hess, 2004); a person with an African American-sounding name is less likely to get a call-back for a job interview than a person with a White-sounding name (Bertrand & Mullainathan, 2004); boys with girls' names are more likely to be suspended from school (Figlio, 2007); and name popularity is negatively associated with juvenile delinquency (Kalist & Lee, 2009).

Such effects are typically explained by the fact that names activate a reservoir of semantic information, which then informs judgment. Etaugh, Bridges, Cummings-Hill, and Cohen (1999), for example, found that women who take their husband's surname are judged to be less agentic and more communal than those who retain their own names. A name activates a rich set of semantic information – from connotations of the bearer's age, to intellectual competence, race, ethnicity, social class (Kasof, 1993) – which impacts impression formation and evaluation.

We argue, however, that there is a more basic route from name to evaluation; a route that has been neglected in the study of impression formation. Names vary in the ease with which they are pronounced. Drawing on work in processing fluency, the current paper explored the *name-pronunciation effect*: that easy-to-pronounce names (and the bearers of those names) are judged more positively than difficult-to-pronounce names.

This prediction stems from research on *processing fluency* –– the subjective experience of ease or difficulty associated with a cognitive process (see Alter & Oppenheimer, 2009 for a review). According to the *hedonic marking hypothesis*, processing fluency automatically elicits a positive affective state which is attributed to the stimulus under judgment (Winkielman, Schwarz, Fazendeiro, & Reber, 2003). As a consequence, easy-to-process stimuli – be they Chinese ideographs, pictures of furniture, or collections of dots – are evaluated more positively than difficult-to-process stimuli (see Schwarz, 2004; Winkielman et al., 2003, for reviews).

One relatively understudied instance of processing fluency is phonological fluency, which is a function of how easy it is to pronounce a word (Alter & Oppenheimer, 2009). Some research shows that phonologically fluent stocks are expected to perform better (Alter & Oppenheimer, 2006), that easy-to-pronounce words are defined more concretely than difficult-to-pronounce words (Alter & Oppenheimer, 2008), and that drugs with easy-to-read names are deemed less risky (Song & Schwarz, 2009). No work, however, has considered the consequences of name pronunciation for impression formation. Drawing on the hedonic marking hypothesis, we hypothesized a *name-pronunciation effect*: that easy-to-pronounce names

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(and their bearers) will be judged more positively than difficult-to-pronounce names.

Although it may seem a straightforward extrapolation from the hedonic marking hypothesis, it is not apparent that name pronunciation ease will influence impression formation. Because we often make judgments about others in information-rich environments (in which ample information besides name fluency may be available), pronunciation ease may contribute little. Indeed, Winkielman et al. (2003) and Reber, Schwarz, and Winkielman (2004) have speculated that processing fluency may exert limited influence when people have access to other information relevant to judgment. Given the diversity of information that people's names carry, as well as the variety of other information sources often available, it is not obvious that pronunciation experiences will have any impact on impression formation. Thus, across five studies we investigated the name-pronunciation effect and its consequences in a range of contexts, from relatively information-poor through to information-rich laboratory conditions, as well as in the real-world context of law firm hierarchies.

Study 1

In Study 1, we sought to demonstrate the name-pronunciation effect by showing that names that are easy to pronounce are liked more than names that are difficult to pronounce. We controlled for name unusualness, as unusual names are often perceived as less desirable (Busse & Seraydarian, 1978; Mehrabian, 1992; West & Shults, 1976) and may, on average, be more difficult-to-pronounce. We also controlled for word length and orthographic regularity. Orthographic regularity (operationalized as bigram frequency) has been related to the ease with which people process linguistic stimuli (e.g., Dominowski & Duncan, 1964; Mayzner & Tresselt, 1959). As orthography and phonology are tightly intertwined, a strong test of a pronunciation-based account (which draws on phonological fluency) would have to rule out orthographic regularity as an alternative explanation.

Method

Thirty-five students (19 females, 16 males) participated in the study. All participants identified as being of Asian ethnicity, had been in Australia for no longer than 5 years ($M = 2.19$, $SD = 1.43$) and fell in the age range 18 to 52 ($M = 22.00$, $SD = 5.80$).

