Why Susie Sells Seashells by the Seashore: Implicit Egotism and Major Life Decisions

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Because most people possess positive associations about themselves, most people prefer things that are connected to the self (e.g., the letters in one's name). The authors refer to such preferences as *implicit egotism*. Ten studies assessed the role of implicit egotism in 2 major life decisions: where people choose to live and what people choose to do for a living. Studies 1–5 showed that people are disproportionately likely to live in places whose names resemble their own first or last names (e.g., people named Louis are disproportionately likely to live in St. Louis). Study 6 extended this finding to birthday number preferences. People were disproportionately likely to live in cities whose names began with their birthday numbers (e.g., Two Harbors, MN). Studies 7–10 suggested that people disproportionately choose careers whose labels resemble their names (e.g., people named Dennis or Denise are overrepresented among dentists). Implicit egotism appears to influence major life decisions. This idea stands in sharp contrast to many models of rational choice and attests to the importance of understanding implicit beliefs.

What role do people's thoughts and feelings about themselves play in their important day-to-day decisions and behaviors? Contemporary research on the self-concept suggests many answers to this question. For example, the desire to maintain positive feelings about the self appears to influence things as diverse as whether people derogate those who criticize their governments (Pyszczynski, Greenberg, & Solomon, 1997, 1999), whether people sabotage the performance of others when playing a game (Tesser & Smith, 1981), what people find rational (Kunda, 1990), and what people find humorous (Wills, 1981). Like people's social beliefs and behavior, people's beliefs about themselves are also influenced by the desire to view the self favorably. Most people have mostly favorable beliefs about themselves (see Crocker & Major, 1989; Greenberg & Pyszczynski, 1985; Miller & Ross, 1975; Paulhus & Levitt, 1987; Taylor & Brown, 1988; but cf. Kruger, 1999).

In short, a great deal of evidence suggests that the motivation to feel good about the self plays a role in a wide variety of important social behaviors. To our knowledge, however, very little research on the self-concept addresses whether self-evaluation plays an important role in major life decisions. For example, only a handful of studies have examined whether self-regulation processes influence people's choice of relationship partners. Moreover, for practical reasons, most of these studies have examined attraction to strangers in the laboratory rather than attraction to long-term relationship partners (Huston & Levinger, 1978; but cf. Murray, Holmes, & Griffin, 1996; Swann, Hixon, & de la Ronde, 1992). We thus know relatively little about whether self-evaluations or self-concept motives influence important decisions such as where people choose to live and what people choose to do for a living.

Is there any reason to believe that self-evaluation shapes important life decisions? Consider the decisions of (a) choosing a city or state in which to live and (b) choosing a career. At first blush, it might seem that these decisions are largely independent. That is, there would appear to be no unifying psychological thread that connects a person's taste in cities and career tracks. This does not mean that these important decisions are completely unrelated. Consider the dentist who is offered jobs in Milwaukee and in Phoenix. She might choose the job in Phoenix—either because it offers her greater professional rewards or because it offers her the promise of milder winters. Such obvious connections aside, however, it might be asking quite a bit of a single self-evaluative mechanism to predict people's taste in both hometowns and occupations.

Implicit Egotism

Or would it? Research in implicit social cognition suggests that many mundane judgments and behaviors are influenced by potent and pervasive unconscious motives. For example, Greenwald and Banaji (1995) argued that the desire to feel good about the self permeates a wide range of social judgments. As an example,

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students' evaluations of instructors' teaching skills tend to be more favorable when instructors give more lenient grades. Presumably, this is true because instructors who give students high grades satisfy students' desires for favorable feedback. That is, unconscious self-enhancement seems to bias students' evaluations of their instructors' teaching skills. As noted previously, researchers have long assumed that people have a basic desire to feel good about themselves (Allport, 1961; James, 1890/1950). What sets recent research on self-enhancement apart from a great deal of earlier research is the contemporary assumption that many self-enhancing social cognitions occur automatically or unconsciously (Greenwald & Banaji, 1995; Hetts, Sakuma, & Pelham, 1999; Jones, Pelham, Mirenberg, & Hetts, 2002; Paulhus & Levitt, 1987; Pelham & Hetts, 1999; Perdue, Dovidio, Gurtman, & Tyler, 1990; Pyszczynski et al., 1997, 1999).

Research on unconscious self-enhancement—or what we call *implicit egotism*—suggests that people's positive automatic associations about themselves may influence their feelings about almost anything that people associate with the self. For example, research on the *mere ownership effect* shows that giving people objects such as pens or keychains causes people to evaluate these object more favorably than they would otherwise (Beggan, 1992; Kahneman, Knetsch, & Thaler, 1990; Van Boven, Dunning, & Loewenstein, 2000). If people instantly acquire positive feelings about objects once these objects become part of the self, it stands to reason that people should develop deep and abiding affections for objects that are chronically associated with the self. In support of this idea, research on the *name letter effect* (Kitayama & Karasawa, 1997; Nuttin, 1985, 1987) shows that people like the letters that appear in their own names quite a bit more than they like letters that do not. This effect occurs for all of the letters in people's names, but it is particularly pronounced for people's first and last initials. This presumably unconscious self-enhancing bias has been documented in at least 14 countries (e.g., Greece, Japan, Spain, the United States).

Although a high level of exposure to the letters that occur in one's own name probably plays a role in the development of the name letter effect (see Zajonc, 1968), it seems unlikely that the name letter effect is determined exclusively by mere exposure (Nuttin, 1987). Consider a recent study of unmarried Japanese college students conducted by Kitayama and Karasawa (1997). These researchers observed the strongest evidence for the name letter effect for the first letter of women's first names and for the first letter of men's last names. They explained this gender difference by noting that there is a very strong expectation that Japanese women will change their family names when they marry. Thus, although there is no reason to assume that men and women differ in their level of exposure to their first versus last initials, women appear to have more positive feelings about the specific name letters that they know they will hold onto for their entire lives. Kitayama and Karasawa also found that people preferred numbers that were in their birthdays to numbers that were not. Moreover, in the case of the birthday numbers that do not overlap with birthday months (13–31), the magnitude of the evaluative bias associated with birthday numbers was slightly larger than the magnitude of the name letter effect. Because people are exposed to their birthday numbers much less often than they are exposed to their names, this further suggests that people's elevated liking for objects that are associated with the self is not simply an affective consequence of mere exposure. Instead, like the mere ownership effect, the name letter effect appears to qualify as a form of implicit egotism (Greenwald & Banaji, 1995; Nuttin, 1987). The essential idea behind implicit egotism is that people should prefer people, places, and things that they associate (unconsciously) with the self.

Although examples of unconscious self-enhancement have been documented for a variety of judgments and decisions, virtually all of the past research on unconscious self-enhancement simply documents the existence of positive associations to the self (but see Greenwald & Banaji, 1995, for some exceptions). For instance, whereas existing research leaves little doubt that people like the letters in their own names, we know of no previous research examining behavioral consequences of the name letter effect. To our knowledge, the closest thing to this is Miller, Downs, and Prentice's (1998) finding that people are nicer than usual to strangers who happen to share their birthdays. In particular, Miller et al.'s participants played more cooperatively than usual with a bogus interaction partner (in a prisoner's dilemma game) when they thought they and their partner had the same birthday (see also Finch & Cialdini, 1989). If people truly prefer the specific letters that appear in their own names, then we might expect people to prefer physical or social objects that either contain or are represented by these same letters. For example, consider the case of a hypothetical person named Steve Spencer. If the name letter effect has implications for important social behaviors, it might not be too far-fetched to expect Steve to prefer to vacation in Sarasota rather than Miami, to choose to study stereotyping rather than attitudes, or to find himself collaborating with colleagues named Steven Fine (or Clyde Steele) rather than Russ Lazio. Although Steve would probably be unaware of the affective basis of his judgment, something about names such as Sarasota, stereotyping, and Steele should just feel good (Greenwald & Banaji, 1995; Lewicki, 1985; Nisbett & Wilson, 1977; Staats & Staats, 1957, 1958).

In this article, we present evidence from a wide range of archival studies that examined two different behavioral consequences of implicit egotism: (a) choosing a city or state in which to live and (b) choosing a career. Because the name letter effect lends itself particularly well to archival research using public records (e.g., telephone directories, memberships in professional organizations), we focus primarily on behavioral consequences of the name letter effect in this research. However, we assume that many other forms of implicit egotism (e.g., the preferences people have for their birthday numbers, implicit in-group bias) also have important consequences for day-to-day decisions. In the present studies, we made use of public records to identify people by their names or initials. We then examined whether people with specific kinds of names or initials (e.g., people named Dennis) gravitated toward specific places in which to live (e.g., Denver) or specific occupations (e.g., dentistry). Because past research suggested that the name letter effect is stronger for men's last names and for women's first names, we took this into account wherever it was pertinent. On the whole, however, we hoped to show that the name letter effect has important behavioral consequences for men and women alike. In our first study, we tested the idea that the positive associations people have for the letters in their names influence the city in which people choose to live.

Study 1

Method

In Study 1, we analyzed social security death index (SSDI) records available at a genealogical Web site (http://www.Ancestry.com). The searchable database available at this Web site is frequently updated and was generated from U.S. government records in May of 2001. These records include the more than 66 million deceased Americans who possessed social security numbers at their time of deaths. These SSDI records and their associated search engine are ideal for the present purposes because they (a) are highly comprehensive, (b) allow searches based on either first or last names, and (c) allow searches based on a person's last known city or state of residence prior to death. Although it is not possible to download these data, the search engine that is a part of this Web site places no restrictions on the number of hits it returns (e.g., it makes it possible to determine exactly how many people named Gladys or Ezekiel have died in the United States since the beginning of the social security system).

In Study 1, we first identified the 40 largest cities in the United States. We then consulted the 1990 census to identify all of the common (top 100) male and female first names that shared a minimum of their first three letters with any of these city names. Because the popularity of different first names varies with age, we selected the two qualifying European American female names that we could match most closely for age (based on the relative proportion of deceased people born in 1900 and 1950 who had these first names). We then repeated this procedure to produce the two most closely age-matched male names. The resulting name–city combinations for women were Mildred–Milwaukee and Virginia–Virginia Beach. The resulting combinations for men were Jack–Jacksonville and Philip–Philadelphia. To generate the data for Study 1, we created two separate 2×2 name–city tables, one for women and one for men. We expected that the women and men whose first names resembled the name of a specific city would be over-represented among the deceased residents of that specific city.

