

The Age of Aidans: Cognitive Underpinnings of a New Trend in English Boys' Names

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Several sources have recently reported a trend in North American English boys' names. According to this trend, a disproportionate number of boys' names contain a final syllabic nasal. This paper presents two studies that investigate this observation systematically. A corpus linguistic study of the most popular names in Ontario and the USA revealed that around 40% of English boys' names fit this pattern, which has been called "the Age of Aidans". The second study was a lexical decision task. It was modeled after previous research on sound symbolism (phonosemantics). This experiment demonstrated that speakers preferred pseudo-names for boys that fit the "Age of Aidans" pattern. Taken together, the two studies suggest that final syllabic nasals can be compared to phonesthemes. Current North American speakers of English may perceive disyllabic names ending in syllabic nasals as "good" boys' names.

KEYWORDS English boys' names, sound symbolism, corpus linguistics, lexical decision task

Introduction

In 2005, Laura Wattenberg of *babynamewizard.com* began reporting on a trend in English naming practices, which she called "The Age of Aidans". She pointed out that there was a pervasive pattern of boys' names in North America with disyllabic names ending in "n". In 2013, *New York Times* reporter Andrew Gelman followed up on Wattenberg's observations and noted that 36% of boys' names (in 2013) end in "n" (Gelman 2013). In 2014, data analyst David Taylor of *proofreader.com* charted what he called "the meteoric rise of boys" names

TABLE 1
Top 10 Boys' Names by Country for 2016

Canada		USA	
*Liam	/lijm/	*Jackson	/dʒæksn/
*William	/wɪljm/	*Aidan	/ejdn/
Noah		Lucas	
*Benjamin	/bɛndʒəm/	*Liam	/lijm/
Jacob		Noah	
*Logan	/lowgn/	*Ethan	/ijθn/
*Nathan	/nejθn/	*Mason	/mejsn/
Oliver		*Caiden	/kejdn/
Lucas		Oliver	
*Ethan	/ijθn/	Elijah	

ending in ‘n’ from 1880–2014 and compared it to every other letter in English (Taylor 2014). He then created a GIF (Graphics Interchange Format) to show this striking change. This GIF generated a lot of attention online and soon it was widely reported that 40% of boys’ names end with “n” (see, for example, *DailyMail* 2014; Garber 2014; Gonzalez 2014; Lee 2009).

The data suggest that, linguistically, Wattenberg’s original generalization of the phenomenon (disyllabic names ending in “n”) was more informative than the simpler “ends in “n” pattern that reporting eventually grabbed hold of. Indeed, what Wattenberg seems to have noticed is that the generalization does not hold for names like *John* or *Dan*, but does hold for names like *Aidan*, *Jayden*, *Gavin*, and *Jackson*. The pattern seems to hold for only those names that end in a syllabic /n/. A more precise generalization of “The Age of Aidans” pattern suggests that the phenomenon in question is an increase in boys’ names that end in an unstressed syllabic nasal. The list in Table 1 shows that six of the top ten boys’ names fit this pattern in 2016 (both in Canada and the USA; BabyCenter 2016). Note that this is not an overlap of tokens but of types (only two names of the six are shared on the lists).

The purpose of this study is twofold. First, we set out to methodically examine relevant naming practices over recent years. Has it indeed become more common to name babies with names that end in syllabic /n/? If so, is this true specifically for baby boys and not girls? Second, we sought to determine whether this tendency could be classified as (or compared to) sound symbolism (see Magnus 2001; Ohala et al 1997; Jakobson and Waugh 2011; Hinton et al 2006). That is, do current speakers of North American English think that disyllabic words ending in syllabic /n/ sound like good boys’ names?

To answer the first set of research questions, we conducted a corpus linguistic study of popular boys’ names in Ontario and the United States (to proxy Anglophone North America) in five-year intervals since 2000, and compared these names to older data (Service Ontario 2008; Statistics Canada 2012; US Social Security Administration 2016). We discovered that in 2015, roughly 40% of English boys’ names in North America ended in syllabic nasals, and that the proportion of names that fit this pattern has in fact been steadily increasing.

Conversely, we found that the proportion of girls' names that fit this pattern has been decreasing (since 2000).

