

## ACCENT TRUMPS RACE IN GUIDING CHILDREN'S SOCIAL PREFERENCES

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A series of experiments investigated the effect of speakers' language, accent, and race on children's social preferences. When presented with photographs and voice recordings of novel children, 5-year-old children chose to be friends with native speakers of their native language rather than foreign-language or foreign-accented speakers. These preferences were not exclusively due to the intelligibility of the speech, as children found the accented speech to be comprehensible, and did not make social distinctions between foreign-accented and foreign-language speakers. Finally, children chose same-race children as friends when the target children were silent, but they chose other-race children with a native accent when accent was pitted against race. A control experiment provided evidence that children's privileging of accent over race was not due to the relative familiarity of each dimension. The results, discussed in an evolutionary framework, suggest that children preferentially evaluate others along dimensions that distinguished social groups in prehistoric human societies.

Gender, age, and race have long been considered the primary categories by which individuals divide the social world. Though many factors, including those that are arbitrarily assigned, can provide the basis for social divisions (e.g., Bigler, Jones, & Lobliner, 1997; Tajfel, Billig, Bundy, & Flament, 1971), these three categories are considered particularly psychologically prominent for adults (Brewer, 1988; Fiske, 1998; Messick & Mackie, 1989; Stangor, Lynch, Duan, & Glass, 1992). Social preferences based on gender, race, and age also are apparent in childhood (Aboud, 1988; French, 1987; Katz & Kofkin, 1997; Kircher & Furby, 1971; Kowalski & Lo, 2001; Maccoby & Jacklin, 1987; Martin, Fabes, Evans, & Wyman, 1999), as are looking-time preferences based on these categories in infancy (Bar-Haim, Ziv, Lamy, &

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Hodes, 2006; Kelly et al., 2005; McCall & Kennedy, 1980; Quinn, Yahr, & Kuhn, Slater, & Pascalis, 2002; Sanefuji, Ohgami, & Hashiya, 2006). Thus, children quickly come to categorize other people along dimensions that are both perceptually available to infants and socially salient to adults.

Nevertheless, there is reason to believe that language may provide an additional, and equally important, social category that guides inferences about individuals from infancy throughout adulthood. Spoken language provides cues to individuals' nationality, regional membership, ethnic group, and social status or class (Labov, 2006), and therefore has a socially communicative power beyond the literal information it conveys. Adolescents and adults use the language and accent with which others speak to infer traits such as intelligence, warmth, and even height for individuals they have never met (e.g., Anisfeld, Bogo, & Lambert, 1962; Dailey, Giles, & Jansma, 2005; Lambert, Anisfeld, & Yeni-Komshian, 1965; Lambert, Frankel, & Tucker, 1966; Lambert, Hodgson, Gardner, & Fillenbaum, 1960; see Giles & Billings, 2004, for a review). In one study, for instance, Canadian adults rated the personality characteristics of someone speaking in English as more positive than the same person speaking in French, and degree of bilingualism in French vs. English was correlated with relative in-group preferences (Lambert et al., 1960). When tested with a similar paradigm, Jewish and Arab adolescents who heard Hebrew and Arabic speech each rated the speech in their native language as belonging to someone who was more honest and friendly (Lambert et al., 1965). In a more recent study conducted in the U.S., both White adolescents and (to a lesser degree) Hispanic adolescents in southern California evaluated American-accented speakers as having more favorable personality characteristics than Spanish-accented speakers (Dailey, Giles, & Jansma, 2005).

Research from developmental psychology shows that attention to language and linguistic differences begins early in life: from birth, infants prefer their native language to a foreign language, and discriminate two foreign languages provided they are sufficiently different (Mehler, Jusczyk, Lambertz, Halsted, Bertocini, & Amiel-Tison, 1988; Nazzi, Bertocini, & Mehler, 1998; Weikum, Vouloumanos, Navarra, Soto-Faraco, Sebastián-Gallés, & Werker, 2007). By 5 months of age, infants successfully discriminate two languages or dialects within the same rhythmic class, provided that one of the languages is their own (Bosch & Sebastián-Gallés, 1997; Nazzi, Jusczyk, & Johnson, 2000). Infants also display early social preferences based on language. In one recent study, 5-month-old infants looked longer at someone who previously spoke in their native language with a native accent, relative to someone who previously spoke in a foreign language or foreign accent. Furthermore, 10-month-old infants preferentially accepted toys from an individual who previously spoke the infants' native language, though the speakers were silent at the time of the toy offering (Kinzler, Dupoux, & Spelke, 2007). Language differences influence children's early inferences about others, too; preschool-aged children infer that speakers of a native language are more likely to be of a familiar race, live in familiar dwellings, and wear familiar clothes (Hirschfeld & Gelman, 1997; see also Aboud & Mitchell, 1977). Thus, from early in development infants and children are highly attentive to language and accent, which influence their early social understanding.