Results and Discussion

The results for women appear in the upper half of Table 1. As shown in Table 1, women named Mildred and Virginia did seem to gravitate toward cities that resembled their first names. The association between name and place of residence for women was highly significant, $\chi^2(1) = 38.25$, $p < .001$. As shown in the lower half of Table 1, the results for men were also highly consistent with predictions. Just as Jacksonville seems to have been disproportionately inhabited by Jacks, Philadelphia seems to have been disproportionately inhabited by Philips, $\chi^2(1) = 202.05$, $p < .001$. Because all of the names used in Study 1 are common European American names, it is difficult to attribute these findings to an ethnic confound. It is even more difficult to attribute these findings to an age confound. In fact, to begin with the women, an examination of the birth dates of all of the decedents of Virginia Beach and Milwaukee indicated that the average resident of Milwaukee was noticeably older than the average resident of Virginia Beach (as indicated by a greater ratio of people born in 1990 versus 1950). The small difference in the ages of the two female names used in Study 1 worked in opposition to this city–age confound. Specifically, the name Mildred is slightly younger than the name Virginia. The same was true for the male names. Whereas the decedents of Philadelphia appear to have been somewhat older, on average, than the decedents of Jacksonville, Philip turns out to be a slightly younger name than Jack.

Table 1
Likelihood of Living in a City as a Function of One's First Name (Study 1)

	First name: Women		
City	Mildred	Virginia	Total
Milwaukee	865 (806)	544 (603)	1409
Virginia Beach	230 (289)	275 (216)	505
Total	1095	819	1914
	First name: Men		
	Jack	Philip	Total
Jacksonville	436 (288)	111 (259)	547
Philadelphia	968 (1116)	1153 (1005)	2121
Total	1404	1264	2668

Note. Expected values (rounded to the nearest whole number) appear in parentheses.

Although the results of Study 1 suggest that implicit egotism may play a role in people's choice of a hometown, these results are open to a highly plausible alternate explanation. Although it is possible that people gravitate toward places that remind them of themselves, it is also possible that the places in which people live serve as primes that influence the names that parents give to their children. To new parents living in Georgia, for example, baby names such as George or Georgia may simply be more accessible than more attractive alternatives such as Brett, John, or Matthew. Although this priming effect would be interesting in its own right, it has little to do with implicit egotism. In Study 2, we attempted to rule out this alternate explanation by focusing on surnames rather than first names. Because laboratory research has shown that surname letter liking is typically lower than first name letter liking, we suspected that surname effects might be smaller than first name effects. In light of this expectation, we sampled U.S. states rather than large cities. If people with surnames that resemble specific state names disproportionately populate these states, we can be relatively confident that the owners of these surnames (or, at a minimum, at least one of their ancestors) chose to live in these specific states.

Study 2

Method

Study 2 was an expanded version of Study 1. However, in an effort to generalize our findings to a wide range of surnames, we conducted surname searches based on the first few consecutive letters of each of the state names we sampled (rather than searching for one specific surname per state). We began by identifying an electronic telephone directory that was ideal for the present purposes, namely the WorldPages directory (http://www.Worldpages.com). This directory will return as many as 2,000 hits in a specific U.S. or Canadian city, state, or province. We chose eight large U.S. states on the basis of population. Specifically, on the basis of 1990 census data, we identified the eight most populous U.S. states that had one-word names. (We eliminated states with two-word names because, with very few exceptions, people do not have two-word surnames. In addition, the first word in most two-word state names is more peripheral to the state name than is the second word.) We selected the initial letter strings

for these searches by beginning with the first four letters of each state name in our list. When a four-letter string (e.g., *Geor* for Georgia) yielded too many hits to be listed by the search engine, we added the next consecutive letter(s) in the state name to narrow the search. When a four-letter string yielded no or very few hits (e.g., *Ohio*), we deleted letters from the end of the string, one at a time, to maximize number of hits realized. For example, we used *Ohi* (which fit within the 2,000 hit limit for all eight states) rather than *Oh* (which often exceeded the limit). Thus, in the case of every state in our list, we generated an initial surname letter string set that (a) matched each state name as well as possible and (b) maximized search size on the basis of the 2,000 hit constraint.

The only exception to this procedure occurred for Pennsylvania. *Penn* yielded too many hits, and *Penns* yielded almost none. Our solution was to add *y* rather than *s* to *Penn*, yielding *Penny*. The two most obvious alternate solutions to this problem (either dropping Pennsylvania altogether or adding the final letter *a* rather than the next consecutive letter *y* to *Penn*) yielded findings slightly stronger than those reported herein. Because this directory occasionally yielded hits that appeared to be clubs, institutions or businesses (e.g., Florida, Gators) rather than people (e.g., Florian, David) we eliminated all such noisy hits within each state. Incidentally, the SSDI search engine used in Study 1 was not appropriate for Study 2 because it only allows searches based on exact names (rather than the first few letters of a name).

Results and Discussion

The results of Study 2 are summarized in Table 2. For five of the eight state–name pairs, the results were weakly to strongly in the predicted direction; for one of the pairs, the observed frequencies were very close to the expected frequencies; and for two pairs (Pennsylvania and Ohio), there were modest reversals. The findings for Ohio are likely a product of sampling error. This may be true of Pennsylvania as well. For instance, if one conducts a search based on names beginning with *Penna*, the results for Pennsylvania look much more reasonable (112.8 expected vs. 135 observed hits). Regardless of one's preferred interpretation for any reversals, the overall name–state matching effect (with the reversals averaged in) was highly significant. The expected number of surname–state matches was 1,584.4 (16.64%), and the observed number of matches was 1,890 (19.86%), $\chi^2(1) = 70.71$, $p < .001$. It is worth noting that the states we sampled in Study 2 provide some excellent controls for potential ethnic confounds. For example, because exactly 32% of the residents of both Texas and California happen to be Latino, it is extremely difficult to attribute the large effects observed for these two states to a confound involving Latino versus European names.

In short, despite the risks associated with drawing causal inferences from passive observational findings, we suggest that the best explanation for the findings of Studies 1–2 is that people are attracted to places that resemble their own names. Furthermore, although creative readers might be able to generate additional criticisms of these findings, alternate explanations based on ethnicity seem relatively implausible, and alternate explanations based on reverse causality (i.e., priming) no longer seem plausible at all.

Because these findings challenge traditional assumptions about how people make major life decisions, critics may still wish to reserve judgment. One could argue, for example, that many of the surnames that were likely to have been generated in Study 2 were rather unusual. The results of Study 1 notwithstanding, are the examples of implicit egotism documented in Study 2 limited to highly unusual names? Do such findings generalize to people's choice of cities rather than states? Study 3 was designed to address these questions.

Study 3

Method

Study 3 was patterned directly after Study 2. Thus, Study 3 also focused on surnames and also made use of the WorldPages electronic telephone directory. In Study 3, however, we focused on the eight largest Canadian cities rather than the eight largest U.S. states. More specifically, we identified the eight largest predominantly English-speaking metropolitan areas in Canada. We excluded Montreal and Quebec to avoid an English–French ethnic name confound (e.g., if a disproportionate number of French names began with *Mont*, including Montreal in our list could falsely inflate our findings). Precisely the same design and same sampling procedure used in Study 2 yielded eight sets of 3- or 4-letter surname strings, one string corresponding to the first 3–4 letters of each city in the list. Needless to say, initial strings such as *Edm* (Edmonton), *Ham* (Hamilton), and *Lon* (London) yielded surnames that were quite a bit more common than those typically generated in Study 2 (see Table 3 for the complete set of cities and letter strings). As in Study 2, we deleted any hits that did not appear to refer to people. Careful readers will notice that the surface differences in

Table 2
Likelihood of Living in a Specific State as a Function of One's Surname (Study 2)

	Surname initial letter string								
State	Cali	Texa	Flori	Illi	Penny	Ohi	Michi	Georgi	Total
California	**929 (760)**	10	357	155	299	66	153	264	2,233
Texas	350	**34 (7)**	170	68	451	31	65	76	1,245
Florida	737	3	**471 (358)**	95	293	18	68	218	1,903
Illinois	328	0	172	**67 (63)**	100	21	52	107	847
Pennsylvania	463	4	266	201	**265 (302)**	3	118	151	1,471
Ohio	188	0	130	40	264	**2 (12)**	16	110	750
Michigan	145	2	182	67	147	8	**87 (44)**	74	712
Georgia	98	1	42	20	135	3	24	**35 (39)**	358
Total	3,283	54	1,790	713	1,954	152	583	1,035	9,519

Note. States are listed in order of population. For the diagonal frequencies, in boldface type, expected values (rounded to the nearest whole number) appear in parentheses.

the sampling procedures of Studies 2 and 3 merely reflect the fact that Study 3 focused on cities rather than states. Because city populations are noticeably smaller than state populations, the same procedure used in Study 2 typically generated three-letter rather than four-letter strings in Study 3 (making Study 3 more conservative than Study 2).

Results and Discussion

Like their American counterparts, these Canadian residents tended to reside in places that resembled their surnames. As illustrated in Table 3, this was true for seven of the eight name–city pairs. The only exception to the surname–city matching rule occurred for the name–city pair Cal–Calgary. Perhaps a few of these Calgarians went missing after visiting American relatives in California (see Table 2, column 1). Alternately, perhaps it was satisfying enough for them merely to live elsewhere in Canada. Nonetheless, for the sample as a whole (Calgarians included), the overall surname–city name matching effect was highly significant (2,497 observed versus 2,178 expected matches), $\chi^2(1) = 52.99$, $p < .001$. Thus, even when it comes to the more run-of-the-mill surnames that were typically generated in Study 3 (e.g., Edmunds, London, Winters), people seem to prefer places that resemble their surnames. Although the absolute magnitude of this matching effect was not very large (about 15% above the chance value), this seemingly small effect is not negligible. For example, this effect size is about three times the effect size that corresponds to a casino's long-run advantage in a game of roulette. It thus seems a safe bet that people are attracted to places whose names resemble their own first or last names (see Prentice & Miller, 1992).

Although Studies 1–3 suggest that implicit egotism plays an important role in where people choose to live, critics have noted that Studies 2 and 3 do not provide irrefutable evidence that people actually moved to the states or cities that resemble their surnames. Unless people routinely change their surnames to match the names of the places in which they live, we do not consider this is a very compelling criticism. Nonetheless, it should go without saying that it would be nice to have direct evidence regarding people's movement from one city or state to another. In Study 4, we attempted to gather such evidence by taking advantage of the fact that SSDI records include not only the state in which decedents lived at the time of their demise but also the state in which they lived when they were issued their social security cards.

Because the large majority of deceased Americans obtained social security cards as adults, it is important to note that SSDI records do not typically indicate where people were born (the social security system did not exist until 1935). This means that SSDI records cannot typically distinguish a person who moved to a state as an adult from a person who was born in that state. However, they can be used to document moves among those who happened to move after receiving their social security cards. In other words, studying people who changed residences as adults constitutes a very conservative test of our hypothesis. With this in mind, we attempted to identify a very large sample of participants in Study 4. We did so by focusing on relatively common first names and looking at the residents of U.S. states rather than cities.