To answer the second set of research questions, we performed an experiment involving a lexical decision task modeled after the task Magnus (2001) used to investigate sound symbolism. Here we found a significant effect where subjects preferred non-words with final unstressed syllabic nasals as potential boys' names over other non-words. This suggests that the pattern of final unstressed syllabic nasals may be recognized as some type of sound symbolism associated in particular with boys' names: disyllabic words ending in syllabic nasals may "sound" like good boys' names.

This paper is organized as follows. Section 1 details the corpus linguistic study we conducted to verify the existence of the "Age of Aidans" naming pattern. Section 2 presents our lexical decision task experiment. Section 3 discusses the results of both experiments and offers possible preliminary explanations for the emergence of the pattern.

Corpus linguistic study

For the purpose of this project, we define the "Age of Aidans" pattern (henceforth AA) as names ending with unstressed syllabic nasals.¹ The first task of this project is to identify the scope of the AA pattern in contemporary English in North America. The second is to determine whether the AA tendency is a recent change. To confirm the presence and magnitude of the AA pattern, we performed a corpus study on name databases in the United States and Ontario.

Since the Government of Canada does not keep records of name data across the entire country, we used data from the Government of Ontario (GO) to represent Canadian English. Our participants for the lexical decision task described in part two were assumed to be largely Ontario English speakers because they were Carleton University undergraduate students. We therefore assumed that this database is the best database to proxy our speakers. We believed GO would be an appropriate proxy since nearly 40% of Canada's population lives in Ontario (Government of Canada 2008). We also collected name data from the United States through the Social Security Administration (SSA). This database records all naming practices across the United States. So this data source so in addition to the Ontario database made for a reasonable proxy of North American English speakers.

We limited the scope of the corpus search to the 200 most widely used names for each sex, for a small selection of years. Because of the variability of spelling in English naming practices (e.g., the name *Jayden* may be spelled *Jaiden*, *Jaden*, *Jaidon*, *Jaydan*), we then controlled for spelling variation in names. For example, if 31,000 boys were named *Jackson* in a particular year and another 8,000 were named *Jaxson* that year, the name /dʒæksn/ as listed as having a combined 39,000 instances.

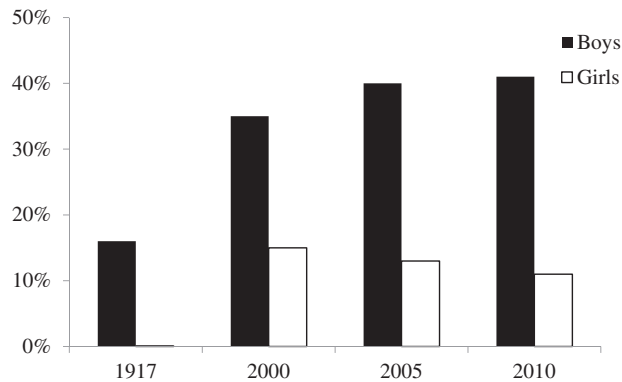


FIGURE 1
Ontario names fitting AA pattern

We collected data from the SSA database for two time spans: 2000–2009 and 2010–2015. We also collected SSA data for the span of 1910–1915 as a historical point of reference. We collected GO data from three different years: 2000, 2005, and 2010. Again, we also collected the GO data from 1915 as a historical point of reference.

Results

We found that a large proportion of boys' names fit the AA pattern in contemporary North American English while a smaller proportion of girls' names did. Commensurate with the reporting on the naming trend, we also found that an increasingly large proportion of boys' names in North America fit the AA pattern. In Ontario, 35.01% of the sample from the year 2000 fit the AA pattern. In 2005, the AA proportion increases to 40.18% of the sample. In 2010, it again increases to 41.30%.

In the United States, the results were similar. 34.88% of the 2000–2009 sample showed the AA pattern. The 2010–2015 sample showed an increase to 39.77%.

Overall, our findings consistently show that around 40% ($\mu = 38.23\%$) of the most popular boys' names in North America (from 2000–2015) fit the AA pattern.

In contrast, prevalence of the AA pattern was much smaller for girls' names. Only 14.78% of the girls' names in the 2000 GO sample fit the AA pattern. Girls' names showed a diachronic effect opposite to the boys' names. In the 2005 GO sample, only 12.87% of girls' names fit the AA pattern, and only 11.38% of the 2010 GO sample did.