There is reason to hypothesize that children may be predisposed to view the language and accent with which others speak as providing critical social grouping information. Throughout cognitive evolution, languages likely varied over small

geographic space, thus differing accents and dialects may have served as valid predictors of group membership throughout our evolutionary history (Baker, 2001), as they often do today (Henrich & Henrich, 2007). Moreover, natural selection may have favored social attention to accent in a way that it did not for race. Although modern societies are often racially stratified, and race can act as a reliable indicator of group membership today, neighboring groups of humans in ancient times did not likely *look* different in terms of physiognomy or skin color (Cosmides, Tooby, & Kurzban, 2003). Indeed, attention to race in adults can be “erased” in the face of contrasting information denoting coalitions along non-racial lines (Kurzban, Tooby, & Cosmides, 2001).

The present work explores the impact of language and accent on young children’s social preferences, and compares attention to accent and race. Experiment 1 investigated children’s friendship choices for native-language speakers over speakers of a foreign language or speakers with a foreign accent. Experiment 2 tested whether early liking of native speakers is based solely on preferences for intelligible speech, or whether such friendship judgments are social in nature and extend beyond preferences for the comprehensible. Experiments 3 and 4 pitted social preferences based on accent against those based on visual information.

## EXPERIMENT 1

Experiment 1 tested 5-year-old children’s friendship preferences for speakers of their native language, compared to speakers of a foreign language (Experiment 1a) or speakers of their native language with a foreign accent (Experiment 1b).

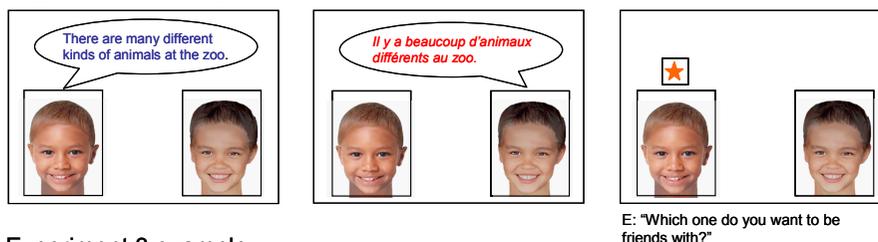
## METHOD

*Participants.* Participants were 5-year-old monolingual English-speaking children (16 in each condition), who were predominantly White (95%) and from predominantly White schools and neighborhoods in the Boston area (15 females; mean age 5 years, 9 months, range = 5;1-6;6).

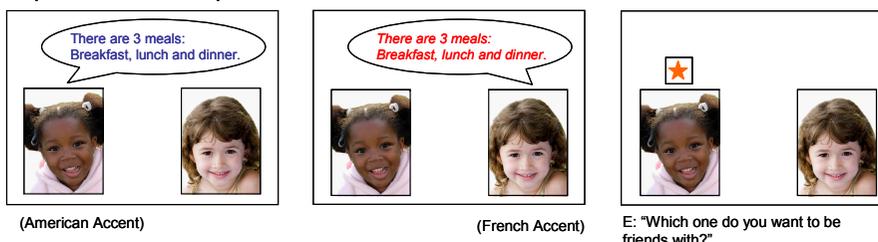
*Materials.* The displays consisted of 16 ambiguous-race child faces (8 male, 8 female), each composed by morphing a White child’s face and a Black child’s face. Faces measured 6 x 9 cm and were presented in pairs against a white background on a 14-inch laptop computer. Accompanying the faces were 8 voice clips in American-accented English, French, or French-accented English that were each 3 seconds in length, neutral in content (e.g., There are three meals: breakfast, lunch, and dinner), and recorded by children living in Boston or Paris who were native speakers of French or English (4 native speakers of each language recorded phrases in their native language; French children also recorded phrases in English).

