

What's in a Forename? Cue Familiarity and Stereotypical Thinking

C. Neil Macrae

Dartmouth College

Jason P. Mitchell

Harvard University

and

Louise F. Pendry

University of Exeter, Exeter, United Kingdom

Received February 5, 2001; revised July 23, 2001; accepted July 24, 2001; published online December 3, 2001

Recent research has characterized categorical thinking as an essential component of the person perception process. Yet relatively little is known about the myriad factors that moderate the accessibility of this mode of thought. With regard to this we hypothesized that the subjective familiarity of a person's forename may play an important role in triggering categorical thinking. Specifically, category-based knowledge may be more accessible when triggered by familiar than unfamiliar forenames. We report the results of three experiments that supported this prediction. Relative to unfamiliar names, participants required less time to verify the gender of familiar forenames (Experiment 1) and semantic priming was more pronounced when stereotype-related material followed the presentation of familiar than unfamiliar items (Experiment 2). Also, familiar forenames attracted more extreme gender-based evaluations than their unfamiliar counterparts (Experiment 3). We consider the theoretical and methodological implications of these findings for a variety of issues in person perception. © 2001 Elsevier Science (USA)

Her name is Bianca. A strange name for someone working in a newsagents, they are usually called Joyce.

—Townsend

To guide their owners through a complex social world, human minds require a host of specialized cognitive skills. For example, without the luxury of unlimited time and attention to evaluate others (Brewer, 1988; Fiske & Neuberg, 1990), perceivers must possess an information-processing system that has the capacity to furnish social-cognitive outputs in a timely and economical manner (Bodenhausen & Macrae, 1998; Macrae & Bodenhausen, 2000). Otherwise, social interaction would be a laborious

affair fraught with uncertainty and doubt. As it turns out, however, the mind is well equipped to satisfy the basic information-processing imperatives of efficiency and speed. Through the activation and application of category-based knowledge structures, perceivers can reduce the demands of the person perception process and respond to others with alacrity and ease (e.g., Brewer, 1988; Fiske & Neuberg, 1990; Gilbert & Hixon, 1991; Macrae, Bodenhausen, Schloerscheidt, & Milne, 1999; Macrae, Milne, & Bodenhausen, 1994; Pendry & Macrae, 1994). Put simply, once implemented, categorical thinking reduces the burden of the person perception process.

THINKING FLEXIBLY ABOUT OTHERS

Given recent emphasis on the functional aspects of categorical thinking, it comes as little surprise to learn that stereotypes have been characterized as labor-saving devices or economizing mental tools (Allport, 1954; Gilbert &

The authors thank Russ Fazio, Galen Bodenhausen, Jeff Sherman, and two anonymous reviewers for their comments on this work and Alan Milne and Polly Verge for their assistance at various stages of the project.

Address correspondence and reprint requests to Neil Macrae, Department of Psychological and Brain Sciences, Dartmouth College, Moore Hall, Hanover, NH 03755. E-mail: c.n.macrae@dartmouth.edu.

Hixon, 1991; Macrae et al., 1994; Sherman & Frost, 2000; Sherman, Lee, Bessenoff, & Frost, 1998; von Hippel, Jonides, Hilton, & Narayan, 1993). As Allport famously opined, "While most of us have learned to be critical and open-minded in certain regions of experience we obey the rule of least effort in others. . . . Life is just too short to have differentiated concepts about everything. A few pathways are enough for us to walk in" (1954, p. 173). In person perception, categorical thinking provides just such an avenue through which efficient information-processing outcomes can be accomplished. For example, on encountering a politician at a party, one may quickly assume that he is dishonest, verbose, and to be avoided. The power of categorical thinking resides in the fact that this information can be generated without the necessity of extended social interaction with the target (Bruner, 1957). Instead, mere categorization of the individual is sufficient to extract associated material from semantic memory.

Of course, for any tool to be useful, it must be utilized in the appropriate context. As anyone who has ever attempted to hammer in some nails with a shoe, consume soup with a fork, or crack open a coconut with a pencil would testify, used inappropriately, tools can impede rather than promote the attainment of one's goals. As a functional mental tool, categorical thinking must be governed by similar considerations. After all, used indiscriminately (and uniformly), category-based processing would surely lose its cognitive utility for perceivers. As such, to provide the flexibility that social cognition demands, one would expect a variety of factors to gate the relative accessibility of categorical knowledge in semantic memory. But what exactly are these factors? Aside from obvious candidates such as the recency and frequency of category activation or the chronic desire on the part of some individuals (e.g., bigots) to construe others in a discriminatory manner (Bargh, 1997; Devine, 1989; Higgins, Rholes, & Jones, 1977), what determines the relative accessibility of categorical knowledge?