Study 4

Method

In Study 4 we focused on states in the Southeastern U.S. This sampling strategy was purely pragmatic. Relative to states in all other regions of the U.S., Southeastern states are disproportionately likely to have names that strongly resemble common person names (e.g., Georgia was named after King George). After identifying all Southeastern states with one-word names, we consulted census records to identify all of the common male and female names that shared a minimum of their first 3 letters with these Southeastern state names. When more than one name matched a state name, we chose the most common name. This procedure yielded four name–state pairs for both women and men (e.g., Florence–Florida, George–Georgia; see Tables 4 and 5). Because we sampled multiple names for both women and men, we were unable to match names directly for age as we had done in Study 1. However, the very large sample size of Study 4 allowed us to control for age directly in supplemental analyses to be described below. In addition, the large sample size available for Study 4 allowed us to perform two separate sets of analyses: (a) preliminary analyses based simply on where people lived at the time of their deaths and (b) more focused analyses based on the subset of people who moved to the states in our sample as adults. To determine the number of people who moved to a specific state as adults, we simply subtracted (a) the total number of people with a specific first name who received their social security card in that state and also died while living in that state from (b)

Table 3
Likelihood of Living in a Specific Canadian City as a Function of One's Surname (Study 3)

	Surname initial letter string								
City	Tor	Vanc	Ott	Edm	Cal	Win	Ham	Lon	Total
Toronto	**836 (611)**	61	178	165	1646	1116	1923	914	6,839
Vancouver	114	**21 (19)**	38	48	316	322	467	192	1,518
Ottawa	104	24	**52 (50)**	37	303	240	553	217	1,530
Edmonton	111	23	85	**54 (48)**	377	361	576	193	1,780
Calgary	177	47	86	82	**409 (528)**	535	904	304	2,544
Winnipeg	150	20	82	45	259	**338 (287)**	508	157	1,559
Hamilton	98	22	45	23	238	236	**527 (434)**	176	1,365
London	81	22	50	46	328	289	480	**260 (201)**	1,556
Total	1,671	240	616	500	3,876	3,437	5,938	2,413	18,691

Note. Cities are listed in order of population. For the diagonal frequencies, in boldface type, expected values (rounded to the nearest whole number) appear in parentheses.

the total number of people with a specific first name who simply died while living in that state (regardless of where they were born). As a concrete example, if (a) 100 men named George received their social security cards in Georgia and also died while living in Georgia and (b) a total of 150 men named George died while living in Georgia, it seems like a safe bet (barring errors in social security records) that 50 men named George moved to Georgia. Needless to say, the strongest evidence for implicit egotism would be evidence that people actually moved to states resembling their first names.

Results and Discussion

Preliminary results. The preliminary results of Study 4 were highly similar to the results of Studies 1–3. First of all, as suggested by the frequencies in the diagonals of Table 4, women disproportionately inhabited states that resembled their first names. In fact, this was strongly true for all four of the name–state pairs. Whereas the total number of expected (chance) name–state matches was 19,859, the observed number was 28,530, or about 44% more than the chance value, $\chi^2(1) = 9{,}375.74$, $p < .001$. The results for men are summarized in Table 5. In the case of men, the results were weaker but still highly significant. On the whole, men were about 26% more likely to live in states resembling their names than they should have been by chance, $\chi^2(1) = 2{,}862.00$, $p < .001$. Thus, Study 4 provided a large scale, highly systematic replication of the findings of Studies 1–3.

Some readers may worry that confounds involving age or ethnicity could be responsible for the findings of Study 4. For instance, if the average resident of Florida is older than the average resident of Georgia, and if women named Florence tend to be older than women named Georgia, this could potentially account for the findings of Study 4. We addressed this age confound by limiting the analyses of Study 4 to women and men born during exactly the same year. As a representative example, in one such analysis, we focused exclusively on people born in 1920. Despite a dramatic reduction in sample size, the name–state matching effect remained highly significant for both women and men, both ps $< .001$. Thus, an age confound cannot explain these findings. We also conducted several analyses to address potential ethnic confounds. For example, we conducted five separate replications in which we limited our searches to people who all had the same European American surname—more specifically, one of the five most common American surnames (Smith, Johnson, Williams, Jones, or Brown). We continued to observe robust name–state matching effects for both women and men when we compared people who had different first names but the same surnames, both ps $< .001$. Although this sampling procedure does a good job of eliminating many ethnic confounds (e.g., it largely eliminates people of French, German, or Visigothic ancestry), it does not eliminate every possible ethnic confound. In particular, many African Americans (e.g., Venus Williams, James Brown) have one of these five highly common surnames. On the other hand, unless (a) some of these first names are more common than others among Blacks as opposed to Whites, (b) some of these Southeastern states have noticeably larger Black populations than others, and (c) these demographic differences happen to coincide perfectly with the forename–state pairs we used in Study 4, it is not easy to attribute these findings to any obvious ethnic confounds. Nonetheless, to address this possibility more directly, we conducted a number of auxiliary analyses. To briefly summarize these findings, the results of Study 4 are still extremely robust when one only compares states with very similar proportions of Black and White residents (e.g., Georgia and Louisiana). Finally, these results appear to apply to the living and breathing as well as the dearly departed. In two different follow-up studies in which we made use of online electronic phone books (e.g., WorldPages.com) rather than SSDI records, we observed clear replications of the name–state matching effect—whether we sampled people with any surname at all or people with any of the five most common U.S. surnames.

Results for interstate immigrants. Preliminary analyses clearly showed that people disproportionately inhabited states that resembled their names. But did these residents actually move to these states? More focused analyses indicated that they did. The results for women who migrated from one state to another after receiving their social security cards are summarized in Table 6. For all four name–state pairs, the findings strongly supported our predictions. On average, women were about 18% more likely to move to states resembling their first names than they should have been based on chance, $\chi^2(1) = 1{,}037.57$, $p < .001$. Furthermore, for the two states that happened to match women's names perfectly (Georgia and Virginia), this effect was noticeably larger than usual (36% higher than the chance values). The results for men are summarized in Table 7. As was the case in the preliminary analyses, the focused results for men were weaker than the results for women. Findings were weakly to moderately supportive for three of the four name–state pairs. On average, men's migration rates to cities

Table 4
Likelihood of Living in a Specific Southeastern State as a Function of One's First Name (Study 4: Preliminary Results for Women)

	First name				
State	Florence	Georgia	Louise	Virginia	Total
Florida	**13,145 (9,641)**	1,920	8,820	8,822	32,707
Georgia	2,591	**2,202 (1,103)**	5,335	2,985	13,113
Louisiana	2,646	926	**4,303 (3,175)**	2,054	9,929
Virginia	3,861	1,298	5,671	**8,880 (5,940)**	19,710
Total	22,243	6,346	24,129	22,741	75,459

Note. For the diagonal frequencies, in boldface type, expected values (rounded to the nearest whole number) appear in parentheses.

Table 5
Likelihood of Living in a Specific Southeastern State as a Function of One's First Name (Study 4: Preliminary Results for Men)

	First name				
State	George	Kenneth	Louis	Virgil	Total
Georgia	**13,697 (12,261)**	1,477	1,642	855	17,671
Kentucky	11,390	**2,092 (1,636)**	2,214	1,736	17,432
Louisiana	9,100	1,045	**5,775 (2,665)**	397	16,317
Virginia	16,629	2,261	2,332	**597 (1,068)**	21,819
Total	50,816	6,875	11,963	3,585	73,239

Note. For the diagonal frequencies, in boldface type, expected values (rounded to the nearest whole number) appear in parentheses.

resembling their names exceeded the chance value by only about 4%. Nonetheless, because of the large sample size, this small overall name–city migration effect for men was still highly significant, $\chi^2(1) = 19.93$, $p < .001$. As noted earlier, this test for adult migration is an extremely conservative test. Presumably, many of the women and men in the preliminary analyses also migrated to the states in which they died (but did so before receiving their social security cards).

Likely Moderators of Implicit Egotism

The results of Study 4 strongly suggest that when it comes to people's first names, implicit egotism is more pronounced among women than among men. This finding is consistent with published laboratory research on the name letter effect (Kitayama & Karasawa, 1997; S. L. Koole, 2001, personal communication) as well as with our own recent laboratory research on name letter preferences. Women typically like their first names and first initials more than men do. To the degree that this gender difference proves to be replicable, it would strengthen our confidence in the conclusion that name letter preferences per se are responsible for people's attraction to places that resemble their names. In the case of Study 4, even if one focuses on the female name–state pairs that bear a less striking resemblance to the states with which they were paired, it appears that our findings were stronger for women than for men. Nonetheless, it might be useful to gather additional data on the moderators of implicit egotism. Along these lines, we conducted several systematic pilot studies suggesting that, in addition to gender, the distinctiveness or statistical uniqueness of people's names may also moderate the strength of behavioral name letter matching effects. For example, to eliminate any variation in how closely people's first names matched state names (e.g., the name Georgia matches Georgia better than the name Florence matches Florida), we identified the 8 most common first names (other than Georgia and Virginia) that matched state names exactly. These eight names (generated based on their population frequencies) ranged from those that readers might vaguely recognize as potential first names (e.g., Florida, Washington) to those that were extremely obscure (e.g., Arizona, Tennessee). This study revealed that people were a full 68% more likely to live in states bearing their first names than they should have been based on chance. Other pilot studies with even more distinctive names yielded even more dramatic results.

If unusual names such as Nevada or Tennessee do an unusually good job of discriminating their owners from every Tom, Dick, and Harry they may encounter, then it seems likely that people with highly unusual names feel a stronger sense of ownership for their names. If distinctiveness, like gender, proves to be a robust moderator of our findings, it would further strengthen our interpretation of our findings. In addition, additional evidence that people with distinctive names show stronger than usual name letter preferences would also argue against a mere exposure interpretation of our findings. By definition, it is people with highly com-

Table 6
Likelihood of Moving to a Specific Southeastern State as a Function of One's First Name (Study 4: Results for Women)

	First name				
State	Florence	Georgia	Louise	Virginia	Total
Florida	**10,062 (8,810)**	1,033	5,608	6,706	23,409
Georgia	777	**346 (184)**	1,118	987	3,228
Louisiana	386	185	**506 (402)**	467	1,544
Virginia	1,349	336	1,469	**2,077 (1,603)**	5,231
Total	12,574	1,900	8,701	10,237	33,412

Note. For the diagonal frequencies, in boldface type, expected values (rounded to the nearest whole number) appear in parentheses.