The SSA data showed roughly the same proportion of girls' names fit the AA pattern, and showed a similar decrease diachronically. 15.3% of girls' names from the 2000–2009 SSA sample fit the AA pattern. This proportion decreased to 13.34% in the 2010–2015 SSA sample.

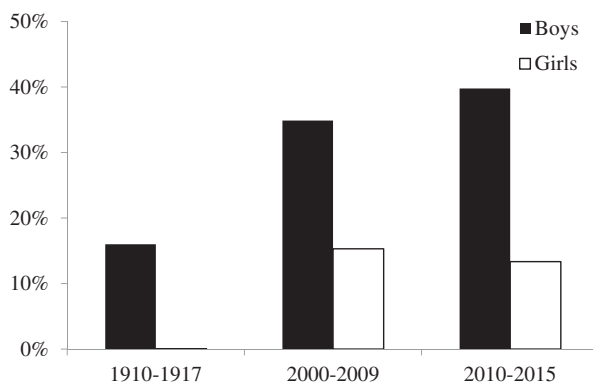


FIGURE 2
USA names fitting AA pattern

Overall, around 14% ($\mu = 13.53\%$) of girls' names in our contemporary samples showed the AA pattern, while 38% ($\mu = 38.23\%$) of boys' names did. The proportion of girls' names with AA decreased by approximately 3% in our samples from 2000 to 2015, while the proportion of boys' names with AA increased by about 5% in the same time period. See [Figure 1](#) for Ontario data and [Figure 2](#) for USA data.²

Limitations

One limitation of this study is that we sampled the naming databases instead of analyzing the entire database. We also sampled every fifth year in the Ontario data rather than every year. Finally, we also used Ontario to represent all of Canada. Each of these choices was made to reduce the amount of computation required, however, it is possible that our results might have been different had we analyzed all the names in more databases for more years.

Discussion

It appears to be the case that Wattenberg's (2005) generalization about the "Age of Aidans' pattern and the subsequent reporting may be accurate. We controlled for spelling and restricted the generalization to disyllabic names ending in syllabic /n/, but this did not change the results: these names were disproportionately popular and have increased in popularity over recent years. Our analysis of official naming databases in Ontario and the United States shows:

- a. The likelihood that a boy today given an English name in North America will be given a name ending in an unstressed syllabic nasal is about 2 in 5 (or 40%).
- b. This likelihood has increased over time.

- c. The likelihood that a girl will be given such a name is approximately 1 in 7 (or 14%)
- d. This likelihood has decreased in the 21st century, roughly inversely proportionately to the increase of boys' names.

The rise of the “Age of Aidans” could simply be a naming fad. Merriam-Webster’s dictionary defines a *fad* as, “a practice or interest followed for a time with exaggerated zeal” (fad, n.d.). If the AA pattern is an example of a notable fad, then we expect that it would not have any real lasting linguistic significance. However, the size of the effect we have found leads us to suspect that there may be some cognitive reality. We considered the most likely possibility to be that the AA pattern is the rise of a new phonestheme (Magnus 2001), or a string of phonemes that contribute meaning without being morphemic (i.e., sound symbolism). To test this hypothesis, we performed a lexical decision task, modeled after Magnus’s (2001) original experiment.

Lexical decision task

The purpose of this experiment was to investigate North American English speakers’ awareness of the AA pattern in pseudo-words. This experiment was approved by the Carleton University Research Ethics Board (CUREB). The experiment was created and carried out using Qualtrics and was distributed online through the Qualtrics website, email recruitment, and external links on Carleton University’s SONA research system. The results were analyzed using a Two-Alternative Forced Choice Task.

Sound symbolism

Sound symbolism (or phonosemantics) is proposed that there is a non-morphemic correlation between the sounds of a word and its meaning (Magnus 2001). That is, that a word’s form carries additional meaning beyond any morphemic compositional meaning. The term “phonestheme” is commonly used to describe examples that show this form-meaning correspondence (Firth 1930). Several works on sound symbolism have provided examples of phonesthemes. One of the most commonly discussed phonesthemes in English is /gl/ in word-initial position associated with the indirect light (Magnus 2001). This is seen in words like *glare*, *gleam*, *glimmer*, *glint*, *glisten*, *glitter*, *glow*, *glass*, *gloss*. Many counterexamples exist for every proposed phonestheme. More accurately, a phonestheme represents a tendency in word-formation. Sound symbolism has been studied extensively in several different languages, with experimenters often confirming a cognitive reality correlated with the tendency (Magnus 2001; Marchand 1969; Sidhu and Pexman 2015). Many of these studies have claimed that there are both language-specific and universal phonesthemes. Unlike morphemes, phonesthemes do not compose. That is, a group of words containing a

common phonestheme may share an aspect of meaning, but the material left over in each word does not make up an additional morpheme.³