CUE FAMILIARITY AND STEREOTYPE ACCESSIBILITY

Examination of the available literature confirms that a host of cognitive and motivational forces moderate the expression of categorical thinking (Macrae & Bodenhausen, 2000). To this list of established variables, however, we suspect it is possible to add another factor which, although seemingly inconsequential, may also play a prominent role in gating the accessibility of stereotypic knowledge. The factor in question is the subjective familiarity of the cue that is used to trigger categorical thinking (Higgins, 1996). To unlock the category-related material that resides in semantic memory, perceivers must obviously trigger the relevant knowledge representations. Of critical importance in this regard, therefore, are the cues that are used to elicit categorical thinking. As some cues may be more effective than

others as triggering stimuli, cue familiarity may be an important determinant of stereotype accessibility. For the most part, however, researchers have failed to acknowledge this possibility (but see Bodenhausen, Schwarz, Bless, & Wänke, 1995; Dasgupta, McGhee, Greenwald, & Banaji, 2000), an oversight that may have some interesting implications for a range of issues in person perception.

At least in contexts in which verbal materials are used to investigate the dynamics of the person perception process (Brewer, 1988; Fiske & Neuberg, 1990), the favored experimental strategy is to trigger categorical thinking through the provision of forenames that identify hypothetical stimulus targets. For example, participants may be required to form impressions of, or memorize information about, two targets named *Martin* and *Sue* (see Kasof, 1993). The assumption guiding research of this kind is quite straightforward. The presented forenames will trigger the activation of category-based knowledge structures (i.e., gender stereotypes) and these in turn will shape the generation of people's social-cognitive products (e.g., impressions, evaluations, memories, and behaviors). These effects, moreover, are believed to be independent of the specific forenames that are used to trigger categorical thinking. Just as *Martin* and *Sue* will elicit category-based processing, so too would *Malcolm* and *Gertrude* or *Winston* and *Sabrina*? But is this assumption entirely correct? In accessing the contents of semantic memory, could one's forename make a difference?

Inspection of the available literature suggests that a person's forename may indeed moderate the accessibility of categorical knowledge. As Kasof has noted, "sex-typed names communicate a great deal more than just the name bearer's sex. Such names differ in attractiveness and connote impressions of the name bearer's age, intellectual competence, race, ethnicity, social class, and other attributes" (1993, p. 140). Accordingly, across a range of judgmental contexts, the forename of a target has been shown to exert a considerable influence on perceivers' responses (see Kasof, 1993). But what is it about a forename that shapes the expression of categorical thinking? Aside from obvious associations with known exemplars (e.g., *Britney* and *Elvis*), fashion trends, and generational shifts in the popularity of certain names, what is it that determines the extent to which a forename will trigger categorical thinking and its associated effects?

Our intuition is that the subjective familiarity of a triggering forename may moderate the accessibility of stereotypical knowledge. Elsewhere, for example, researchers have demonstrated that experiential familiarity is an important determinant of lexical access (e.g., Balota & Chumbley, 1984; Connine, Mullennix, Shernoff, & Yelen, 1990; Gernsbacher, 1984). In the present context, this gives rise to some intriguing empirical possibilities. If, through repeated activation, one assumes that some forenames (i.e., familiar names) will be more strongly associated with categorical

knowledge than others (i.e., unfamiliar names), then associative strength may be a critical determinant of stereotype accessibility (see Fazio, 2001). Specifically, when the name–gender association is strong (i.e., familiar forenames) perceivers should gain more rapid access to stereotypical knowledge than when the corresponding association is weak (i.e., unfamiliar forenames). Interestingly, a functionally comparable explanation has been offered by Fazio and his colleagues to account for the differential accessibility of people’s evaluative responses when triggering attitude objects are present in the environment (e.g., Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Roskos-Ewoldsen & Fazio, 1992). This work has revealed that automatic attitude activation is moderated by the strength of the relevant object–evaluation association, such that relatively stronger associations are more likely to be activated when triggering cues are presented to participants (see Fazio, 2001). In much the same way, we anticipate that the strength of forename–gender associations (as determined by the subjective familiarity of the relevant stimuli) will moderate the accessibility of stereotypical knowledge.