Using intuitions about pronunciation ease, the researchers selected twenty-five 'easy-to-pronounce' (fluent) and 25 'difficult-to-pronounce' (disfluent) surnames of five different nationalities from an online directory of names (Monk, 1997). Five fluent and five disfluent surnames were selected from each nationality (see Appendix). Participants were randomly assigned to rate all 50 surnames on one of the following dimensions: fluency ("how easy to pronounce are the following surnames?" *1 = very difficult, 7 = very easy*); unusualness ("how unusual are the following surnames?" *1 = not at all, 7 = very unusual*); or liking ("how much do you like the following surnames?" *1 = not at all, 7 = very much*). Thus, all surnames were rated on each of these three dimensions by an independent group of 11 or 12 participants. We also coded word length and bigram frequency (using MC Word; Medler & Binder, 2005).

Results

As stimulus selection was based on researchers' intuitions about fluency (and not on an empirically-grounded a priori classification as fluent or disfluent), we adopted a correlational approach in this study. Following an analysis strategy used in related research (e.g., Alter & Darley, 2009; Tausch, Kenworthy, & Hewstone, 2007) we treated items (i.e., surnames) rather than participants as units of analysis. To establish the reliabilities of each rating dimension, we first excluded participants whose responses were uncorrelated ($r < .10$) with average ratings on each dimension ($n = 1$, liking dimension) (Tausch et al., 2007) and then computed reliability estimates for each dimension (fluency, $n = 11$, $\alpha = .96$; unusualness, $n = 12$, $\alpha = .88$; liking, $n = 11$, $\alpha = .74$). We next calculated mean ratings, averaged across reliable judges, for each name, yielding fluency, unusualness, and liking ratings for each of the 50 surnames.

As predicted, fluency was positively correlated with liking, $r(50) = .76$, $p < .001$, indicating that easier-to-pronounce names were liked more. When liking ratings were regressed onto fluency and the covariates, fluency predicted liking, $\beta = .25$, $t(45) = 1.98$, $p = .05$, as did unusualness, $\beta = -.69$, $t(45) = -6.55$, $p < .001$, however, name length, $\beta = .07$, $t(45) = .77$, $p = .44$, and log bigram frequency, $\beta = .12$, $t(45) = 1.51$, $p = .14$, did not. Consistent with the hypothesis, pronunciation ease predicted name liking and this effect was not reducible to name unusualness, name length, or orthographic regularity.

Study 2

Having established the name-pronunciation effect in tightly controlled but rather impoverished conditions, in Study 2 we tested whether the effect would obtain in a more meaningful context: voting behavior. Thus, in Study 2, we considered whether name pronunciation ease would influence voting preferences for candidates in a mock ballot. Importantly, this study also used a different sample (Anglo-Australians) and three different name-nationalities in order to generalize across participant populations and targets.

Method

Thirty-five undergraduate students (27 females, 7 males, 1 unspecified) ranging in age from 17 to 22 years ($M = 18.38$, $SD = 0.95$) participated in this study, which was presented as an investigation of voting behavior. A short introduction informed participants that people often cast votes based on very minimal information about candidates. Following this introduction, 12 surnames were presented in a mock electoral ballot, and participants were asked to rank all twelve candidates in order of preference. Six easy-to-pronounce surnames and six difficult-to-pronounce surnames were used as stimuli (selected based on ratings from Study 1). In order to increase generalizability across targets, these were sampled from three national groups (see Appendix). The easy and difficult to pronounce names did not differ in terms of average word length ($M_{easy} = 8.00$, $SD_{easy} = 2.00$ vs. $M_{difficult} = 9.50$, $SD_{difficult} = 3.21$), $t(10) = -.97$, $p = .35$, or orthographic regularity (i.e., average log bigram frequency; $M_{easy} = 4.21$, $SD_{easy} = .09$ vs. $M_{difficult} = 3.78$, $SD_{difficult} = .97$), $t(10) = 1.07$, $p = .31$. After the ranking task, participants rated the twelve surnames on fluency, as in Study 1.