Thanks to large-scale corpus studies, several researchers have compiled dictionaries of phonesthemes. Marchand (1969) provides an extensive list of English phonesthemes as well as some proposed universals. An example of such a universal is found in the English word *whisper*, which is claimed to be imitative of the action of whispering. The words to express the same concept in German, Turkish, and Latin all also contain a similar “hissing” sound that is echoic of a whisper (Marchand 1969). The claim here is that the unrelated words across languages share a common imitative form-meaning correspondence. In addition to corpus studies, sound symbolism has also been studied with psycholinguistic experimentation, typically presenting participants with non-words containing the putative phonestheme and soliciting judgments. Psycholinguistic experiments have also found evidence of priming effects of phonesthemes (Magnus 2001).

Sidhu and Pexman (2015) expands the literature on sound symbolism to include patterns in naming. This project finds a correlation between the *Bouba/Kiki Effect* (the tendency for certain phonemes to correlate to certain shapes: *bouba* for round and *kiki* for angular; Köhler 1929) and first names. Sidhu and Pexman (2015) finds that certain phonemes in first names affected participants’ perceptions of the human silhouettes. In the experiment, participants were presented with English names and “alien silhouettes” and asked to pick the best name for a particular silhouette. Names had both male and female options, and were controlled for the phonemes in each name. Names either contained “round” sounds (with/b/, /l/, /m/, /n/, /u/, /o/, and/v/) or “sharp” sounds (with/k/, /p/, /t/, /i/, /e/, /ε/ and/Λ). Consistent with the previous findings, participants tended to choose round-sounding names for round silhouettes and sharp-sounding names for sharp silhouettes. Unexpectedly, they also found that participants associated round silhouettes with female names more often than male names. In fact, participants were just as likely to associate round shapes and female names as they were to associate round shapes and names with round sounds. Notably, this was the first known experiment to show the *Bouba/Kiki Effect* in real words. Importantly for this study, the results also confirm results from previous studies (e.g., Slater and Feinman 1985) that people have intuitions about gender based on the sounds in first names. Upon an extensive analysis of first names, the Sidhu and Pexman (2015) study finds the proportion of “rounder” consonants in a name corresponds to the likelihood that its referent is female. Similarly, Slater and Feinman (1985) and Meyer (2015) find that female names end in a sonorant or vowel (respectively) more frequently than male names do.

Magnus (2001) defines two relevant types of sound symbolism: “clustering” (or “phonosemantic association”) and “true iconism”. Clustering is a pattern where newly created words have referents that share a common phoneme and a common element of meaning with words that already exist. For example: *house*, *home*, *hall*, *haven*, *hold*, *hollow*, *hostel*, *hotel*, *hut* all refer to some sort of

dwelling (Magnus 2001). True iconism, however is defined as a non-arbitrary, universal, productive correlation between form and meaning. For example, we can see patterns in the sounds and iconic meaning of words across languages—namely that there are similarities between these elements even in languages with different phonotactic constraints (Magnus 2001).

Magnus (2001) describes 14 different experiments. Many classify existing vocabulary in a language into both phonetic and semantic domains and consider the similarities. Others present participants with some sort of stimuli and solicit judgments. In one such experiment, participants were asked “If X were a type of Y, then what type of Y would it be?” The set of “X” words were all nonsense words, and the set of “Y” words were either actions, qualities or things. For example, there are many English words starting with or containing /m/ and /n/ that refer to size. Most of these words refer to large things (*mountain, many, numerous, enormous, massive, monstrous*). When presented with “if “nem” were a size, what would it be?”, most participants chose “large”, suggesting that speakers associate words with nasals with large items.