Applied to issues in person perception, this viewpoint gives rise to a number of interesting experimental predictions. These center on the issue of how readily perceivers should be able to access categorical knowledge when presented with forenames as triggering cues. Based on the previous theorizing, we expect the following effects to emerge. First, participants should require less time to verify the gender of a forename when presented with familiar than unfamiliar exemplars (e.g., *John* vs *Cedric*). Second, stereotype-based priming effects should be more pronounced when participants are presented with familiar than unfamiliar forenames as triggering categorical cues. Third, when perceivers encounter familiar and unfamiliar forenames, the former items should attract more pronounced gender-based evaluations. We investigated these predictions in the three experiments reported herein.

EXPERIMENT 1: FORENAME FAMILIARITY AND CATEGORY VERIFICATION

According to the present line of reasoning, participants should take longer to verify the category membership of unfamiliar than familiar exemplars (Larochelle & Pineau, 1994). To test this prediction, we measured the time taken by participants to establish the gender of male and female forenames in a category-verification task. The forenames varied in familiarity and we anticipated that participants would require less time to establish the gender of familiar than unfamiliar items.

Method

Participants and design. Twenty-four undergraduates (9 men and 15 women) were paid £2 (\$3) for their partic-

ipation in the experiment. The experiment had a 2 (target gender: male or female) \times 2 (forename: familiar or unfamiliar) repeated-measures design.

Procedure and stimulus materials. Upon their arrival in the laboratory, each participant was greeted by a male experimenter and seated facing the monitor of an Apple Macintosh G3 Microcomputer. The experimenter explained that the study was a classification task in which participants had to judge the gender of a series of forenames. In the center of the computer screen a forename would appear (e.g., *John* and *Sarah*). The task was simply to report, by means of a key press, whether each forename was characteristically male or female. The experimenter instructed participants to perform the task as quickly and accurately as possible. In total, participants classified 80 forenames according to their gender.¹ Of these items, 40 were male forenames (20 familiar, e.g., *John* and *Mark*) and 20 unfamiliar (e.g., *Felix* and *Isaac*) and 40 were female forenames (20 familiar, e.g., *Sarah* and *Louise*) and 20 unfamiliar (e.g., *Tamsin* and *Glenda*). The stimulus items were selected on the basis of an earlier pilot study in which 54 participants (16 men and 38 women) rated a large number of forenames on a series of dimensions, including their familiarity (9-point scale; 1 = *very unfamiliar* to 9 = *very familiar*). For both the male and female forenames, the selected items differed in terms of their subjective familiarity (male forenames: 6.09 vs 2.47, $p < .0001$; female forenames: 6.01 vs 2.66, $p < .0001$).

Throughout the experiment, participants were instructed to fixate on a small black cross that was located in the center of the screen. It was explained that the forenames would always be located on the fixation cross. On each trial, the fixation cross was blanked out 30 ms before the onset of each stimulus. Each forename remained on the screen until participants made a response and the intertrial interval was 2000 ms. Presentation of the stimuli was randomized for each participant by computer software and participants made their responses by pressing one of two labeled keys (i.e., “male” or “female”). The meaning of the response keys was counter-balanced across the experiment and the computer recorded the latency and accuracy of each response. On completion of the task, participants were debriefed, thanked for their assistance, paid, and dismissed.

Results and Discussion

The dependent measure of interest in this experiment was the mean time taken by participants to categorize the forenames according to gender. Given the presence of outlying responses in the data set, category-verification times that

¹ Previous pilot testing established that, in the context in which the present research was undertaken (i.e., United Kingdom), British undergraduates were able to report correctly the gender of the 80 forenames.

TABLE 1

Participants' Mean Category-Verification Times (in Milliseconds) as a Function of Forename Familiarity and Target Gender (Experiment 1)

Target gender	Forename	
	Familiar	Unfamiliar
Male	611	747
Female	614	737

were slower than 3 standard deviations from the mean were excluded from the analysis, as were trials in which participants categorized the forenames incorrectly. This resulted in 4.0% of the data being excluded from the statistical analyses. Error rates were equivalent for typical and atypical forenames [respective *Ms*: 2.6% vs 3.4%, $F(1, 23) < 1$, *ns*]. Prior to the statistical analysis, a log transformation was performed on the data. For ease of interpretation, however, the untransformed means are reported in the text and Table 1. Preliminary analysis revealed no effect of the gender of the participants on category-verification times; consequently the data were collapsed across this factor. Participants' mean category-verification times were submitted to a 2 (target gender: male or female) \times 2 (forename: familiar or unfamiliar) repeated-measures analysis of variance (ANOVA). The only effect to emerge in this analysis was a main effect of forename on participants' reaction times [$F(1, 23) = 87.53$, $p < .0001$, $d = 1.95$]. As expected, participants took longer to report the gender of unfamiliar than familiar forenames (respective *Ms*: 742 ms vs 612 ms).