*Design and Procedure.* On each of 8 trials, two same-gender faces appeared on the screen, and the experimenter said, “Here are two kids. Let’s hear what they sound like.” She pointed to each face in turn and a voice played either in English or French (Experiment 1a), or in English with an American or French accent (Experiment 1b). Children were asked with whom they wanted to be friends, and indicated their response by placing a Velcro sticker below the face of their choice.

## Experiment 1 example:



## Experiment 3 example:



## Experiment 4 example:

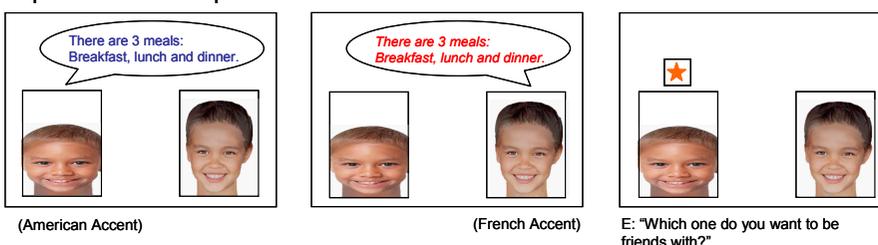


FIGURE 1. Example Displays.

The faces then switched lateral positions on screen, and children were asked to point a second time, to discourage side biases. See Figure 1 for example displays. Pairings of type of voice (native/foreign) to faces were counterbalanced across subjects, and the lateral positions of faces paired with native/foreign voices were counterbalanced within and across subjects. Choices of the native English-speaker were compared to chance by 2-tailed *t*-tests.<sup>1</sup>

## RESULTS AND DISCUSSION

In Experiment 1a, children chose to be friends with faces paired with English voices,  $M_{\text{native}} = 78.06\%$ ;  $SE = 5.30$ ;  $t(15) = 5.29$ ,  $p < .001$ ,  $d = 1.32$ . In Experiment 1b, children chose to be friends with faces paired with a native English accent,  $M_{\text{native}} = 79.69\%$ ;  $SE = 5.10$ ;  $t(15) = 5.82$ ,  $p < .001$ ,  $d = 1.47$ . See Figure 2, top left.

1. The reported means and analyses consider only children's initial response on each trial. All analyses were repeated considering both responses per trial (one initial response, and one response after the side-switch) and all yielded identical results.

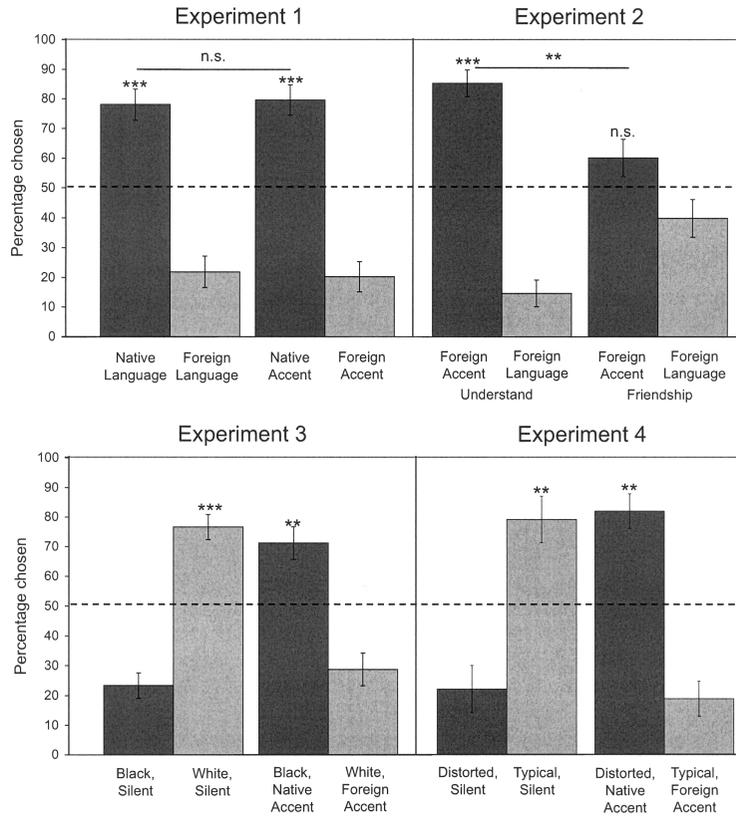


FIGURE 2. \*\* $p < .01$ ; \*\*\* $p < .001$ . Error bars represent standard error.