Methods

We modeled our lexical decision task on experiment 12 (as described above) from Magnus (2001). Participants for this experiment were 216 native English-speaking undergraduates from Carleton University in Ottawa. The participants were presented with a pair of non-words and instructed to choose the best name for a given object. All questions took the form “Which of the following would be the best name for X?” There were five categories of questions with 20 questions in total (four questions per category). There were also two demographic questions: “Are you a native speaker of English?” and “Where did you grow up?” (either Canada, USA or other). All questions (apart from the demographic ones) and the order in which the answer options were displayed were randomized. The stimuli are presented in (1–5).

(1) Boys’ names stimuli

Which of the following would be the best name for a baby boy?

a) TALIM b) PEEKEN a) MYDEN a) GOSSUN

b) TALIX b) PEEKEB b) MYDEK b) GOSSUL

(2) Vehicle stimuli

Which of the following would be the best name for a vehicle?

a) KUBET a) TEEVON a) JAUPPER a) WILLADE

b) KIBET b) TEVON b) JAPPER b) WILLAD

(3) Light stimuli

Which of the following is the best name for an object that gives off light?

a) GLAFFLE a) GLIPSON a) GLORUM a) GLESSITER

b) TRAFFLE b) NIPSON b) STORUM b) BRESSITER

(4) Noise stimuli

Which of the following best refers to a loud noise?

a) SKRUZZ a) SKREGA a) CROTTISH a) CRINDOP

b) NUZZ b) BLEGGA b) CHOTTISH b) FLINDOP

(5) Mouth stimuli

Which of the following best describes a sound made with your mouth?

a) SPUK a) SPOOSY a) SNAIBAGE a) SNETCHICLE

b) GLUK b) TOOSY b) RAIBAGE b) RHETCHICLE

The final syllabic nasal in the boys' names (1) is the target phonestheme of this experiment. The lengthened vowel in the vehicle names (2) is a hypothetical phonestheme (not based on any previous research) to serve as our control. The /gl/ in (2), the /s{k,l/ in (3), and /s{p,n}/ in (4) are all English phonesthemes attested in the literature (for example, *crash*, *crack*, *crunch*, *scrape*, *scream*, *screech*, etc.; Magnus 2001; *spit*, *splutter*, *spew*, *speak*, *sniffle*, *snarl*, *snicker*, etc.). Our fillers thus also serve to replicate previous experiments on phonesthemes. Our predictions for the lexical decision task were thus manifold: (a) if our experiment design does indeed detect phonesthemes, we should find a strong preference for

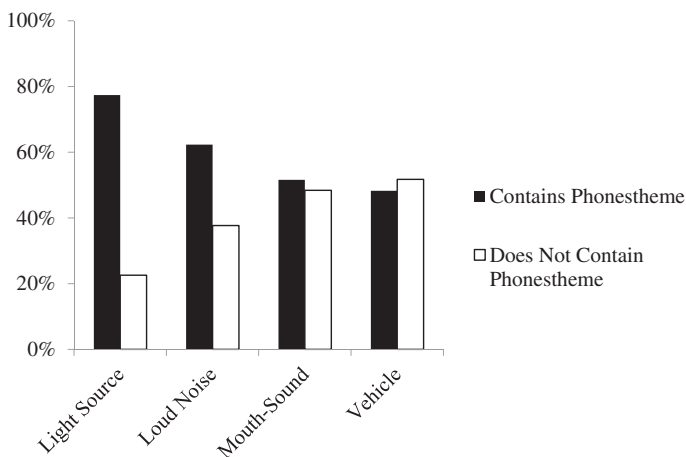


FIGURE 3
Phonesthemes in Filler Questions

TABLE 2
Preference for non-words with and without phonesthemes (%)

/gl-/ light source	GLORUM	84.49	STORUM	15.51
	GLESSITER	73.26	BRESSITER	26.74
	GLIPSON	81.82	NIPSON	18.18
	GLAFFLE	70.05	TRAFFLE	29.95
/(s)kɪ-/ loud noise	CROTTISH	64.17	CHOTTISH	35.83
	CRINDOP	58.82	FLINDOP	41.18
	SKRUZZ	67.91	NUZZ	32.09
	SKREGGA	58.29	BLEGGGA	41.71
/s{p,n}-/ mouth sounds	SNETCHICLE	60.42	RHETCHICLE	39.58
	SNAIBAGE	48.66	RAIBAGE	51.34
	SPOOSY	63.10	TOOSY	36.90
	SPUK	34.22	GLUK	65.78
/-V:-/ vehicle	WILLADE	45.99	WILLAD	54.01
	JAUPPER	43.32	JAPPER	56.68
	TEEVON	43.32	TEVON	56.68
	KUBET	60.42	KIBET	39.58

the (a) candidate in each pair in (3–5) but not in (2); and (b) if we find that, and if the AA pattern is a phonestheme, we should also find a preference for the (a) candidate for the pairs in (1).