Thus, corroborating our prediction, category-verification times were moderated by the familiarity of the presented forenames. Participants took longer to verify the gender of unfamiliar (i.e., weak name–gender association) than familiar (i.e., strong name–gender association) items (Fazio, 2001). This finding is important as it suggests a potential route through which people's forenames may gate the relative accessibility of categorical knowledge in semantic memory. Specifically, given the observed differences in category-verification times, it is possible that categorical knowledge (i.e., stereotype contents) may be accessed more rapidly following the presentation of familiar than unfamiliar forenames. If this is indeed the case, then it should be possible to detect such an effect in a semantic priming task (Blair & Banaji, 1996; Macrae, Bodenhausen, & Milne, 1995). That is, priming effects should be more pronounced when target items (i.e., stereotype matching vs stereotype mismatching) follow the presentation of familiar rather than unfamiliar forenames. We investigated this prediction in our next experiment.

EXPERIMENT 2: FORENAME FAMILIARITY AND STEREOTYPE ACCESSIBILITY

Method

Participants and design. Thirty undergraduates (7 men and 23 women) were paid £2 (\$3) for their participation in the experiment. The experiment had a 2 (forename: familiar or unfamiliar) \times 2 (target status: stereotype matching or stereotype mismatching) repeated-measures design.

Procedure and stimulus materials. Participants arrived at the laboratory individually, were greeted by a male experimenter, and told that the study was an investigation into person perception. The task was based closely on a priming procedure developed by Blair and Banaji (1996). Written instructions explained that the experiment involved an investigation into the speed with which people could categorize gender stereotypical words. Participants were informed that, on the computer screen, they would see words that are generally associated with men or women (e.g., *jeep* and *lingerie*). The task was simply to decide, as quickly as possible, whether each word is characteristically masculine or feminine. The target words were selected from those normed by Blair and Banaji (1996) and comprised 20 masculine and 20 feminine items. Participants were also told that, prior to the presentation of each word, they would briefly see another item appear on the screen. It was stressed, however, that this item was irrelevant to their task and should be ignored (in reality, of course, these items were the critical priming stimuli).

A total of 100 items were used as primes in the experiment: 40 male forenames, 40 female forenames, and 20 nonwords (i.e., baseline condition). The forenames were those used in Experiment 1. Twenty pronounceable nonwords were generated by scrambling the letters of a subset of the forenames. Stimulus presentation and response latency recording were controlled by an Apple Macintosh computer running PsyScope (Cohen, MacWhinney, Flatt, & Provost, 1993) software. For all trials, the prime was presented for 150 ms, a blank screen for 100 ms, and then the target appeared and remained on the screen until participants made a response (i.e., $SOA = 250$ ms). The intertrial interval was 1000 ms. Participants made their responses by pressing one of two labeled keys (i.e., "masculine" or "feminine"). In the course of the experiment, participants completed two blocks of trials, each consisting of 10 buffer and 200 experimental trials, separated by a 1-min rest break. In each block, each priming stimulus was presented twice, once preceding a masculine item and once preceding a feminine item. Thus, there were five types of trial in the experiment: unfamiliar forename/stereotype-matching item (e.g., *Phyllis-cosmetics*), unfamiliar forename/stereotype-mismatching item (e.g., *Quentin-ballet*), familiar forename/stereotype-matching item (e.g., *John-logical*), familiar forename/stereotype-mismatching item (e.g., *Sarah-trousers*),

TABLE 2

Participants' Mean Classification Times (in Milliseconds) as a Function of Forename Familiarity and Target Status (Experiment 2)

Target status	Forename	
	Familiar	Unfamiliar
Stereotype matching	637	641
Stereotype mismatching	658	653
Difference	21	12

and nonword prime/target item (e.g., *Iddreilm-sewing*). The computer recorded the accuracy and latency of each response. On completion of the task, participants were debriefed, thanked for their assistance, paid, and dismissed.