Table 7
Likelihood of Moving to a Specific Southeastern State as a Function of One's First Name (Study 4: Results for Men)

	First name				
State	George	Kenneth	Louis	Virgil	Total
Georgia	**3,592 (3,520)**	722	657	204	5,175
Kentucky	2,570	**526 (518)**	527	299	3,922
Louisiana	2,024	411	**699 (476)**	118	3,252
Virginia	5,314	964	1,022	**198 (309)**	7,498
Total	13,500	2,623	2,905	819	19,847

Note. For the diagonal frequencies, in boldface type, expected values (rounded to the nearest whole number) appear in parentheses.

mon rather than highly unusual names who are more frequently exposed to their own names. Study 5 was designed to provide further evidence regarding the potential moderators of implicit egotism. Study 5 also made use of an even more exhaustive sampling strategy than the one employed in Study 4, as well as an arguably more sophisticated data analytic strategy. The novel analytic approach we adopted in Study 5 allowed us to test our hypotheses for a great number of names without having to generate an extraordinarily large (e.g., $35 \times 35 = 1{,}225$ cell) matrix of names and places of residence.

Study 5

Method

In Study 5, we sampled every U.S. city whose name begins with *Saint* followed by a person name (e.g., St. Anne, St. Helen, St. Louis, St. Paul). There are 35 such city names. Because of duplicate city names in different states, however, there are about 80 individual cities with such names. Because we searched for complete first or last names (rather than letter strings) in Study 5, we made use of the same SSDI database used in Studies 1 and 4. As noted earlier, SSDI records are extremely comprehensive. Because this search engine places no limit on the number of hits it returns, it also allows for national base-rate calculations of the frequency of different specific first or last names. Thus, for instance, one can use this tool to determine the exact proportion of deceased Americans whose first or last name was Louis. This search engine also allows one to specify the city in which a person was living at the time of his or her death. Thus, for instance, one can determine the exact proportion of deceased residents of St. Louis whose first or last name was Louis.

In Study 5, we exhaustively sampled all of the "Saint" cities in the U.S. and compared (a) the proportion of deceased residents from each city whose first name was the same as that city name with (b) the proportion of deceased Americans who possessed that same first name. For example, we were able to determine whether the deceased residents of St. Louis were disproportionately likely to be named Louis (relative to all other Americans). We repeated this analysis for all 35 of the Saint city names. In the first such analysis, we searched for first names only (regardless of surname). In the second such analysis we searched for last names only (regardless of first name).

Results and Discussion

The entire list of names used in Study 5 appears in column 1 of Table 8. Column 2 of Table 8 lists the proportion of deceased Americans in the SSDI database who possessed each of the first names listed in column 1. Column 3 lists the proportion of deceased Americans who lived in a given Saint city who possessed this same first name. Column 4 lists the (deceased) population for each Saint city. Finally, column 5 lists the effect size (in the form of an odds ratio) for each name–city pair in the list. In interpreting these odds ratios, it is important to note that many of the cities were sufficiently small (or the names sufficiently rare) that the expected number of residents who possessed that Saint name was less than a single person. For instance, the seemingly troubling odds ratio of 0 to 1 for women named Agatha living in St. Agatha is not very disappointing. This is because the expected number of women named Agatha living in this very small city was less than 1/50th of a person (0.0167 women). City–name combinations that yielded expected values of at least 5.0 (meaning that at least 5 people with that first name should have resided in that specific city, based on base rates) are printed in bold. Ten of these 15 odds ratios were greater than 1.0. What, then, were the overall results for first names in Study 5?

Beginning with the results for women, expected values dictated that 308.8 of the 45,908 women sampled should have resided in cities named after Saints who happened to share their first names. The actual number of women who showed this name–city matching effect was 445, which is 44% greater than the chance value, $\chi^2(1) = 41.97$, $p < .001$. The results for men told a weaker but highly significant version of this same story. On the basis of expected values, 3,476.0 out of 594,305 men should have lived in Saint cities bearing their first names. The actual number of men who did so was 3,956, which is 14% greater than the chance value. Because of the extremely large sample size for men, this value was also highly significant, $\chi^2(1) = 58.63$, $p < .001$. A test comparing the women's name–city matching rate (144% of the expected value) against the name–city matching rate observed for the men (114%) indicated that the gender difference favoring women was highly significant, $\chi^2(1) = 25.1$, $p < .001$. In short, averaging across the residents of all of these cities, both women and men gravitated toward Saint cities whose names included their own first names, and this tendency was particularly pronounced among women. These findings greatly increase our confidence in the gender differences observed in Study 4.

Presumably, the fact that these city names paired people's exact first names with the positive word *Saint* may have contributed to their appeal. At the same time, these findings might be especially

Table 8
Likelihood of Living in a "Saint" City as a Function of One's First Name (Study 5)

Name	Proportion U.S. names	Proportion in city	City population	OR
		Women		
1. Agatha	.000091	.0000000	183	0.00
2. Anne	.001305	.0000000	1,703	0.00
3. Bernice	.001381	.0000000	133	0.00
4. Clair	.000155	.0003153	25,376	2.03
5. **Helen**	.009068	.0106762	1,405	1.18
6. **Marie**	.004591	.0059749	5,021	1.30
7. **Mary**	.022972	.0339013	11,504	1.48
8. Rose	.004141	.0034305	583	0.83
		Men		
9. Anthony	.002508	.003858	1,296	1.54
10. Augustine	.000084	.000000	13,057	0.00
11. Bernard	.001523	.001600	1,250	1.05
12. **Charles**	.014408	.015509	21,343	1.08
13. **David(s)**	.004549	.002035	2,948	0.45
14. Elmo	.000126	.000000	1,083	0.00
15. **Francis**	.002432	.004752	2,315	1.95
16. Gabriel	.000148	.000000	276	0.00
17. **George**	.014347	.012532	6,942	0.87
18. Henry	.006720	.033755	474	5.02
19. Ignace	.000007	.000000	1,328	0.00
20. Jacob	.001111	.005319	376	4.79
21. **James**	.020204	.015049	10,499	0.74
22. **Joe**	.002471	.005117	2,345	2.07
23. **John(s)**	.029861	.022749	5,187	0.76
24. **Joseph**	.013665	.008143	36,349	0.60
25. Leonard	.002038	.002132	469	1.05
26. **Louis**	.004168	.006206	358,699	1.49
27. Mark(s)	.000679	.000000	113	0.00
28. Martin	.001477	.000000	77	0.00
29. Matthew(s)	.000536	.001037	1,928	1.94
30. Michael	.003717	.013210	757	3.55
31. **Paul**	.005469	.005445	119,736	1.00
32. **Peter**	.002414	.002956	2,706	1.22
33. Stephen(s)	.001221	.000549	1,823	0.45
34. **Thomas**	.007796	.013746	873	1.76
35. Vincent	.001080	.000000	56	0.00

Note. Names in boldface type have expected frequencies greater than 5.0. Proportion U.S. names = proportion of deceased Americans in the Social Security Death Index who possessed the first name; Proportion in city = proportion of deceased persons who lived in that particular "Saint" city and possessed that first name; OR = odds ratio.

prone to an alternate explanation based on priming (or a conscious analogue thereof). In particular, the same parents who adore Saint Mary or Saint Louis enough to move a city bearing that Saint's name might also name one of their sons or daughters after the same beloved Saint. Of course, it is not clear why such a priming effect should hold more strongly for female than for male names. Nonetheless, it would be reassuring to see that the results of Study 5 generalized to surnames as well as first names.

As it turns out, all 35 of these Saint names exist as surnames as well as first names (though in much lower frequencies as surnames). Were people disproportionately likely to inhabit Saint cities when their surnames were the same as the names appearing in the city names? Yes. Base-rate calculations indicated that there should have been 82.6 residents whose surnames matched the Saint (first) name after whom their hometown was named. The actual number of matches was 128, which is 55% greater than the chance standard, $\chi^2(1) = 24.97$, $p < .001$.

We also conducted a supplemental analysis of all people whose surname included the word *Saint* (e.g., Mimi de Saint Aubin, Matthew Saint). We then compared (a) the proportion of people in the U.S. whose surname included the word *Saint* with (b) the proportion of people living in any Saint city (e.g., St. Paul, St. Cloud) whose surname included the word *Saint*. Whereas there should have been 242.4 matches on the basis of chance, the actual number of matches was 290, $\chi^2(1) = 9.35$, $p = .003$. Thus, people were disproportionately likely to inhabit a Saint city when their surname included the word Saint. Like the primary analysis involving surnames, this supplemental finding is not susceptible to any alternate explanations involving either unconscious priming or conscious veneration of specific Saints. Like the strong first-name findings we observed in the supplement to Study 4 (the study involving first names such as Florida and Tennessee), the strength of the primary surname matching effect in Study 5 may be grounded in the fact that the surnames we sampled were statistically rare (in this particular case, rare as surnames).

To gain further insight into whether more distinctive names are associated with stronger name letter preferences, we conducted a meta-analysis of our individual results for first names. To be sure that this analysis was based on reliable estimates of effect sizes for a given name, we limited the analyses to name–city combinations that yielded expected frequencies of at least five names (the names appearing in bold in Table 8). Because pilot studies suggested that the distinctiveness effect might apply primarily to men, and because there were only three female name–city combinations that yielded expected values of at least 5.0, we limited this meta-analysis to male names. In this analysis, we simply correlated the effect size (i.e., the odds ratio) associated with each name with the objective frequency of that name (the proportion of Americans having that name). This analysis indicated that the tendency for people to live in cities resembling their first names was notably stronger for the least common first names, $r(10) = -.545$, $p = .034$ (one-tailed). An alternate approach to this analysis would be to categorize each individual participant according to the frequency of his or her name and then examine whether the city–name matching effect was stronger for less common names. It should go without saying that such an analysis would yield a dramatically lower *p* value because the number of observations for that analysis would be the total sample size associated with these 12 names rather than the number 12 (for 12 names).

The findings of Study 5 add some punch to the idea that name-letter preferences influence people's choice of a place in which to live. These findings further suggest that when it comes to first names, name-letter preferences (a) are stronger for women than for men and (b) are stronger for unique as opposed to highly common names. Each of these findings increases our confidence in the conclusion that our findings truly reflect implicit egotism (in the form of behavioral name letter preferences). Taken together, these supplemental findings involving gender and distinctiveness also suggest that there is more to name letter preferences than mere exposure. Finally, the robust surname findings for Study 5 further suggest that the name letter preferences we observed are not merely priming effects in disguise.

Another Systematic Replication

At the risk of boring some readers, it is worth noting that we have conducted several other systematic replications of our name–residence matching effects. For example, in a recent replication, we made use of an exhaustive national telephone directory (the U.S. Telephone & Address Listings Page at Ancestry.com) to focus on exact surname–city-name matches that should be difficult to explain in terms of any obvious confounds. In particular, we consulted census records to identify the five most common surnames that happen to be place names commonly used in city names. These surnames, in order of frequency, were Hill, Park, Beach, Lake, and Rock. People were disproportionately likely to live in cities featuring place words that happened to be their surnames. The observed number of matches in this study (1,351) exceeded the chance value (976) by more than 38%, $p < .001$.