Results

We tested 216 participants in total. We excluded 29 responses by non-native English speakers and those that indicated the participant did not grow up in North America (“Other”). The results were consistent with the above hypotheses.

We were able to confirm that our experiment does in fact detect phonesthemes: the filler questions containing phonesthemes followed our expectations for two of three categories. Participants overwhelmingly chose options containing an initial /gl/ phonestheme for the light questions. They also showed a preference for the pseudo-words with an initial /(s)kɪ/ in the loud noise questions.

Also as predicted, the control phonestheme (the long vowel in vehicle names) did not show any effect, with subjects’ preference in line with chance. Somewhat surprisingly, we were not able to replicate the /s{p,n}/ “mouth sound” phonestheme. Here again, responses align with chance. We show the effects for the filler data in Figure 3 and Table 2.

We are confident that our experiment can detect phonesthemes in the same way Magnus (2001) was. We turn now to the AA pattern. The participants showed a significant preference for pseudo-names containing a final syllabic nasal (*TALIM*, *PEEKEN*, *GOSSUN*, *MYDEN*) (see Table 3 and Figure 4):

We conducted an analysis using an Exact Binomial Test with a 95% Confidence Interval. We found the results to be statistically significant. Participants were much more likely to choose an AA name as the best boys’ name ($p < 0.001$) (see Table 4).

TABLE 3
Preference for boys' names with AA pattern (%)

AA pattern boys' names	TALIM	63.63	TALIX	36.37
	PEEKEN	71.66	PEEKEB	28.34
	GOSSUN	78.07	GOSSUL	21.93
	MYDEN	77.01	MYDEK	22.99

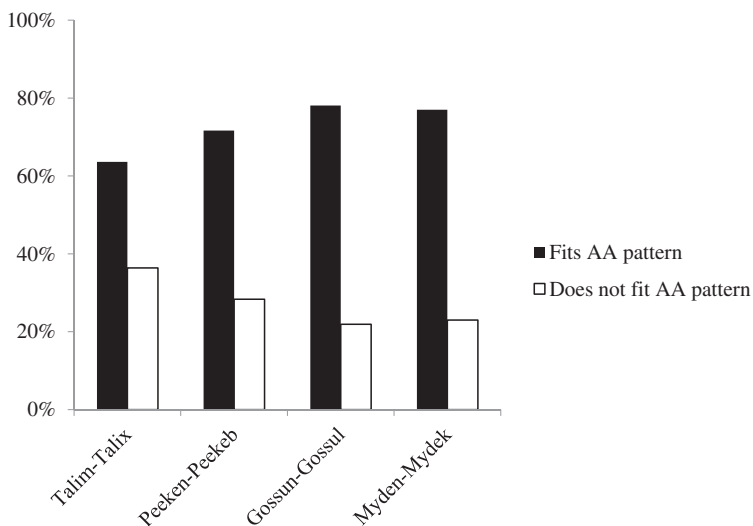


FIGURE 4
Preference for Boys Names fitting AA pattern

TABLE 4
Results of Exact Binomial Test

	p-value
Boy's Name	<0.001
Loud Noise	<0.001
Sound Made with the Mouth	0.40
Light Source	<0.001
Vehicle	0.36

Discussion

Assuming that this method actually can detect phonesthemes, our results suggest that the AA pattern in boys' names is a phonestheme in modern North American English. We were able to solicit significant effects for known English phonesthemes in non-words for "light" and "loud noises" while not finding the same effect in non-words for mouth sounds or vehicle names (our control). We found the same effect in boys' names for non-words containing the AA pattern.

This suggests that, whatever effect is happening in language to constitute a phonestheme seems to be happening in boys' names.

Previous studies in sound symbolism have mainly been done auditorily. We instead used a written lexical decision task. This is, of course, a potential limitation of the present study. Future research into this pattern should involve auditory stimuli.