Results and Discussion

The dependent measure of interest in this experiment was the mean time taken by participants to classify the stereotype-related items. These data were trimmed and normalized using the procedures outlined in Experiment 1. Targets were incorrectly categorized on 6.5% of the trials and outliers comprised an additional 2.1% of the data set. Thus, in total, 8.6% of the trials were excluded from the statistical analysis. Preliminary analysis revealed no effect of the gender of the participants on the time taken to classify the items; consequently the data were collapsed across this factor. We expected participants to respond faster to targets that were preceded by stereotype-matching than stereotype-mismatching primes. However, the size of this priming effect was expected to be qualified by the familiarity of the previously presented forenames. Specifically, we anticipated that familiar forenames would yield a larger priming effect than unfamiliar forenames. To test these predictions, participants' response times were submitted to a 2 (forename: familiar or unfamiliar) \times 2 (target status: stereotype matching or stereotype mismatching) repeated-measures ANOVA. This analysis revealed a main effect of target status on participants' responses times [$F(1, 29) = 26.95, p < .0001$]. As expected, however, this effect was qualified by a forename \times target status interaction [$F(1, 29) = 4.86, p < .04$] (see Table 2 for treatment means). An analysis of simple effects revealed a priming effect for both familiar and unfamiliar forenames. For unfamiliar forenames, the difference between stereotype-matching ($M = 641$ ms) and stereotype-mismatching ($M = 653$ ms) trials was moderate, but reliable [$F(1, 29) = 10.98, p < .002, d = .61$]. For familiar forenames, in contrast, the difference between matching ($M = 637$ ms) and mismatching ($M = 658$ ms) trials was substantially larger [$F(1, 29) = 29.72, p < .0001, d = 1.01$].

To investigate the relative facilitatory and inhibitory con-

sequences of category activation (see Dijksterhuis & van Knippenberg, 1996), difference scores were calculated by subtracting participants' reaction times in the experimental conditions from those obtained in the baseline condition ($M = 648$ ms). Subsequent comparisons between these scores revealed marginally significant facilitatory and inhibitory effects of category activation that were moderated by the familiarity of the priming stimuli. On stereotype-matching items, response facilitation was greater following the presentation of familiar than unfamiliar forenames (M s: 11 ms vs 7 ms, $p < .10$). On stereotype-mismatching items, in contrast, familiar forenames prompted greater response inhibition than their unfamiliar counterparts (M s: -10 ms vs -5 ms, $p < .09$).

EXPERIMENT 3: FORENAME FAMILIARITY AND GENDER TYPING

Thus far, the results have demonstrated that the subjective familiarity of triggering forenames moderates the accessibility of categorical knowledge. But would these effects also extend to the application of gender stereotypes? Specifically, would familiar forenames attract more extreme gender-typed evaluations than their unfamiliar counterparts (Kasof, 1993). We investigated this possibility in our final experiment.

Method

Participants and design. Twenty undergraduates (10 men and 10 women) were paid £2 (\$3) for their participation in the experiment. The experiment had a single factor (forename: familiar or unfamiliar) repeated-measures design.

Procedure and stimulus materials. Upon their arrival in the laboratory, each participant was greeted by a female experimenter who explained that the current study was an investigation into person perception. Participants were then presented with a series of forenames and required to rate the relative masculinity/femininity of each name on a 7-point scale (1 = *very masculine* to 7 = *very feminine*). The names were those used in Experiments 1 and 2. On completion of the task, participants were debriefed, thanked for their assistance, paid, and dismissed.

Results and Discussion

Preliminary analysis revealed no effect of the gender of the participants on ratings of the forenames; consequently the data were collapsed across this factor. A single factor (forename: familiar or unfamiliar) repeated-measures ANOVA was undertaken on the ratings (masculinity/femininity) of the male and female forenames. This revealed a significant effect of forename on the ratings of both the male

[$F(1, 19) = 86.75, p < .0001, d = 2.13$] and female [$F(1, 19) = 17.90, p < .0005, d = 0.97$] items. As expected, familiar male forenames were considered to be more masculine than unfamiliar forenames (respective *Ms*: 1.62 vs 2.50). Similarly, familiar female forenames were deemed to be more feminine than unfamiliar forenames (respective *Ms*: 6.07 vs 5.56). Thus, as expected, familiar forenames attracted more extreme gender-typed evaluations than their unfamiliar counterparts.

GENERAL DISCUSSION

By conceptualizing stereotypes as mental tools, researchers have unraveled some of the more perplexing mysteries of the person perception process (Bodenhausen & Wyer, Jr., 1985; Gilbert & Hixon, 1991; Macrae et al., 1994; Sherman et al., 1998). As economizing cognitive devices, stereotypes provide order, meaning, and structure to an otherwise chaotic social world. It was arguably the emergence of this functional viewpoint that prompted a timely reappraisal of a troublesome issue in person perception—when exactly do perceivers activate category-based knowledge structures in their dealings with others? Until quite recently, the “inevitability of stereotyping” viewpoint tended to dominate thinking on this topic (see Allport, 1954; Bargh, 1999). According to this account, stereotype activation is an obligatory component of the person perception process. Present perceivers with a triggering categorical stimulus and they will be unable to prevent the activation of an associated stereotype (Allport, 1954). Stereotyping, in other words, is inevitable. In the context of an unconditionally automatic mental event, it is therefore understandable why some researchers have deemed stereotypes to be relatively blunt and inflexible cognitive instruments.