To summarize thus far, Studies 1–5 strongly suggest that people are attracted to places that resemble their names. We have suggested that these preferences constitute examples of implicit egotism. However, advocates of *explicit egotism* might take issue with this explanation. Perhaps people consciously gravitate toward places that remind them of themselves (a possibility that, in some ways, is more intriguing than the explanation we have offered). We believe there is a big difference between being aware of one's behavior ("My name is Paul, and I am moving to St. Paul") and being aware of the basis for one's behavior ("I am doing so because of the positive associations I have about my name"). Nonetheless, the argument that implicit egotism is responsible for the findings of Studies 1–5 would be strengthened by evidence that more subtle self-relevant associations influence where people choose to live. In Study 6 we attempted to gather such evidence by extending our hypotheses to include an alternate implicit preference. Specifically, if people possess positive implicit associations to the numbers in their birthdays (Kitayama & Karasawa, 1997; Miller, Downs, & Prentice, 1998), then it might not be too far-fetched to expect people to gravitate toward cities whose names prominently feature these birthday numbers. For example, people born on March 3rd (03/03) and June 6th (06/06) might be attracted to cities such as Three Rivers, Michigan, and Six Mile, South Carolina, respectively. From a theoretical perspective, support for this prediction would extend our research on the behavioral consequences of implicit egotism to an alternate self-evaluative bias. From a methodological perspective, examining whether people's birthdays influence major life decisions constitutes an ideal natural experiment on implicit egotism. Because the exact date of a person's birth is essentially a random outcome, this date should be uncorrelated with individual differences such as age, gender, and ethnicity.

Study 6

Method

Study 6 made use of the same SSDI records examined in Studies 1, 4, and 5. These records were ideal for the purposes of Study 6 because they allow searches based on (a) decedents' exact date of birth as well as (b) the specific city in which decedents lived at the time of their deaths. Furthermore, this search engine allows comprehensive searches that include one-word portions of a city name. Thus, if one searches for cities named *two*, this search engine will return hits from any U.S. city whose name includes the word *two* (e.g., Two Harbors, Two Oaks). Study 6 focused on all U.S. cities whose names began with the numbers 2–8, inclusive. Typical city names included Two Harbors, Minnesota; Three Forks, Montana; and Five Points, Alabama. Although there were a few cities whose names contained numbers higher than the number 8 (there are no cities, incidentally, containing the word *one*), these cities had extremely small populations, making them uninformative. Moreover, adding them to the analysis does not change our findings. To simplify our analysis and to make certain that our participants would have a preference for only one birthday number, we focused on participants born on the same numbered day and month (02/02, 03/03, 04/04, etc.). Our list of usable birth dates thus ranged from February 2 to August 8. To create the data for Study 6, we created a 7×7 matrix that included every possible combination of the seven birthdays and the seven sets of city names. We filled in the cells for this 7×7 matrix by determining the number of people with each birth date who lived in each set of cities that corresponded to each number. We expected that, on average, people whose birthday numbers corresponded to the prominent number in each city name would be over-represented among the (deceased) residents of that specific city.

Results and Discussion

The complete 7×7 frequency matrix for Study 6 appears in Table 9. As illustrated in Table 9, the observed frequency in each

Table 9
Likelihood of Living in a Specific City as a Function of One's Birthday (Study 6)

	Birthday							
City	February 2	March 3	April 4	May 5	June 6	July 7	August 8	Total
Two	**22 (17.67)**	12	22	16	14	9	24	119
Three	27	**40 (28.58)**	25	22	32	22	30	198
Four	7	6	**11 (7.72)**	10	4	8	6	52
Five	4	2	2	**3 (2.49)**	2	3	2	18
Six	5	4	2	4	**7 (4.04)**	5	1	28
Seven	1	5	3	2	6	**3 (2.99)**	5	25
Eight	6	1	7	10	5	8	**8 (7.05)**	45
Total	72	70	72	67	70	58	76	485

Note. "City" represents the number in a city name that begins with a number (e.g., Two Harbors, Minnesota; Three Oaks, Michigan). For the diagonal frequencies, in boldface type, expected values appear in parentheses.

of the seven diagonal cells exceeded the expected value based on chance pairings. That is, for every possible birthday–city set combination, people were disproportionately likely to have lived in a city whose name prominently featured their birthday number (at least by a very small margin). Whereas the overall percentage of chance matches between birth date and city name should have been 14.5%, the observed percentage of matches was 19.4%, which is about 33% more than the chance value, $\chi^2(1) = 9.13$, $p = .003$. It thus appears that people are attracted to cities whose names activate their positive associations regarding their birthday numbers. Although we obviously do not know how these people would have explained their decision to live in a specific city, it seems extremely unlikely that many of these people set out on a conscious trek for a city whose name reminded them of their birthdays. In light of the nearly random ways in which people come to possess their specific birthdays, it is also difficult to imagine any compelling alternate accounts of these findings.[1]

Thus far, we have shown that the positive associations people have about both the letters in their names and the numbers in their birthdays appear to influence a very important life decision, namely where people choose to spend their lives. In the remaining studies of this report, we focus on another important life decision—what people choose to do for a living. It is worth noting in advance that the universe of possible careers that resemble people's names is dramatically smaller than the universe of possible places of residence that fit this same bill. This fact, combined with the scarcity of public databases that include information about people's names and careers, makes archival studies of implicit egotism and career choice inherently difficult to conduct. Nonetheless, the same logic that dictates that people should prefer to live in places whose names resemble their own names also dictates that people should be attracted to careers whose names resemble their own names.

Because we were unable to locate any large databases that provided records of people's names and careers (for multiple careers), our interest in implicit egotism and career choice necessitated a change in analytic strategy. In the studies that follow, that is, we had to examine one or two careers at a time. We began our assessment of career choices by focusing on whether people's first names predicted whether they were dentists or lawyers. Of course, few people ever make a specific choice between these two particular careers. However, comparing the proportion of people with different first names who choose these two different careers allows for a simple and direct test of our hypothesis

Study 7

Method

We searched for dentists and lawyers by consulting the official Web pages of the American Dental Association (http://www.ada.org/directory/dentistsearchform.html) and the American Bar Association (http://lawyers.martindale.com/aba). These sources proved to be very useful because they provided comprehensive national directories of the official members of these two professional organizations (though they only allowed searches on a state by state basis). Each of these directories also allowed for searches based solely on people's first names, and neither directory placed limits on the number of hits they allowed for a specific search. We began this search by consulting 1990 census records. Using these records, we attempted to identify the four most common male and female first names that shared a minimum of their first three letters with the names of each of these two occupations. However, we had to relax our three-letter criterion from *Law* to *La* for all of the female names (and for three of the four male names) because there were no names that qualified using the stricter criterion. The 16 names we generated in this fashion included the female names Denise, Dena, Denice, Denna, Laura, Lauren, Laurie, and Laverne and the male names Dennis, Denis, Denny, Denver, Lawrence, Larry, Lance, and Laurence. We expected that people with names such as Dennis or Denise would be overrepresented among dentists, and people with names such as Lawrence or Laura would be overrepresented among lawyers. Because the lawyer search engine produced a great number of false alarms involving last or middle as opposed to first names, we carefully cleaned the data generated by this search engine to limit hits to true first name hits (no such problem occurred for the dentist search engine). Finally, to make manageable the task of cleaning the lawyer data, we limited both searches to the eight most populous U.S. states (California, Florida, Illinois, Michigan, New York, Ohio, Pennsylvania, and Texas).

Results and Discussion

The results for women in Study 7 are summarized in the left-hand portion of Table 10. Relative to female lawyers, female dentists were quite a bit more likely to have names that began with the letters *Den*, $\chi^2(1) = 4.72$, $p < .05$. The comparable results for men are summarized in the right-hand portion of Table 10. Though the results for men were also in the expected direction, they fell short of significance, $\chi^2(1) = 2.14$, *ns*. Although we expected that women might show more pronounced name-letter preferences than men, we did not expect men to show such weak effects.[2]

In light of the small effect sizes observed in Study 7, critics might be concerned that these findings were driven by only one or two of the names we sampled or that they were an artifact of a specific comparison between dentists and lawyers. We conducted several analyses to address these concerns, and they all supported the idea that these findings are a product of implicit egotism. For example, in one such analysis, we sampled dentists in all 50 U.S. states and assessed whether dentists were more likely than the average American to possess names such as Dennis, Denis, Denise, or Dena (the two most common male and female names in our lists). In this supplemental analysis, we compared (a) the number of dentists with each of these four specific names with (b) the number of dentists who had the two European American names that were most similar in frequency to each of these specific names. For example, according to 1990 census records, the names

[1] The name–city matching effect observed in Study 6 occurred in a weaker but significant form in an alternate analysis that included participants born on the 2nd through 8th day of any month of the year. This is a very weak test of the name–city matching hypothesis because for 11 out of 12 of the participants in this analysis, the month number associated with their birthday conflicts with the day number associated with their birthday.

[2] Although both of these online directories allowed searches by first name only, the lawyer search directory sometimes returned hits that included the searched-for name when it proved to be a middle name or a surname. When the first name we searched for showed up as a middle name, we included the name on our list because we saw no evidence of any systematic bias in which of our names were first versus middle names. However, we deleted names from our tally when the searched-for name proved to be a surname because we observed that some first names turned up as surnames more often than others. Our results do not differ meaningfully if we exclude all hits that involve middle names.

Table 10
Likelihood of Being a Dentist Versus a Lawyer as a Function of One's First Name (Study 7)

	Women		Men	
Occupation	*Den* names	*La* names	*Den* names	*La* names
Dentist	30 (21.4)	64 (72.6)	247 (229.7)	515 (532.3)
Lawyer	434 (442.6)	1512 (1503.4)	1565 (1582.3)	3685 (3667.7)

Note. For each cell of the design, expected values appear in parentheses. Each name set is collapsed across the four most common names fitting that criterion. The complete set of names used in Study 7 were Denise, Dena, Denice, Denna, Laura, Lauren, Laurie, Laverne, Dennis, Denis, Denny, Denver, Lawrence, Larry, Lance, and Laurence.

