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# Mr "Py" is Probably a Good Mathematician: An Experimental Study of the Subjective Attractiveness of Family Names

NICOLAS GUÉGUEN
*University of Bretagne-Sud, France*

ALEXANDRE PASCUAL
*Université of Bordeaux 2, France*

Research suggests that surnames are associated with connotations such as ethnicity, liking, familiarity . . . In this experiment we tested the effect of a symbolic connation associated with a surname. Several ads offering private math lessons for pupils were published in various local French newspapers. The surname of the professor in mathematics who offered his help was manipulated according to the experimental conditions: Mr Py a surname that sounds like the famous mathematical constant (Pi) was compared with Mr Rie a name with the same frequency and vowel sound but who was not associated with any symbol or professional connotation, and Mr Le Gal the most frequent surname in the geographic area where the experiment was conducted. It was found that the ad published by Mr Py received more phone contacts than when the same ad was published with the two other surnames. Results provide some support that symbolic connotations associated with surname and a professional function has implications on people's behavior toward their owner.

KEYWORDS surname, symbolic connotation, behavior

Allport (1937) suggested that name is one of the most important components of an individual's self-identity, yet names, and particularly surnames, also represent social identity, status, ethnicity, origin, occupation, etc. Various attributes are associated with the origin of surnames and sometimes point to the origin of their owner. Surnames have a patronymic dimension referring to an ancestor's name with the

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suffix "son" ("fils" in French): e.g., Jackson, Johnston in United States or Bonfils, Beaufils in France. Surnames also have a toponymic dimension identifying, in the past, where a person comes from (e.g., Hill, Lake in US or Lebreton, Lenormand in France). Occupational information is also associated with surname and refers to ancestor's vocation or social role (Baker or Smith in US or Le Boulanger, Lemaire in France). Finally, a surname can also be associated with some physical characteristics of the first owner (e.g., Small, Barber in United States or Legrand, Lefort in France) or even with psychological characteristics (e.g., Savage in US or Lebon in France). Of course, such practices refer to ancestors' names and today the name passed down from generation to generation.

Previous research has found that liking of others' surnames is associated with familiarity: common and frequent surnames receive higher, more positive evaluation than uncommon and infrequent surnames (Colman et al., 1981; Hargreaves et al., 1983). Stereotypes are also associated with surnames and affect judgment of their owner. Numerous studies have found that surnames with connotation of minority ethnicity are associated with more negative connotations (Luscri & Mohr, 1998; Mair, 1986; Radelet & Pierce, 1985). However, attributes other than ethnicity or frequency are also associated with surnames. O'Sullivan and his colleagues found that, in a laboratory context, the attractiveness of the names of two imaginary political candidates influenced voter preferences only when names (and not candidate's issue position) were presented (O'Sullivan *et al.*, 1988). Attractiveness of the consonance of names is also associated with variation in individuals' evaluation. Smith (1998) examined forty-two US presidential elections from 1824 to 1992, devising a sound comfort score based on multiple phonetic and lexical factors of the surname (number of syllables, initial or ending fricative consonant, stressed vowel . . .). This author found that thirty-five of the surnames with the more positive comfort scores received the greatest popular vote.

Of course, a person's surname is sometimes used as a cue to his/her ethnic background, which in return, activates stereotypes associated with this ethnic membership (Luscri & Mohr, 1998). However, other aspects could be associated with further stereotypes or trait inference. One aspect of the attribute associated with surnames that has not been explored in previous research is the link between a name and a symbol or a professional occupation and its effect on people's behavior. According to the Implicit Personality Theory, general expectations about a person are sometimes explained by a single trait of this person. For example, a happy person is likely to be perceived as friendly and sociable (Kassin et al., 2008). Such assumptions are congruent with the statement of Leirer et al. (1982) who found that persons identified by formal (such as Robert) as opposed to familiar names (such as Bob) are associated with different patterns of trait inference. Sometimes, a family name could act as a central initial trait that led people to associated personality traits with the central trait-surname. For example, "Lebon" in France (literally someone who is good) could be perceived as someone who is empathic, generous, and thoughtful. In this experiment we tested whether possible psychological traits inferred by a person's surname could affect people's behavior. Our objective was to test the impact of surnames associated with a symbolic meaning and not simply those surnames associated with

personality attributes (e.g., Savage, Fairchild in English or Lebon, Lebrave in French). By choosing a surname that literally sounds like a famous mathematical constant (Pi) we tested the likelihood of success that the owner of such a name would have in soliciting students for mathematical lessons.

## Method

### *Participants*

The participants included 216 people who responded to an advertisement proposing private lessons in mathematics and who telephoned to obtain further information.