Contrasting this viewpoint, however, recent research has painted a considerably less pessimistic picture of mental functioning, with stereotyping characterized as a flexible and versatile process that is regulated by a variety of forces (see Macrae & Bodenhausen, 2000). For example, for a modest attentional outlay, suitably motivated perceivers can readily overcome the inferential consequences of categorical thinking (Bodenhausen & Macrae, 1998; Devine, 1989; Fiske & Neuberg, 1990; Pendry & Macrae, 1994). In addition, the activation of stereotypes is no longer deemed to be an unconditionally automatic mental process (but see Bargh, 1999). Recent research has revealed that stereotype activation can be moderated by a number of factors, including attentional capacity (Gilbert & Hixon, 1991), processing goals (Macrae, Bodenhausen, Milne, Thorn, & Castelli, 1997), chronic prejudices and motivations (Fazio, Jackson, Dunton, & Williams, 1995), and the resolution of visual attention (Macrae, Bodenhausen, Milne, & Calvini, 1999). These findings are theoretically noteworthy as they challenge the assumption that stereotypes inevitably taint the

products of the person perception process. Although there are undeniably contexts in which categorical thinking guides people’s reactions toward others (Brewer, 1988; Fiske & Neuberg, 1990), in no sense is stereotyping unavoidable. Rather, categorical thinking is a versatile cognitive tool that is influenced both by the nature of the processing objectives that are in place and the characteristics of the task environments in which perceivers are operating.

The present findings take this debate about the dynamics of categorical thinking in a new direction. Rather than attempting to identify processing conditions under which perceivers do or do not activate category-based knowledge structures (see Bargh, 1999; Macrae & Bodenhausen, 2000), the present work considered a related issue. Assuming that stereotypical thinking tends to follow the registration of triggering verbal cues (Bargh, 1999; Macrae & Bodenhausen, 2000), what impact does cue familiarity have on the relative accessibility of categorical knowledge? Is the magnitude of stereotyping independent of the triggering categorical cue, or does the nature of the cue shape the consequences of categorical thinking? In addressing this issue, the present findings confirmed that cue familiarity is an important determinant of category-based responding. Relative to their unfamiliar counterparts, familiar forenames provided rapid access to category-based knowledge structures and their associated semantic contents (Gernsbacher, 1984). Through this demonstration, then, the present findings reaffirm the flexible nature of categorical thinking and highlight the important role that associative strength (i.e., name–gender association) may play in regulating the accessibility of categorical knowledge (Fazio, 2001).

In considering factors that may shape the strength of name–gender associations, the present research has focused on the subjective familiarity of people’s forenames (Gernsbacher, 1984). Subjective familiarity, of course, is but one factor that may influence the strength of name–gender associations. Also of significance may be the objective frequency of occurrence of forenames in the population. This possibility (i.e., subjective familiarity vs objective frequency) raises a number of important conceptual issues as several researchers have questioned whether the objective frequency of occurrence of an item is an adequate index of its actual frequency in the mental lexicon. Gernsbacher (1984), for example, has argued that experiential familiarity, as determined by people’s subjective ratings, is a critical determinant of knowledge accessibility. For both visually and auditorily presented words, participants have been reported to require less time to verify the lexical status of familiar than unfamiliar items, even when the objective frequency of the items has been equated (Connine et al., 1990). Nevertheless, in the present context, it would be interesting to consider the effects of the objective frequency of occurrence of forenames on the accessibility of categorical knowledge. It may indeed be the case that subjective

familiarity is a more potent determinant of knowledge accessibility than the objective frequency of occurrence of forenames in the population, it remains for future research to demonstrate this effect, however.