Results

As a manipulation check, we analyzed participants' fluency ratings of the surnames using a repeated-measures *t*-test, which revealed that the fluent names ($M = 6.14$, $SD = 0.78$) were rated as significantly easier to pronounce than the disfluent names ($M = 2.65$, $SD = 1.13$), $t(34) = 18.80$, $p < .001$, $\eta^2_p = .91$.

Importantly, people ranked fluent surnames significantly higher ($M = 5.35$, $SD = 1.17$) than disfluent surnames ($M = 7.65$, $SD = 1.17$), $t(34) = -5.8$, $p < .001$, $\eta^2_p = .50$, indicating a preference for candidates with easy-to-pronounce names.

Study 3

In Study 2, although the ballot format provided a contextual frame for name evaluation, namely voting, it still utilized name characteristics as the only source of information upon which judgments could be

based. In Study 3 we tested the robustness of the name-pronunciation effect in a richer context, by embedding target names in mock-newspaper articles containing ample decision-relevant information about election candidates.

Method

Participants were seventy-four undergraduate students (55 females, 19 males) ranging in age from 17 to 55 years ($M = 21.08$, $SD = 5.01$). Most were Australian-born (93.24%) and identified as being of European ethnicity (75.7%); the remainder identified as Asian (13.5%) or of other ethnicities (10.8%). No participants reported Greek or Polish heritage (see below).

Participants read a mock newspaper article that presented a male candidate running for an upcoming local council election. The article provided general information about the candidate, including his family background and previous career, and also outlined one of his policies. The candidate's surname varied according to a 2 (name fluency: easy vs. difficult) × 2 (name nationality: Greek vs. Polish) between participants design. All other information was held constant across conditions (including the first name and gender of the candidate). The surnames used in the experiment were selected on the basis of two pilot studies in which different participants rated Greek and Polish surnames on fluency, unusualness (using the same items as in Study 1), and typicality ("How typically Greek/Polish are the following surnames?" *1 = not at all; 7 = very much so*). The surnames were chosen so that the easy (Lazaridis and Paradowska) and difficult (Vougiouklakis and Leszczynska) names differed significantly on fluency within each nationality, but not on unusualness or typicality. After reading the newspaper article, participants rated the degree to which they thought the target was a good candidate for the local council position (*1 = not at all; 7 = very much so*). Finally, participants rated the target's surname on ease-of-pronunciation.

Results

As a manipulation check we subjected fluency ratings of the candidates' surnames to a 2 (nationality: Greek vs. Polish) × 2 (fluency: fluent vs. disfluent) analysis of variance (ANOVA). This revealed a significant main effect of fluency, $F(1, 70) = 93.47$, $p < .001$, $\eta^2_p = .57$, indicating that participants in the fluent conditions ($M = 4.66$, $SD = 1.51$) rated the candidate's surname as significantly easier to pronounce than those in the disfluent conditions ($M = 1.85$, $SD = 0.90$). No other effects were significant.

Participants' candidate evaluations were submitted to a 2 (nationality: Greek vs. Polish) × 2 (fluency: fluent vs. disfluent) ANOVA. This revealed the expected, significant main effect of fluency, $F(1, 70) = 11.364$, $p = .001$, $\eta^2_p = .14$: participants in the fluent conditions ($M = 5.23$, $SD = 0.73$) evaluated the candidate as better suited for the position of local councilor than did those in the disfluent conditions ($M = 4.62$, $SD = 0.85$). No other effects were significant. Consistent with this finding, participants' ratings of the candidate's surname on linguistic fluency were positively related to their evaluation of the candidate, $r(74) = .38$, $p = .001$.

Study 4

Studies 1–3 examined the name-pronunciation effect for outgroup names. However, it is not clear whether this effect is restricted to outgroup targets. Given that people typically have more information about ingroups than outgroups (Linville, Fischer, & Salovey, 1989; Park & Rothbart, 1982; Quattrone, 1986), and that they may be more motivated to consider all judgment-relevant content when making ingroup judgments (Allport, 1954; Linville et al., 1989), it is possible that fluency effects may be weaker for ingroup than for outgroup judgments. We tested this proposition in Study 4 by experimentally manipulating the group-status of names and examining whether the name-pronunciation effect held for the very same names when presented as belonging to either ingroup or outgroup targets.