Children therefore prefer people who speak their native language rather than a foreign language, as well as people who speak in a native accent compared to a foreign accent. Notably, children’s preferences based on accent were just as strong as their preferences based on language,  $t(30) < 1$ , providing evidence that children do not grant “native” social status to people who communicate in their native language, yet speak with a foreign accent.

## EXPERIMENT 2

Though the equivalence of children’s preferences based on language and accent suggests that friendship preferences are not driven by comprehensibility alone, Experiment 2 tested this suggestion more directly. Children in Experiment 2a were presented with the foreign-language and foreign-accented voices from Experiment 1, and they were asked whom they understood. Children in Experiment 2b were presented with the same contrast of foreign language versus foreign accent, but were asked whom they preferred as friends.

## METHOD

Participants included 16 children in each condition (32 participants total) drawn from the same population as in Experiment 1 (17 females; mean age = 5 years 8 months, range = 5;1-6;6). The design and procedure were identical to Experiment 1, with the following exceptions: Children were shown a contrast of French vs. French-accented English, and were asked either whom they understood (Experiment 2a) or with whom they wanted to be friends (Experiment 2b).

## RESULTS AND DISCUSSION

When asked whom they understood, children robustly chose individuals paired with a foreign accent rather than a foreign language,  $M_{\text{accent}} = 85.25\%$ ;  $SE = 4.47$ ;  $t(15) = 7.89$ ,  $p < .001$ ,  $d = 1.97$ . In contrast, when asked about friendship, children did not reliably choose to be friends with either type of speaker,  $M_{\text{accent}} = 60.12\%$ ;  $SE = 6.30$ ;  $t(15) = 1.61$ ,  $p = ns$ ,  $d = .40$ . Children's choices in Experiments 2a and 2b differed significantly,  $t(30) = 3.25$ ,  $p < .005$ ,  $d = 1.15$ . See Figure 2, top left.

Together, the results of Experiments 2a and 2b provide evidence that children's ability to comprehend a speaker, and their social preferences based on that person's manner of speaking, are not always the same. Across the two randomly assigned conditions, children were shown the same faces and heard the same voices, but they responded differently depending on whether they were asked about comprehension or friendship. Although the children in Experiment 2a indicated that they understood individuals paired with foreign accents over individuals paired with a foreign language, children in Experiment 2b did not reliably choose foreign-accented speakers as friends. In concert, the results of Experiments 1 and 2 suggest that friendship decisions based on language are indicative of social preferences for individual members of one's native language group, rather than a strategic choice of individuals with whom one can communicate.

This is not to say that relative intelligibility could *never* be a predictor of social preferences. Though children's friendship preferences for foreign-accented versus foreign-language speakers in Experiment 2a were not significant, children did trend toward choosing individuals with a foreign accent. Indeed, research with adults shows that individuals display more positive attitudes toward speakers of an intelligible rather than an unintelligible foreign accent (Bresnahan, Ohashi, Nebashi, Liu, & Shearman, 2002). However, perceptions of intelligibility are also susceptible to bias: college students rate an identical lecture as being more or less intelligible based on the presumed ethnicity of the speaker (Rubin, 1992). The results of Experiment 2, and in particular the difference between children's responses when asked about friendship preferences versus comprehension, provide further evidence that relative comprehensibility is not the sole factor responsible for guiding preferences based on language and accent.

If accent is a cue to social group membership, how does it compare to cues that are visually available to children, and socially salient to adults? Race is parallel to accent in dividing humans into different communities with high intragroup and low intergroup contact; moreover race is visually available, and research in social development has provided evidence of children's reliance on race in simi-

lar friendship-choice tasks (Aboud, 1988; Kircher & Furby, 1971; Kowalski & Lo, 2001). Experiment 3 therefore assessed the relative importance of accent and race in guiding children's friendship preferences.