Naming Hypothetical Stimulus Targets

Unlike reflective parents, researchers rarely give much thought or attention to the naming process. Apart from avoiding a clutch of unsavory or unsuitable items (e.g., *Adolph*), pretty much anything goes when experimenters provide their hypothetical stimulus targets with forenames. As Kasof (1993) has noted however, while expedient, this may be a rather unsatisfactory practice. Forenames differ on many dimensions, dimensions that may have unforeseen consequences with regard to people's evaluations of others. Take, for example, Goldberg's (1968) classic investigation of sex discrimination. In this task, participants were required to evaluate essays that were allegedly written by either male or female authors [e.g., *John* (or *Joan*) McKay and *Stephen* (or *Stella*) Hamilton]. The results were troubling. Essays were evaluated more positively when composed by male than female authors, a clear case of sexual discrimination. Or was it? Consider, for a moment, two new essay writers, *Michael* and *Edith*. If, following Goldberg's (1968) findings, *Michael* was deemed to be a more skilled wordsmith than *Edith*, would this necessarily constitute an egregious example of sexual discrimination? Perhaps not. As Kasof has argued, "the names Michael and Edith . . . differ on variables other than sex: Edith is considered less attractive, more old-fashioned, and connotative of lower intellectual ability than is Michael" (1993, p. 140). The message here, then, is an important and sobering one—forenames may exert a range of unintended effects on people's judgments, evaluations, and impressions of others, hence caution should be exercised when naming hypothetical stimulus targets in investigations of person perception.

Extending Kasof's (1993) observations, the present research revealed another route through which forenames may alter the products of the person perception process. As triggering categorical cues, forenames have the capacity to activate and access the contents of semantic memory. In this respect, however, forenames differ in their effectiveness as triggering cues. What emerges quite clearly in the present research is that familiar forenames provide enhanced access to categorical knowledge. This finding has important implications for a range of social-cognitive investigations of person perception, but particularly those that consider the automatic components of prejudice and discrimination (Blair & Banaji, 1996). In research of this kind, it is commonplace for investigators to prime categorical knowledge through the presentation of group members who are identified on the basis of their forenames. As demonstrated herein, however, this may be a problematic strategy if researchers overlook the subjective familiarity of the se-

lected items. Simply stated, depending on their familiarity, forenames may give rise to quite different estimates of implicit prejudice. Acknowledging this problem, researchers are now equating forenames for subjective familiarity prior to their presentation as triggering categorical cues in studies of implicit prejudice (Dasgupta et al., 2000). Investigators in other areas of person perception would be well advised to follow this example. Not only does familiarity breed contempt, but it also appears to provide rapid access to categorical knowledge about others.

REFERENCES

- Allport, G. W. (1954). *The nature of prejudice*. Reading, MA: Addison-Wesley.
- Balota, D. A., & Chumbley, J. I. (1984). Are lexical decisions a good measure of lexical access? The role of word-frequency in the neglected decision stage. *Journal of Experimental Psychology: Human Perception and Performance*, **10**, 340–357.
- Bargh, J. A. (1997). The automaticity of everyday life. In R. S. Wyer, Jr. (Ed.), *The automaticity of everyday life: Advances in social cognition* (Vol. 10, pp. 1–61). Mahwah, NJ: Erlbaum.
- Bargh, J. A. (1999). The cognitive monster: The case against the controllability of automatic stereotype effects. In S. Chaiken & Y. Trope (Eds.), *Dual process theories in social psychology* (pp. 361–382). New York: Guilford.
- Blair, I. V., & Banaji, M. R. (1996). Automatic and controlled processes in stereotype priming. *Journal of Personality and Social Psychology*, **70**, 1142–1163.
- Bodenhausen, G. V., & Macrae, C. N. (1998). Stereotype activation and inhibition. In R. S. Wyer, Jr. (Ed.), *Stereotype activation and inhibition: Advances in social cognition* (Vol. 11, pp. 1–52). Hillsdale, NJ: Erlbaum.
- Bodenhausen, G. V., Schwarz, N., Bless, H., & Wänke, M. (1995). Effects of atypical exemplars on racial beliefs: Enlightened racism or generalized appraisals? *Journal of Experimental Social Psychology*, **31**, 48–63.
- Bodenhausen, G. V., & Wyer, R. S., Jr. (1985). Effects of stereotypes on decision making information processing strategies. *Journal of Personality and Social Psychology*, **48**, 267–282.
- Brewer, M. B. (1988). A dual process model of impression formation. In R. S. Wyer, Jr., & T. K. Srull (Eds.), *Advances in social cognition* (Vol. 1, pp. 1–36). Hillsdale, NJ: Erlbaum.
- Bruner, J. (1957). On perceptual readiness. *Psychological Review*, **64**, 123–152.
- Cohen, J., MacWhinney, B., Flatt, M., & Provost, J. (1993). PsyScope: An interactive graphical system for designing and controlling experiments in the psychology laboratory using Macintosh computers. *Behavior Research Methods, Instruments, and Computers*, **25**, 257–271.
- Connine, C. M., Mullennix, J., Shernoff, E., & Yelen, J. (1990). Word familiarity and frequency in visual and auditory word recognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, **16**, 1084–1096.
- Dasgupta, N., McGhee, D. E., Greenwald, A. G., & Banaji, M. R. (2000). Automatic preference for white Americans: Eliminating the familiarity explanation. *Journal of Experimental Social Psychology*, **36**, 316–328.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, **56**, 5–18.
- Dijksterhuis, A., & van Knippenberg, A. (1996). The knife that cuts both