Method

Participants were 55 undergraduate students (36 females, 19 males) ranging in age from 18 to 35 years ($M = 19.56$, $SD = 3.14$), who were either Australian-born (92.7%) or had lived in Australia for more than 15 years ($M = 19.37$, $SD = 3.04$). All were citizens or permanent residents of Australia.

We used the same approach as in Study 1: independent samples of 13–14 participants rated a list of names on a single item. The stimuli comprised 40 names of Anglo-Celtic origin varying in pronunciation ease (as judged by researchers' intuitions) drawn from Monk's (1997) online directory of names (see Appendix). Participants were randomly assigned to rate the 40 surnames, printed in a random order, on either fluency or liking using the same items and response scales as in Study 1. Importantly, participants completed the ratings in either the 'in-group condition' or 'out-group condition', in which the 40 surnames were presented as belonging to Australian versus American citizens, respectively. To ensure that participants had encoded the apparent group identity of the names, they were subsequently asked to identify the national group from which the names were sampled. All participants did so correctly. We also coded name length and orthographic regularity (bigram frequency), as in Study 1, and considered these as covariates.

Results

We first excluded participants whose judgments were uncorrelated ($r < .10$) with average ratings within each dimension ($n = 1$, ingroup liking; $n = 1$, outgroup liking dimension) (Tausch et al., 2007). We then computed reliability estimates for each dimension (ingroup fluency: $n = 13$, $\alpha = .96$; ingroup liking: $n = 13$, $\alpha = .83$; outgroup fluency $n = 14$, $\alpha = .97$; outgroup liking $n = 13$, $\alpha = .83$). All subsequent analyses were conducted using the data from these 53 reliable judges.

As in Study 1, linguistic fluency was significantly correlated with liking in the outgroup condition, $r(40) = .81$, $p < .001$, indicating that easier-to-pronounce out-group surnames were evaluated more positively. The same relationship emerged for the ingroup condition, $r(40) = .81$, $p < .001$. A test comparing the magnitude of the correlations between fluency and liking in the in-group and out-group conditions using Steiger's (1980) method revealed that, not surprisingly, there was no significant difference between them, $Z_2^* = -0.02$, $p = .98$.

When name-length and log bigram frequency were entered as covariates into simultaneous regressions predicting liking from fluency, fluency was the only significant predictor, both for ingroup ($\beta = .88$, $t(36) = 7.25$, $p < .001$) and outgroup ($\beta = .80$, $t(36) = 6.10$, $p < .001$).

Study 5

Studies 1–4 demonstrated the name-pronunciation effect in a range of laboratory settings. In Study 5 we examined the relationship between pronunciation fluency and evaluation in a naturalistic environment. Some work on name characteristics and political judgments (e.g., O'Sullivan, Chen, Mohapatra, Sigelman, & Lewis, 1988) shows that subtle name effects may actually disappear in contexts in which other relevant information is available (e.g., political party affiliation). We thus thought it important to demonstrate the robustness of the name-pronunciation effect in a naturalistic context rich in decision-relevant information. Specifically, we examined whether

American lawyers with fluent rather than disfluent names tend to occupy superior positions within law firm hierarchies.

Method

We began by compiling a list of 500 lawyers' first and last names using law firm websites. To sample randomly but widely, we extracted 50 names from each of 10 firms that varied in size from the largest U.S. firm to the 178th largest firm (determined using the website: http://www.ilrg.com/nlj250). The names varied in length, and the list of names within each firm included names beginning with each letter of the alphabet. We also extracted several covariates, including each lawyer's graduation year, law school ranking (according to the U.S. News and World Report), the average associate's salary at the firm, and the critical dependent measure: the lawyer's position in the firm hierarchy (coded such that associates were assigned the lowest value and partners the highest).

Having collected the names and data, a separate pool of undergraduate students at a large U.S. university rated one of three subsets of 167 names on one of two dimensions: fluency (the independent measure; from *1 = very easy to pronounce* to *5 = very difficult to pronounce*); and foreignness (binary: Anglo-American vs. foreign names). Each name was rated at least twice on each dimension, and both the fluency ($\alpha = .78$) and foreignness ($\alpha = .79$) ratings were reliable.