Jerry, Dennis, and Walter respectively ranked 39th, 40th, and 41st in frequency for male first names. Taken together, the names Jerry and Walter have an average frequency of 0.416%, compared with a frequency of 0.415% for the name Dennis. Thus, if people named Dennis are more likely than people named Jerry or Walter to work as dentists, this would suggest that people named Dennis do, in fact, gravitate toward dentistry. This is the case. A nationwide search focusing on each of these specific first names revealed 482 dentists named Dennis, 257 dentists named Walter, and 270 dentists named Jerry. The odds ratio corresponding to this effect is 1.83 to 1, $p < .001$. We conducted identical analyses for the names Denis, Denise, and Dena. Although the sample sizes were much smaller for these remaining names, the odds ratios for these names also supported our hypotheses. These odds ratios were 1.75 to 1 for Denis (vs. Vance and Jarrod), 2.50 to 1 for Denise (vs. Beverly and Tammy), and 1.71 to 1 for Dena (vs. Therese and Candy). Incidentally, we did not conduct a comparable set of analyses for lawyers because (a) the lower reliability of the lawyer search engine for first names would have required an extraordinary amount of data cleaning (i.e., removing middle and last names from the results, one case at a time) and (b) the lawyer search engine, unlike the dentist search engine, only allows searches on a state by state basis. Critics with large amounts of time on their hands are invited to conduct these analyses for themselves.

The results of Study 7 thus provide additional evidence for the idea that implicit egotism plays a role in major life decisions. Although the methods used to address this question in Study 7 differed slightly from those used in Studies 1–6, observant readers may have noticed that the supplemental analyses presented in Study 7 are extremely similar to the primary analyses introduced in Study 5 (the "Saints" study). One desirable feature of this approach is that it can be used to make inferences about people's career choices even when one only has access to the names of people working in a single occupation. In Study 8, we made use of this approach to see if people whose first names began with the letters *Geo* would be disproportionately represented among published professional geoscientists.

Study 8

Method

Study 8 was conducted using the bibliographic search tool GeoRef (http://georef.cos.com), which contains highly exhaustive records of scientific publications in the geosciences (e.g., geology, geophysics, geochemistry). Unlike most other widely used bibliographic search tools (e.g., PsycINFO), this search tool generates individual researcher names rather than individual citations (papers). This is important because search tools that generate individual citations will yield many redundant hits. In Study 8, we examined whether people named George or Geoffrey (the two most common American first names beginning with *Geo*) were disproportionately likely to be published in the geosciences. We did not include additional names in the list because there simply are no such usable names. We consulted 1990 census data to identify the four European American male first names that were most similar in overall frequency to these two target names (using an expanded version of the procedure described in the supplemental portion of Study 7). The control names for George were Daniel, Kenneth, Donald, and Mark. The control names for Geoffrey were Pete, Randolph, Jonathon, and Bennie. Because this search tool does not allow searches by first name only, we had to specify a last name for each search. We selected the eight most common U.S. surnames and paired each of the eight surnames with each set of five first names. Doing so had the additional advantage of controlling, in part, for potential ethnic confounds. In the interest of brevity we collapsed (a) across the two target names (George and Geoffrey), (b) across the eight control names, and (c) across the eight surnames.

Results and Discussion

On the basis of the observed frequencies for the eight control names, there should have been 65.5 geoscientists named George or Geoffrey in Study 8. The observed number was 93, or about 42% more than the expected value, $\chi^2(1) = 4.58$, $p < .05$. To assess the generality of this effect, we conducted an identical analysis for the three most common male first names that began with the letters *Ge* (recall that we exhausted the entire list of names beginning with *Geo*). Although the results for these three names (Gerald, Gene, and Gerard) were all in the predicted direction, the sample size for each of these names was very small. For instance, the base-rate (control name) calculations for Gerard indicated that there should have been a total of 1.75 geoscientists named Gerard in this database. In reality there were 4. Thus, this name yielded an impressive effect size and an equally unimpressive sample size.

In light of this problem, we conducted an additional analysis based on first initials rather than first names (while still using the eight most common U.S. surnames). First, we consulted 1990 census data for male first names to determine which letter (i.e., which initial) provided the closest frequency match for the letter *G*. This proved to be the letter *T*. In 1990, about 8.2% of all American men had first names that began with *G*, and about 8.9% had first names that began with *T*. Because the large majority of the scientists listed in the GeoRef index are male, the census estimates for male names probably provide the best estimate of the proportion of geoscientists who should be expected to have first names that begin with *G* versus *T*. Nonetheless, we examined census data for female first names as well. The percentage of female names beginning with *G* was 1.8%, and the percentage beginning with *T* was 1.4%. As a stringent indicator of expected frequencies for the initials *G* and *T*, we thus weighted the male and female percentages equally. On the basis of this estimate, 5.07% and 5.24% of all American first names should begin with *G* and *T*, respectively.

To be certain that these same values held for adults with the same eight highly common surnames that were included in Study 9, we consulted the same WorldPages telephone directory we used in Studies 2 and 3. We then randomly sampled three U.S.

states (Ohio, Massachusetts, and Minnesota), searching each state for people with each of the eight surnames and each of the two initials (*G* and *T*). This search yielded totals that corresponded almost perfectly with the estimates based on census data. Specifically, collapsing across these three states (and the eight surnames), there were 12,510 people whose first initial was *G* and 12,995 people whose first initial was *T*. It thus seems very safe to assume that among Americans with the eight common surnames sampled in Study 9, *G* is a slightly less common first initial than is *T*. We thus averaged these two estimates (census and phone book records) to determine our expected values for geoscientists having these two initials. Relative to the base rates for Americans in general, these geoscientists were much more likely to have first names that began with *G* as opposed to *T* (at a rate of 177 to 128), $\chi^2(1) = 9.85$, $p < .001$. Because the standard of comparison in Study 8 was people with exactly the same surnames as these geoscientists, it is more difficult than it would be otherwise to attribute this finding to an ethnic confound. In addition, because this effect involved people's first initials rather than the first three letters in people's names, it seems unlikely that these people would have realized the connection between their names and their careers. In short, no matter how we analyzed these data, we found that people whose first names begin with *G*, *Ge*, or *Geo* gravitated toward the geosciences.

Although the results of Study 8 strengthen our confidence in the findings of Study 7, an obvious limitation of Studies 7 and 8 is that, collectively, they focus on only three specific career choices. Do people's names have implications for other kinds of careers? In an effort to address this question, we conducted Study 9. In this study, we examined whether people's first or last initials were associated with whether they worked in the hardware business or the roofing business.

Study 9

Method

In Study 9 we identified owners of hardware stores versus roofing companies whose first or last names began with the letters *H* versus *R*. We did so by using Yahoo's Internet Yellow Pages (http://www.yp.yahoo.com), a search directory that yields alphabetically sorted listings for specific businesses or companies in specific U.S. cities. For example, a single search using this directory could be conducted to produce an alphabetical listing of all of the hardware stores in Buffalo, New York. A second search could then be conducted to identify all of the roofing companies in the same city. We searched for hardware stores and roofing companies in the 20 largest U.S. cities (on the basis of 1990 census data). The names of these cities appear in Table 11. Because we did not anticipate a large number of hits for these searches, we collapsed first and last initials into a single analysis and pooled our results across the 20 cities. We searched only under hits that appeared under *H* and *R* in the alphabetical lists, and we were careful to exclude potential hits that appeared to be the names of streets, towns, or suburbs (e.g., Hollywood Hardware). Examples of hits that we treated as valid indicators of names include HL Campbell Hardware, Harris Hardware, Rashid's Roofing, H & T Roofing, and Ray & Roy's Roofing (counted once). Examples of hits that we excluded from the search include Hardware Mart, Highland Hardware (on Highland Avenue), and Roof Roofing (because a phone call to the owner indicated that his company was named after his barking dog). We coded ambiguous hits (Hyd-Mech Hardware, Hec Roofing) as half a hit and rounded downward to the nearest whole number in each city (thus it took two ambiguous hits in the same category in a given city to be counted). There were very few of these ambiguous hits, and our results do not change if we exclude them from the analysis. Finally, because almost all of these businesses appeared to be owned by men, we did not code or analyze for gender.

Table 11
The Twenty Largest U.S. Cities in 1990 (the Search Pool for Study 9)

Rank	City	Rank	City
1.	New York, NY	11.	San Jose, CA
2.	Los Angeles, CA	12.	Baltimore, MD
3.	Chicago, IL	13.	Indianapolis, IN
4.	Houston, TX	14.	San Francisco, CA
5.	Philadelphia, PA	15.	Jacksonville, FL
6.	San Diego, CA	16.	Columbus, OH
7.	Detroit, MI	17.	Milwaukee, WI
8.	Dallas, TX	18.	Memphis, TN
9.	Phoenix, AZ	19.	Washington, DC
10.	San Antonio, TX	20.	Boston, MA

Results and Discussion

As we expected, people's initials were good predictors of whether they worked in roofing or hardware. As shown in the upper half of Table 12, hardware store owners were about 80% more likely to have names beginning with the letter *H* as compared with *R*. In contrast, roofers showed the reverse pattern. They were about 70% more likely to have names beginning with *R* as compared with *H*. This association between people's initials and their occupations was highly significant, $\chi^2(1) = 10.58$, $p < .001$. Because we tabulated these data on a city-by-city basis, it was easy to determine whether the roofers in a specific city were more likely than the hardware store owners in that same city to have names that began with the letter *R*. This was the case in 17 of the 20 cities.

Although the results of Study 9 supported our predictions, an alternate explanation for these results is based on the fact that we were not able to search for these two businesses by the actual names of the business owners. Instead, we searched businesses whose names began with *H* or *R* and then examined these hits to identify those that involved people's names. It is thus plausible that an equal number of people with the initials *H* and *R* go into hardware and roofing respectively. Instead of reflecting an attraction to careers that resemble one's name, the disproportionate number of matches we observed between people's initials and their businesses could merely reflect people's preference for alliteration. For example, if Hector Ramirez opened up both a hardware store and a roofing company, it is plausible that he might choose to name his two businesses Hector's Hardware and Ramirez's Roofing. In short, people's love of alliteration rather than their love for themselves might be the real reason behind these findings. Of course, if people have a powerful preference for alliteration, they should take advantage of other opportunities to provide their places of employment with highly alliterative labels. We tested this alternate hypothesis by conducting three supplemental analyses to see if people gravitated toward alliteration in naming their businesses. We began by searching for hardware stores and roofing companies in the eight largest U.S. cities that began with the letters *H* and *R* (e.g., Houston, Honolulu, Raleigh, Rochester). We then focused on whether people were more likely to name their busi-

nesses after the city in which they lived when it lead to alliteration (e.g., "Honolulu Hardware") than when it did not ("Honolulu Roofing"). Because very few people gave their businesses the names of the cities in which they lived, we supplemented this analysis by examining whether the participants in our 20 original cities ever named their businesses after the streets on which they were located (e.g., Halsted Hardware on South Halsted Street). Neither of these analyses yielded any support for the alliteration hypothesis. In fact, the trends in both analyses were weakly in a direction opposite that predicted by the alliteration hypothesis. Finally, as a third test of the alliteration hypothesis, we recoded the business names from our original 20-city search pool by focusing on business names that began with the letters *H* versus *R* but did not designate people's names (e.g., Handyman Hardware, Hilltop Roofing, Regency Hardware, Rainbow Roofing). The results of this analysis appear in Table 13. Though weakly in the direction predicted by the alliteration hypothesis, these results fell well short of significance, $\chi^2(1) = 0.39$, $p = .535$. In short, a variety of alternate analyses yielded little support for the alliteration hypothesis. Nonetheless, it would be useful to devise a test of implicit egotism and career choices that more convincingly ruled out this alternate explanation. To do this, and to provide a replication of our career findings that applied to women, we conducted Study 10.[3]

Table 13
Likelihood of Naming a Hardware Store or a Roofing Company Using Non-Self-Referent Words Beginning With H *Versus* R *(Study 9)*

	First or last initial	
Business	H	R
Hardware	27 (23.85)	22 (22.15)
Roofing	32 (32.15)	33 (29.85)

Note. Expected frequencies appear in parentheses.