- ways: Facilitated and inhibited access to traits as a result of stereotype activation. *Journal of Experimental Social Psychology*, **32**, 271–288.
- Fazio, R. H. (2001). On the automatic activation of associated evaluations. *Cognition and Emotion*, **15**, 115–141.
- Fazio, R. H., Jackson, J. R., Dunton, B. C., & Williams, C. J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology*, **69**, 1013–1027.
- Fazio, R. H., Sanbonmatsu, D. M., Powell, M. C., & Kardes, F. R. (1986). On the automatic activation of attitudes. *Journal of Personality and Social Psychology*, **50**, 229–238.
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum model of impression formation from category based to individuating processes: Influences of information and motivation on attention and interpretation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 3, pp. 1–74). San Diego, CA: Academic Press.
- Gernsbacher, M. A. (1984). Resolving 20 years of inconsistent interactions between lexical familiarity and orthography, concreteness, and polysemy. *Journal of Experimental Psychology: General*, 256–281.
- Gilbert, D. T., & Hixon, J. G. (1991). The trouble of thinking: Activation and application of stereotypic beliefs. *Journal of Personality and Social Psychology*, **60**, 509–517.
- Goldberg, P. (1968). Are women prejudiced against women? *Trans-Action: Social Science and Modern Society*, **5**, 28–30.
- Higgins, E. T. (1996). Knowledge activation: Accessibility, applicability, and salience. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 133–168). New York: Guilford.
- Higgins, E. T., Rholes, W. S., & Jones, C. R. (1977). Category accessibility and impression formation. *Journal of Experimental Social Psychology*, **13**, 141–154.
- Kasof, J. (1993). Sex bias in the naming of stimulus persons. *Psychological Bulletin*, **113**, 140–163.
- Larochelle, S., & Pineau, H. (1994). Determinants of response times in the semantic verification task. *Journal of Memory and Language*, **33**, 796–823.
- Macrae, C. N., & Bodenhausen, G. V. (2000). Social cognition: Thinking categorically about others. *Annual Review of Psychology*, **51**, 93–120.
- Macrae, C. N., Bodenhausen, G. V., & Milne, A. B. (1995). The dissection of selection in person perception: Inhibitory processes in social stereotyping. *Journal of Personality and Social Psychology*, **69**, 397–407.
- Macrae, C. N., Bodenhausen, G. V., Milne, A. B., & Calvini, G. (1999). Seeing more than we can know: Visual attention and category activation. *Journal of Experimental Social Psychology*, **35**, 590–602.
- Macrae, C. N., Bodenhausen, G. V., Milne, A. B., Thorn, T. M. J., & Castelli, L. (1997). On the activation of social stereotypes: The moderating role of processing objectives. *Journal of Experimental Social Psychology*, **33**, 471–489.
- Macrae, C. N., Bodenhausen, G. V., Schloerscheidt, A. M., & Milne, A. B. (1999). Tales of the unexpected: Executive function and person perception. *Journal of Personality and Social Psychology*, **76**, 200–213.
- Macrae, C. N., Milne, A. B., Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality and Social Psychology*, **66**, 37–47.
- Pendry, L. F., & Macrae, C. N. (1994). Stereotypes and mental life: The case of the motivated but thwarted tactician. *Journal of Experimental Social Psychology*, **30**, 303–325.
- Roskos-Ewoldsen, D. R., & Fazio, R. H. (1992). On the orienting value of attitudes. Attitude accessibility as a determinant of an object's attraction of visual attention. *Journal of Personality and Social Psychology*, **63**, 198–211.
- Sherman, J. W., & Frost, L. A. (2000). On the encoding of stereotype-relevant information under cognitive load. *Personality and Social Psychology Bulletin*, **26**, 26–34.
- Sherman, J. W., Lee, A. Y., Bessenoff, G. R., & Frost, L. A. (1998). Stereotype efficiency reconsidered: Encoding flexibility under cognitive load. *Journal of Personality and Social Psychology*, **75**, 589–606.
- Townsend, S. (1994). *Adrian Mole: The wilderness years*. London: Mandarin.
- von Hippel, W., Jonides, J., Hilton, J. L., & Narayan, S. (1993). Inhibitory effect of schematic processing on perceptual encoding. *Journal of Personality and Social Psychology*, **64**, 921–935.