Results

A regression analysis suggested that lawyers with more easily pronounceable names occupied superior positions within their firm hierarchy, $\beta = .12$, $t\ (498) = 2.69$, $p = .008$. The effect was independent of firm size, firm ranking, or mean associate salary.

We sought to eliminate one potential alternative explanation for the effect. Given the relatively recent institution of diversity policies in law firms, it seemed plausible that lawyers with Anglo-American names would occupy higher positions in the hierarchy merely because they had been employed, on average, for longer than lawyers with foreign names. Indeed, not surprisingly, lawyers who had been employed for longer occupied superior positions, $\beta = .73$, $t\ (498) = 23.45$, $p < .0001$. To eliminate this concern, we examined the relationship between name fluency and position in the hierarchy separately among lawyers with Anglo-American names and foreign names. Consistent with our suggestion that this relationship is driven by fluency, rather than foreignness per se, we found that lawyers with more pronounceable names occupied superior positions in their company hierarchies regardless of whether we confined our analysis to Anglo-American names only, $\beta = .24$, $t\ (99) = 2.43$, $p < .02$, or foreign names only $\beta = .13$, $t\ (397) = 2.59$, $p = .01$.

General discussion

Five studies demonstrated the name-pronunciation effect: easy-to-pronounce names (and the people who bear them) are evaluated more positively than difficult-to-pronounce names. This effect obtained across various samples (Australian and Asian), various outgroups, as well as for ingroup targets, various analysis strategies (item vs. participant as unit of analysis) and in contexts ranging from rather impoverished name ratings to more contextualized political judgments and even status in the workplace. The effect is independent of name length (Studies 1, 2, and 4), orthographic regularity (Studies 1, 2, and 4), unusualness (Studies 1 and 3), name typicality (Study 3), and name foreignness (Study 5).

This research contributes to the processing fluency literature in extending the effects of fluency into the domain of impression formation. This is an important extension as it demonstrates the robustness of fluency effects in potentially information-rich contexts. Impression formation depends on a variety of cues, many of which are indicated by names (e.g., ethnicity and gender). The fact that name pronunciation impacts liking and other evaluative measures so strongly and consistently in such contexts is an important demonstration, given theorising about the limits of fluency effects in information rich environments (e.g., Reber et al., 2004; Winkielman et al., 2003).

The research also contributes to work on name characteristics and their relation to evaluation and impression formation. It also potentially provides a more parsimonious explanation of a variety of extant name-characteristic effects. Factors such as conventionality of spelling (Mehrabian & Piercy, 1993) and unusualness (Busse & Seraydarian, 1978; Mehrabian, 1992; West & Shults, 1976) have been shown to influence positivity ratings. To the extent that unconventionally-spelled and unusual names are also difficult to pronounce, these effects may be explained at least partially by pronunciation ease. This remains a question for future research.

The current work also highlights an important methodological consideration. In research that uses names as indicators of social category membership (e.g., resume research; Bertrand & Mullainathan, 2004; Booth, Leigh, & Varganova, 2010; and see Kasof, 1993), care must be taken to equate stimuli on pronunciation ease. If one wants to infer that social category information per se accounts for an effect, it is important rule out the possibility that category indicators (such as names) differ on processing fluency.

Finally, it is important to note the generalizability of the name pronunciation effect across samples and targets and, perhaps most importantly, to a naturalistic context. The practical consequences of such effects could be numerous and significant and thus warrant future research. In classroom contexts, for example, preferences for students with easy-to-pronounce names may result in selective treatment, engendering self-fulfilling prophecy effects often detrimental to educational and social outcomes (Rosenthal & Jacobson, 1992).

Although processing fluency has been considered an important factor in many judgment contexts, the current research constitutes the first demonstration of the potency of processing ease in impression formation and the range of consequences that processing fluency has on how we evaluate others.

Supplementary materials related to this article can be found online at doi:10.1016/j.jesp.2011.12.002.

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