Study 10

Method

The design of Study 10 was very similar to the design of Study 9. Like Study 9, for example, Study 10 made use of an electronic telephone directory (http://www.switchboard.com/bin/cgidir.dll). This directory proved to be ideal for Study 10 because it allows searches using any number of consecutive words or letters that begin a business name. For example, a search for "Kathy's K" might yield informative hits such as "Kathy's Kite Shop" or "Kathy's Kayak Kompany." Thus, after (a) systematically choosing a set of names and (b) adding an apostrophe, an *s*, and a single follow-up letter to each name, a researcher can log all of the hits returned in such searches and then code the hits for whether they constitute valid business names of interest. The flexibility of this search tool also makes it possible to control directly rather than indirectly for alliteration. We did so in Study 10 by capitalizing on the fact that some female first names have the same initial vowel sound despite the fact that they begin with different letters. In particular, quite a few female names that begin with the *sh* sound begin with the letters *Ch* rather than *Sh*. As a concrete example, if Sheryl is more likely than Cheryl to own a seashell shop, it is difficult to crack this fact up to alliteration. In Study 10, we consulted 1990 census data and identified the four most common female first names that began with the letter pairs *Ch* and *Sh*. Of course, we skipped names that did not fit our criterion for pronunciation (e.g., Christine). The eight names we generated in this fashion were Cheryl, Charlotte, Charlene, Cheri, Shirley, Sharon, Sherry, and Shannon. Thus for instance, we searched for businesses beginning "Cheryl's C" as well as for those beginning "Cheryl's S."

Two coders were trained to code each hit in this set of searches for whether it truly constituted a business that began with the letter *S* or *C*. Hits involving adjectives that began with *S* or *C* (e.g., Cheryl's Creative Arts, Sherry's Superb Diner) were coded as false alarms. However, when a business name following an adjective constituted a true hit (e.g., Charlotte's Classic Catering, Cheri's Super Subs) the adjective was ignored, and it was counted as a regular hit. Along similar lines, in cases in which an adjective was an inherent part of the product or service being sold (e.g., Charlotte's Classical Music) this was also counted as a true hit. Finally, because the owners of beauty salons often gave their businesses names that began with *S* (Sherry's Salon, Shannon's Snip & Shear) as well as *C* (Cheri's Clip n Curl, Charlene's Classy Cuts), entries that appeared to refer to beauty salons were also coded as nonhits. Otherwise, supportive findings might reflect name letter *labeling effects* rather than name letter career choices (see Mirenberg & Pelham, 2001). Typical examples of business names that were counted as hits included Café, Candles, Catering, Clothes Closet, Sewing, Shoes, Snack Shop, and Sweets. Finally, identical hits produced in the same city or area code were counted only once—to avoid counting chain stores as multiple hits. Coders were kept blind to the names of business owners by replacing the names with arbitrary code numbers. Interrater agreement was high ($\alpha = .89$). Results were averaged across the two raters, rounded to the nearest whole number, and summed across each of the four female first names (within each of the two categories of business names).

Table 12
Likelihood of Owning a Hardware Store or a Roofing Company as a Function of One's First or Last Initial (Study 9)

	First or last initial	
Business	H	R
Hardware	42 (27.56)	26 (31.44)
Roofing	45 (50.44)	76 (57.56)

Note. Expected frequencies appear in parentheses. Because of the very small number of women in this sample, we did not break down the results by gender.

Results and Discussion

The results of Study 10 are summarized in Table 14. As shown in the left-hand column of Table 14, about 23% of women whose names began with *Ch* appeared to own businesses beginning with the letter *S*. In comparison, about 39% of women whose names

[3] We replicated the findings of Study 10 in numerous informal pilot studies as well as in two highly systematic studies, one involving first names and one involving surnames. For example, in one study involving surnames we arbitrarily chose computer shops and travel agencies as the target businesses and then generated owner names by sampling the four most common American surnames beginning with the letters *C* (Clark, Carter, Campbell, and Collins) and *T* (Taylor, Thomas, Thompson, and Turner). People whose surnames began with *C* were slightly more likely to be in the computer business (e.g., Campbell's Computer Repair), and people whose surnames began with *T* were quite a bit more likely to be in the travel business (e.g., Thompson's Travel).

Table 14
Likelihood of Owning a Business Beginning With the Letter C *Versus* S *as a Function of One's First Name (Study 10)*

Initial letter of business name	First name	
	Ch names	*Sh* names
C	55 (46.25)	145 (153.75)
S	16 (24.75)	91 (82.25)

Note. Expected frequencies appear in parentheses.

began with *Sh* appeared to own such businesses. This association between name and business type was significant, $\chi^2(1) = 6.17$, $p = .013$. Thus, even when we eliminated alliteration as an alternate account for our findings, we found that the women in Study 10 gravitated toward businesses that began with the same letter as their first names. We realize that there could be unforeseen risks associated with our use of telephone listings. For example, just as it is possible that some people who endorse positive statements on self-esteem scales do not possess high self-esteem, it is possible that some of these businesses sampled in Study 10 were not truly owned by the women whose names were featured in their titles. In spite of their potential limitations, however, we believe that Studies 9 and 10 provide a useful complement to the more methodologically rigorous Studies 7 and 8. In other words, we feel that the most parsimonious explanation for all of our studies involving careers is that implicit egotism plays a role in a wide range of career choices. Nonetheless, it should go without saying that, given the limited amount of data we were able to amass regarding career choices, our confidence regarding implicit egotism and career choices is much lower than our confidence regarding implicit egotism and people's choice of a place in which to live. At a minimum, future studies should examine the most likely moderators of these findings. Like our findings regarding where people live, for example, our findings regarding careers should be moderated by gender as well as by the distinctiveness of people's names.

General Discussion

The present studies provide some novel insights into the role of the self-concept in major life decisions. In particular, the positive, and presumably unconscious, associations people have about themselves seem to influence at least two major life decisions: where people choose to live and how people choose to make a living. In light of these findings, critics of research on implicit social cognition would be hard-pressed to argue that implicit self-concept processes have no consequences for important decisions. Moreover, although our research on implicit egotism is in its early stages, we have already uncovered additional evidence for the consequences of implicit egotism. For example, we recently found that people are attracted to other people whose names resemble their own (Pelham, Jones, Mirenberg, & Carvallo, 2002; Jones & Pelham, 2001). For example, Jones and Pelham (2001) found that people's contributions to political election campaigns were influenced by the names of Presidential candidates. More specifically, during the 2000 presidential campaign, people whose last names began with *B* and *G* were more likely to contribute to the election funds of Bush and Gore, respectively.

How Representative Are the Present Findings?

Taken as a whole, we feel that our findings provide solid evidence for the existence of implicit egotism. In contrast to this view, avid fans of random sampling might argue that it is difficult to place great confidence in the present findings. From this perspective, researchers who fail to use random sampling have no assurances that their findings apply to the general population of people about whom they would presumably like to make inferences. Although we sampled names systematically in this research, we obviously did not sample them randomly. From our perspective, random sampling is a methodological tool that, like any other tool, is well suited to some problems and poorly suited to others. Applying this logic to the present research, one would have to randomly sample an extraordinarily large number of people in the hopes of happening across a sizable number of people with surnames such as Califano or Texada. However, it is people with precisely such names who provided the ideal tests of our hypotheses (see Mook, 1983, for related arguments). Readers who are concerned about whether our results apply to people in general might be happy to learn that when it comes to studies of implicit egotism and interpersonal attraction, we have been able to use truly exhaustive sampling techniques. For example, in a study of implicit egotism and marriage, Pelham et al. (2002) identified every woman who gave birth to a baby in the state of Texas in 1926. As a group, these women were married to men who shared their (maiden) surname initials at a rate that exceeded chance pairing by more than 40%. Moreover, because this effect also held strongly for people with Latino surnames, this surname-matching effect cannot be attributed to ethnic matching. We observed this same finding in two large samples of rural Southerners (taken from entire counties in Georgia and Florida), in a set of exhaustive, statewide California mortality records, and in exhaustive sets of statewide marriage records from both Georgia and Alabama. In fact, we have yet to locate a large sample of marriage records in which we did not observe this effect. In our larger samples, we also observed a small but highly significant first name matching effect that paralleled the much stronger surname matching effect. Moreover, unlike the present studies, which focused mainly on contemporary samples of European Americans, our studies of relationship choices yielded support for implicit egotism in a wide variety of cultural and ethnic groups (e.g., rural Southerners, Californians, Latinos) and across historical periods ranging from the early 1800s to the turn of the 21st century.

Of course, we are not arguing that concerns regarding sampling (including random sampling) are completely irrelevant to this work. For example, a polite take on one reviewer's critique of this article is that even the most well-intentioned researcher could have conducted a very large number of archival studies, selectively presenting only the studies that happen to support his or her hypothesis. Of course, there is nothing to prevent laboratory experimenters or survey researchers from doing similar things in their research (Rosenthal, 1963). Nonetheless, the relative ease of conducting archival research should probably exacerbate this particular concern. There are several reasons that we do not think this concern is applicable to the present report. First, we always chose

our sampling techniques on an a priori basis. Second, we sampled systematically and often exhaustively. Third, we repeatedly replicated our primary findings. Fourth, in several studies we observed support for theoretically derived moderators of our basic findings. Finally, for what it is worth, we have never observed a meaningful reversal of our effect. The numerous pilot studies that we do not report here consisted of a great deal of supportive and highly significant (albeit typically less systematic) studies, combined with a few directionally supportive but nonsignificant replications (typically involving relatively small samples). From a meta-analytic perspective, we feel very confident that we have identified a meaningful and replicable effect.