### *Materials*

A newspaper ad without any information other than text was designed for our experiment. This ad offered private lessons for pupils who have difficulties at school. Precaution was taken to write the ad in the same vein as those ads for school support found in the newspapers where our ad was to be printed. To ensure the similarity of our ad with those commonly published, we analyzed ads that appeared in local newspapers during a three-month period prior to our experiment. The English translation of the text of our ad was as follows: "Mr (surname) a High-School Mathematics Teacher with 27 years of teaching experience offers his help for students from the sixth to the twelfth grade. Increase in school results and progress are guaranteed. I work from home. Call 06 74 91 20 53 for further information."

### *Procedure*

Our advertisement was printed bi-monthly (first and third week of each month) for a period of two years in the local newspaper of a medium-sized town in France, with about 120,000 inhabitants. This advertisement was published in the "Lessons and school support" ("Cours et soutien scolaire" in French) section of the newspaper. According to a random distributio,n the surname of the teacher proposing his help was Mr Py (a surname that sounds the same as the well known mathematical constant, $\pi$); Mr Rie (a surname with the same central vowel sound: in French "ie" and "y" sound exactly in the same way), high frequency in France and no ethnic connotation) or Mr Le Gal (the most common surname in Brittany, where the experiment was conducted). This frequency was obtained by consulting a database that contained French family names according to their overall frequencies and local frequencies on multiple areas of the French territory (Mergnac, 2005).

The ads were printed forty-eight times (16 with Mr Py, 16 with Mr Rie, and 16 with Mr Le Gal). The dependent variable measured was the number of calls received exactly ten days after each distribution of the local paper. For ethical reasons, as individuals were deceived and called us for their children, each caller was informed that it was not possible to accept further students, but three telephone numbers and addresses of three good available mathematics professors were given to the caller. This procedure was used in accordance with the suggestion of the ethical committee of the laboratory when the experiment was presented to the committee.

TABLE 1

NUMBER OF CALLERS RESPONDING TO THE NEWSPAPER ADVERTISEMENT, ACCORDING TO EXPERIMENTAL CONDITION

| Mr Py | Mr Rie | Mr Le Gal |
|---|---|---|
| 98 | 55 | 63 |
| 45.4% | 25.5% | 29.1% |

## Results

The number of callers responding to the advertisement according to experimental conditions are presented in Table 1.

A Chi-Square "Goodness of fit" revealed an overall difference in frequency between the three conditions ($\chi^2_{(2, N=216)} = 14.53$, $p < .001$). Additional comparison revealed that response to the ad with Mr Py was significantly different from that with Mr Rie ($\chi^2_{(1, N=153)} = 12.09$, $p < .001$) or with Mr Le Gal ($\chi^2_{(1, N=161)} = 7.61$, $p < .01$). The response to the ad with Mr Rie was not statistically different than that with Mr Le Gal ($\chi^2_{(1, N=118)} = .54$, *ns*).

## Discussion

In this experiment, it was found that one ad received more response than the others, suggesting that the name, Mr Py, had the ability to influence real people's behavior. These results accord with previous research showing that connotations associated with names have an influence on attractiveness or evaluation, particularly in laboratory settings. Luscri and Mohr (1998) in a description of a legal case, involving either a theft or a murder, found that undergraduate students blamed more and rated the crime as more common when the surname of the defendant was Savage rather than Roach. In a political voting simulation, undergraduate students evaluate more favorably a candidate named "Fairchild" compared with a candidate called "Sangmeister," suggesting that the name "Fairchild" carries positive attributes which in return influence voting decision (O'Sullivan *et al.*, 1988). However, this effect of surname was found only when candidates' issue positions were not described. In our experiment, we found that surname had an influence on real behavior when other "positive" information about the target was available (27 years of teaching experience, results guaranteed). This behavioral effect is possibly explained by a high level of trait attribute created by the high level of symbolism that exists between the surname (in French Py exactly sounds like "Pi") and mathematics. This surname was probably interpreted as a kind of predestination to become a mathematician and probably to become a good mathematician. Such trait inference is likely to have led callers (parents looking for a good teacher for their child) to gather from this, that someone named "Py" should be a good maths teacher. With the other two ads, such additional traits could not be activated, explaining why no difference in behavior was found, given the fact that, apart from the name, the information contained in the ads were the same in all three conditions. Clearly additional traits/attributes that can be associated with the name "Py" are not applicable to the other names.

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## Notes on contributors

Nicolas Guéguen is Professor of Social Behaviour at the University of Bretagne-Sud in France. His research interests focus on atmospherics and consumer behavior and compliance-gaining procedures.

Correspondence to: Dr Nicolas Guéguen, Université de Bretagne-Sud, 4 rue Jean Zay, Lorient 56100, France. Email: nicolas.gueguen@univ-ubs.fr

Alexandre Pascual is currently Assistant Professor in Social Psychology at the University of Bordeaux 2. His research focuses on behavioral influence process.