### EXPERIMENT 3

Experiment 3a tested children's preferences based on race in the absence of any language cue. Experiment 3b pitted native accent against race, to investigate their relative impact on children's friendship preferences.

### METHOD

Participants were 32 5-year-old monolingual English-speaking White children (16 in each condition), from the same population as the other experiments (20 females; mean age = 5 years, 10 months (range = 5;0-6;7). The displays consisted of 16 child faces (8 male, 8 female), half of which were White, and half of which were Black. In Experiment 3a, faces were presented without voices. In Experiment 3b, White faces were paired with foreign-accented voices, and Black faces were paired with native-accented voices. See Figure 1 for example displays. The voices were the same as those used in Experiment 1b (English with a native accent; English with a French accent). Children's friendship choices were elicited following the same procedure as Experiments 1 and 2b.

### RESULTS AND DISCUSSION

Children selected the White faces as friends when the target children were silent,  $M_{\text{white}} = 76.63\%$ ,  $SE = 4.27$ ,  $t(15) = 6.22$ ,  $p < .001$ ,  $d = 1.56$ . When the faces were paired with voices, however, children chose to be friends with the Black faces paired with a native accent, over the White faces paired with a foreign accent,  $M_{\text{black/native}} = 71.19\%$ ,  $SE = 5.48$ ,  $t(15) = 3.87$ ,  $p < .005$ ,  $d = .97$ . See Figure 2, bottom left.

Children's choice of a silent child of their own race (White), compared to a child of another race (Black), replicates previous findings that majority-race children in the U.S. prefer other children who can be visually identified as members of their race. However, when race was pitted against accent, such that the person who looked like an ingroup member sounded like an outgroup member, children privileged accent over race in guiding their friendship decisions.

The results of Experiment 3 suggest that children privilege information about how individuals sound over how they look in guiding their social preferences. However, it is possible that children preferred native-accented other-race individuals to foreign-accented same-race individuals because participants were relatively more familiar with diverse races than they were with diverse accents.<sup>2</sup> Thus, Experiment 4 examined children's preferences for familiar versus completely novel

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2. Though our demographic information suggests that children's local environments were highly homogenous, it is difficult to obtain an accurate metric of total race exposure from parental reports, particularly as it compares to exposure to different accents.

facial properties, and compared children's preferences for native-accented speech to their preferences for relatively familiar over unfamiliar faces.

## EXPERIMENT 4

Experiment 4a tested children's preferences for typical vs. visually distorted silent faces. Experiment 4b pitted accent against visual distortion, to investigate whether preferences based on accent would trump preferences for visually familiar versus novel (and dispreferred) faces.

## METHOD

Participants were 16 5-year-old monolingual English-speaking children (8 in each condition), from the same population as the other experiments (8 females; mean age = 5 years, 8.5 months (range = 5;3-6;3)). The displays consisted of 16 child faces (8 male, 8 female) from Experiments 1 and 2. Half were presented typically as they were in Experiments 1 and 2, and half were visually distorted, such that the ratio of height to width was changed to make the faces appear unnatural. (The images' height:width ratio was changed from 1:1 to approximately 2:3). See Figure 1 for example displays. In Experiment 4a, faces were presented without voices. In Experiment 4b, typical faces were paired with foreign-accented voices, and visually distorted faces were paired with native-accented voices. The voices were the same as those used in Experiments 1b and 3b (English with a native accent; English with a French accent). Children's friendship choices were tested following the procedure of the previous experiments.

## RESULTS AND DISCUSSION

In Experiment 4a, when the target children were silent, children selected the typical faces over the distorted faces as friends,  $M_{\text{typical}} = 78.13\%$ ,  $SE = 7.75$ ,  $t(7) = 3.63$ ,  $p < .01$ ,  $d = 1.28$ . When the faces were paired with voices, however, children chose to be friends with distorted faces paired with a native accent, rather than typical faces paired with a foreign accent,  $M_{\text{distorted/native}} = 81.25\%$ ,  $SE = 5.79$ ,  $t(7) = 5.40$ ,  $p < .005$ ,  $d = 1.9$ . See Figure 2, bottom right.