The Potency of the Self-Concept

By suggesting that implicit egotism is an important determinant of what people like, the findings of this report also attest to the pervasiveness and potency of the self-concept. It is well established that people's consciously reported beliefs about themselves influence a wide variety of important behaviors (e.g., how people explain their successes and failures, how long people persist on a difficult task; Anderson, 1984; Bandura, 1982; Taylor & Brown, 1987). However, we suspect that existing research has only begun to scratch the surface of how people's implicit associations about themselves influence their thoughts, feelings, and behaviors (Greenwald & Banaji, 1995). By suggesting that people's associations about the letters in their own names influence major life decisions, the present results thus suggest the intriguing possibility that many of the routes through which the self-concept influences behavior may be unconscious or implicit (Spalding & Hardin, 1999).

The Potency of the Cognitive Unconscious

The findings of this report also attest to the validity and importance of a growing body of research on implicit social cognition. In the past two decades, an increasing number of studies have begun to suggest that a great deal of self-regulation and social information processing occurs unconsciously (Banaji & Hardin, 1996; Bargh, Chen, & Burrows, 1996; Devine, 1989; Dijksterhuis & van Knippenberg, 1998; Epstein, 1990, 1994; Fazio, Jackson, Dunton, & Williams, 1995; Greenwald & Banaji, 1995; Higgins, Rholes, & Jones, 1977; Kihlstrom, 1987; Pyszczynski et al., 1999; Wegner, 1994; Wilson, Lindsey, & Schooler, 2000). Some of the most intriguing studies of implicit social cognition suggest that people's behavior is not always under their own control. For example, Bargh et al. (1996) found that college students who had been subliminally primed to think about old people walked more slowly than usual. Along the same lines, Dijksterhuis and van Knippenberg (1998) found that people who had recently been primed to think about soccer hooligans rather than college professors answered fewer questions correctly on an intellectual task. Priming effects such as these appear to be most pronounced when people are unaware of the priming stimulus (either because it was presented subliminally or because people have had time to forget about it; Bargh, 1992; Strack, Schwarz, Bless, Kubler, & Wanke, 1993). At the same time, another potent lesson of recent research on implicit social cognition is that unconscious processes sometimes "have their way" in people's thoughts and behaviors even when people consciously try to override them (Wegner, 1994; Wegner & Bargh, 1998; Wegner, Ansfield, & Pilloff, 1998).

As intriguing as these recent laboratory findings are, critics could argue that they merely represent experimental curiosities that have no consequences for important daily decisions. It would be comforting to think so because the possibility that unconscious processes influence important day-to-day decisions can be as disturbing as it is intriguing. In other words, the idea that much of what we think, feel, and do is unconsciously determined raises doubts about some of our most cherished assumptions concerning personal choice and free will. The current findings add fuel to this epistemological flame by suggesting that even major life decisions are not immune to the kinds of unconscious biases that have been repeatedly demonstrated in the laboratory. If decisions as important as where we live or whom we fall in love with are under the control of factors as subtle and capricious as whether our parents named us Denise or Laura, then this suggests that the feelings of control and personal choice that we experience when we make major life decisions are partly illusory (Dennett, 1991; Gilbert, 1993; Nisbett & Wilson, 1977; Skinner, 1971; Wegner & Bargh, 1998).

Of course, the findings of this report only suggest that unconscious processes influence major life decisions if we assume that our participants were typically unaware of the basis of the major life decisions we examined. Though we obviously have no way of knowing what people were thinking when they made these major life decisions, we think that in the case of the large majority of our findings, people were extremely unlikely to have been aware of the basis for their decisions. Statements such as "I became a lawyer because of the positive associations I have about the letter *L*," or "I took a job in Buffalo because my first name starts with *B*" simply do not appear in the list of culturally accepted truisms for why people make important life decisions (Nisbett & Wilson, 1977). Although we consider it well established that people sometimes know exactly why they do what they do (Quattrone, 1985), the research presented herein suggests that there are also times when people are completely clueless. In support of the idea that name letter preferences are truly implicit, Koole, Dijksterhuis, and van Knippenberg (2001) recently found that name-letter preferences disappeared when people were asked to think carefully about their reasons for liking particular letters. Of course, this is one of the signatures of implicit social cognition. It is often disrupted by conscious information processing (Greenwald & Banaji, 1995; Wilson & Schooler, 1991).

Having said this, we hasten to add that making major life decisions on the basis of implicit egotism is not necessarily irrational. If people feel good when they are exposed to the letters that appear in their own names, then there may be an important sense in which it is highly rational for people to succumb to what Nuttin (1985) called "narcissism without gestalt awareness." Whereas the mythological Narcissus was so pathologically drawn to his own reflection that it led to his downfall, the more subtle pleasures that people derive from exposing themselves to the letters in their own names seem less likely to lead to self-destruction. As Woody Allen once noted, it may be unduly harsh to criticize people for engaging in acts of self-love. Specifically, Allen noted, "Don't knock masturbation; it's sex with someone I love." To paraphrase Allen, why should we be so critical of the particular form of narcissism identified in this research? From this perspective, falling prey to

implicit egotism merely consists of being attracted to that which reminds us of the one person most of us love most dearly.

There is also some empirical reason to believe that people are likely to be highly satisfied with the judgments and decisions that they make on the basis of automatic affective associations. In particular, Wilson and Schooler (1991) asked some participants to think carefully about the reasons for decisions that they would normally be expected to make on the basis of their intuitions or "gut feelings." For example, in one study they asked some participants to think carefully about their reasons for liking or disliking a variety of different jams. Wilson and Schooler found that introspection about reasons typically compromised the quality of people's decisions. In one study, jam tasters who thought carefully about the reasons for their preferences agreed less than usual with expert jam tasters. In another study, students who thought carefully about reasons before choosing specific classes were later less satisfied with these classes. These findings suggest that it would be unwise to equate decisions based on implicit associations with irrational or ineffective judgments. If decisions make people feel good in the long run, then it would be best to regard these decisions as rational.

Implicit Egotism or Mere Exposure?

Just as we have assumed that the findings of this report reflect implicit processes, we have also assumed that they constitute a form of egotism—that is, a bias based on people's positive associations about the self. To our knowledge, there is only one competing theory that might seem to account for the findings in this report. In particular, just as Zajonc's (1968) mere exposure effect is loosely consistent with many of Nuttin's original laboratory findings, it is also loosely consistent with the present findings. There can be little doubt, that is, that people are disproportionately exposed to the letters that appear in their own names. At the same time, given the enormous amount of exposure that fluent readers have to all the letters in the alphabet, it seems clear that most people are exposed to highly common letters of the alphabet (e.g., *E*, *S*) much more often than they are exposed to the letters in their own specific names. Nonetheless, the preference that most people have for the letters that appear in their own names appears to be quite a bit more pronounced than the preference that most people have for the most common letters in their own alphabets (Nuttin, 1987; Hoorens & Nuttin, 1993). In addition, and in keeping with the findings of Kitayama and Karasawa (1997), our findings suggested that when it came to people's first names, name letter effects were stronger for women than for men (see also Mirenberg & Pelham, 2001, who found that this gender difference is reversed for people's surnames). This finding, too, suggests that there is more to the name letter effect than mere exposure. Of course, our finding that implicit egotism is stronger (at least among men) for people with less common names also suggests that there is more to implicit egotism than mere exposure.

Finally, more definitive evidence that name letter effects may constitute a form of self-enhancement comes from a recent study by Jones, Pelham, Mirenberg, and Hetts (2002). Jones et al. assessed participants' global self-esteem and then exposed some participants to a self-concept threat (writing about a personal flaw). After being exposed to this threat, participants who were high in global self-esteem displayed particularly pronounced name letter preferences. Moreover, in each of two nonthreatening control conditions, there was no association at all between people's self-esteem and their name letter preferences. If name letter effects were simply mere exposure effects in disguise, there is no reason that they should become more pronounced for people high in self-esteem under self-threatening conditions. Koole, Smeets, van Knippenberg, and Dijksterhuis (1999) also found that name letter preferences are sensitive to psychological threat manipulations. Koole et al. found that people's liking for their initials was increased when people were allowed to engage in self-affirmation after a failure manipulation (presumably, being allowed to self-affirm is the rough experimental equivalent of being chronically high in self-esteem). Like Jones et al.'s findings, Koole et al.'s findings suggest that there is more to the name letter effect than mere exposure. Although we think it is likely that mere exposure plays some role in people's name letter preferences, we believe that implicit egotism provides the most parsimonious explanation of the total body of research on the name letter effect.

Other Likely Moderators of Implicit Egotism

In addition to gender and the distinctiveness of people's names, it seems likely that several other important social and cognitive factors might moderate the strength of people's behavioral name letter preferences. One likely moderator is suggested by research on self-verification (Swann, 1987, 1996; Swann, Pelham, & Krull, 1988). Self-verification theory is grounded in the assumption that some people harbor well-developed negative thoughts and associations about the self. From this perspective, the reason that we observed supportive findings in this research is that the large majority of people happen to possess positive associations about themselves. Thus, most people should be attracted to people, places, and things that remind them of themselves. However, when it comes to the minority of people who possess truly negative associations about themselves, it is conceivable that these people might actually steer away from stimuli that remind them of themselves (but cf. Swann, Hixon, Stein-Seroussi, & Gilbert, 1990). Clearly, this would be an interesting direction for future research. In addition, even if one assumes that all people possess predominantly positive associations about themselves, this does not guarantee that people will always gravitate toward people, places, and things that resemble their names. After all, the people, places, and things to which people could conceivably gravitate often have an inherent (or conditioned) valence of their own. A great deal of research in implicit social cognition (e.g., Fazio et al., 1987, 1995; Greenwald, McGhee, & Schwartz, 1998) suggests, albeit indirectly, that people who have positive associations about the self might be less attracted than usual to negative stimuli that happen to resemble their names. We thus suspect, for example, that behavioral name letter preferences would be stronger than usual for especially desirable places in which to live, for more prestigious careers, and for more attractive or successful people. Hypotheses such as these await future scrutiny. As a hypothetical example, a person named Kruglinski should be especially interested in the writings of a famous philosopher named Kierkegaard. However, unless this person happened to possess unusually conservative political views, we would not expect this person to be particularly attracted to the philosophy of the Ku Klux Klan.

Summary

The findings of this report stand in sharp contrast to many of the assumptions that both scientists and lay people have typically made about major life decisions. For example, these findings raise serious questions about whether people are fully in control of their own behavior. Nonetheless, the idea that people make major life decisions on the basis of unconscious decision rules does not necessarily mean that people are irrational. Instead, the specific form of implicit egotism identified in this research may represent an unconscious route through which people create social worlds that typically make them feel good. Such speculations aside, the most important implications of these studies may be the most obvious: there may be much more in a name than most people realize. To paraphrase an anonymous author of tongue twisters, this research offers some new insights into why some people might find it more satisfying than others to sell seashells by the seashore.

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