Analogous to the accent vs. race condition in Experiment 3, children again chose to be friends with native-accented speakers, even though the visual characteristics of those individuals were considered to be less appealing than visual characteristics of the foreign-accented speakers. Because the facial distortion was unnatural and therefore unfamiliar, it is unlikely that children's preference for a distorted, native-accented speaker depends on a preference for individuals with more familiar properties. Nevertheless, it is possible that other forms of visual novelty, such as faces that were further distorted in configuration or color, would overshadow preferences based on language and accent.

## GENERAL DISCUSSION

The present research provides evidence for children's early and robust use of language and accent in guiding social preferences. In Experiment 1, children chose to be friends with speakers of their native language compared to speakers of a foreign language (Experiment 1a), or speakers with a foreign accent in the child's native language (Experiment 1b). Preferences based on accent were as robust as those based on language, and did not stem from a preference for speakers who are comprehensible. Although the children in Experiment 2a said that they could understand the foreign-accented speakers compared to the foreign-language speakers, children in Experiment 2b did not choose these individuals as friends. Thus, friendship preference and comprehensibility can be distinct for young children, who do not grant favorable social status to non-native speakers of their language.

Experiment 3 compared children's preferences for speakers with a native accent to preferences for individuals of their own race. Experiment 3a replicated extant literature showing that young White children raised in the U.S. display friendship preferences for other children of their own race. When race was pitted against accent, however, children expressed a social preference for Black children who spoke with a native accent, over White children whose accent was foreign. In Experiment 4, when accent was pitted against visual distortion of the target faces, children again chose to be friends with native speakers of their native language, thus providing evidence that children's attention to accent over race in Experiment 3b was not guided by the relative familiarity of each dimension.

Unlike many social categories including race, the language someone speaks is not visually apparent in the face. A prior emphasis in the adult literature on the "big three" social categories has been attributed to each category's visual salience (Fiske, 1998): each of these categories is readily apparent at first view. Likewise, children's social category formation has often been thought to rely on visual observations of properties that differ among individuals (Aboud, 1988; Clark & Clark, 1940; Goodman, 1970; Holmes, 1995). Consistent with this latter view, children in Experiment 3a and 4a chose other children of their own race, as well as children with typical faces, as friends on the basis of visual information alone.

Nevertheless, our findings suggest that children's social preferences can surpass reliance on information that is visual. In the present experiments, the critical social information consisted of the accent with which a person had previously spoken. Children's reliance on accent, over the visually and socially salient cue of race, is consistent with a tradition of research that roots the development of social categories in more abstract distinctions and predispositions (e.g., Diesendruck & haLevi, 2006; Gelman, Collman, & Maccoby, 1986; Hirshfeld, 1996). For example, gender is often communicated by perceptual cues, but young children prioritize category membership (e.g., labeling as a "boy" or "girl") over conflicting visual information in reasoning about the characteristics of novel children (Gelman et al., 1986). Moreover, when perceptually neutral pictures of children are labeled with different ethnic labels (e.g., "Arab" vs. "Jew"), children generalize novel properties along ethnic category lines, in the absence of visual cues to ethnicity (Diesendruck & haLevi, 2006). Because our studies presented static photographs, visual information for the native language was not available to children, and auditory information was no longer present at the time of choosing. Nevertheless, children robustly

used native accent, rather than race, to guide their social preferences. Children's privileging of accent over race information is further consistent with evolutionary hypotheses concerning the origins of ingroup social preferences. Given that social groups in ancient times likely differed in accent, but not in race, children may be predisposed to rely primarily on accent to guide their social evaluations of novel individuals. Future research might address how children's early attention to language and accent compare to the categories of gender and age, which also likely held social significance throughout human evolution.

Open questions concern the generality and malleability of children's preferences for native speakers. Would children raised in multilingual environments show similar preferences for other people who speak with the accent of their primary language? Moreover, in many societies, one language or accent has higher status than others; though from infancy humans demonstrate social preferences for native speakers (Kinzler et al., 2007), over development, children's language-based social preferences may become sensitive to the social status of different languages in their culture. Furthermore, a culture's tendency to label linguistic or racial distinctions may influence children's perception of these categories. Can children be led to overcome an initial disfavoring of foreign-accented individuals through cooperative experiences across languages and social groups? The present methods may help to address these questions.

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