Conclusions

Recall that the purpose of this project was twofold: the corpus study investigated the veracity of the widely reported claim that there is a recent increase of boys' names with a particular phonological pattern (which we identified as containing final, unstressed, syllabic nasals and dubbed "the Age of Aidans" pattern after Wattenberg's 2005 work). We also asked whether this AA pattern is appearing more frequently in boys' names today, and whether the AA pattern is disproportionately found in boys' names as opposed to girls' names.

The corpus linguistic study found exactly those things: roughly 40% of boys' names in Ontario and the United States indeed followed the AA pattern (according to our most recent data). This percentage of boys' names following the pattern has steadily risen over time and is in stark contrast to the roughly 15% of boys' names showing the pattern a century ago. Similarly, there was stark contrast between boys' names and girls' names, where only about 14% of girls' names matched the AA pattern. Additionally, the prevalence of the AA pattern in girls' names is decreasing in an apparent negative correspondence to the increase in boys' names.

Our findings through the corpus linguistic study and the experiment involving the lexical decision task (à la Magnus 2001) strongly suggest that there is some cognitive reality to the AA pattern. We hypothesized that that the final nasal is a phonestheme: words fitting the AA pattern have some sort of connotation of boys' names.

We feel confident that the findings of the corpus linguistic study show that the prevalence of this pattern in boys' names is suggestive of a naming trend that deserves to be seriously studied. We similarly feel confident that the lexical decision task reveals a real cognitive bias that we can exploit. Although we cannot definitively conclude without further research that the AA pattern (the unstressed, final, syllabic nasal) is necessarily a phonestheme, our findings mirror other such findings in the literature. Therefore, we believe the phonestheme explanation is a plausible one.

We see a spectrum of possible explanations for the AA pattern, and sound symbolism seems to fall in the middle. At one extreme, it is possible that we have just found a particularly strong naming fad. As mentioned in section 1.3, if the rise in popularity of the AA pattern is simply due to some unexplainable social phenomenon (i.e., a seemingly random preference for names with a final nasal), then it is obviously not as linguistically relevant. We have not done anything to eliminate this possibility, though replicating the findings of two other

phonesthemes does seem to suggest that we have tapped into something more than just a fad. Additionally, 40% of names fitting this pattern seems to be a very large proportion for a fad (though we would have to check other such “fads” to see if this really is unusual).

Similarly, it could be that what we are seeing is a strong preference for names that “sound” as if they are Celtic, since a large proportion of the most popular names fitting the AA pattern are of Celtic origin (*William, Liam, Nathan, Ethan, Aidan*, etc.). Perhaps the true fad is just a widespread embracing of names that sound especially Celtic.

At the other end of the spectrum is the possibility that we are seeing the onset of a new morpheme in English. Perhaps this fledgling morpheme indicates sex in the English morphology the same way a theme vowel potentially indicates grammatical gender in other systems. At this stage, however, that does not seem to be the case because the phonological form (the place of the nasal) varies unpredictably and the rest of the name besides the AA phonestheme is not morphemic.

At the end of this preliminary investigation, the evidence for a phonestheme with the rough connotation of “boy”’s name’ seems like the most likely explanation for the rise of the AA pattern. Whatever the explanation is for this meteoric rise, the AA trend certainly deserves to be studied further in the future. Of course, this investigation is just an initial step in what we expect to be a fruitful area of research into the possible development of a phonestheme (or morpheme).

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Notes

1. We ultimately did not need to decide whether to include names with a final unstressed/ŋ/. The definition of AA pattern would not be restricted to syllabic nasals if we included these names because we assume that /ŋ/, is not syllabic in contemporary English. As it happens though, none of these names were frequent enough in any of our databases to be included in our samples.
2. As an aside, the number of girls’ names showing the AA pattern also increased by a similar magnitude (from approx. 0% to 14% compared to an increase from 15% to 35% for boys) in the 20th century before it started the decline that we see in 21st century. We set this aside for this project and attribute that fact to two trends in girls’ names: (1) they already have a tendency to end in sonorants (Sidhu and Pexman 2015); and (2) there is a diachronic tendency for English boys names to become girls names, including names that fit this pattern (see for example *Maddison* and *Addison*) (Milbrand 2016).
3. This is contrasted to a putative “cran-morph” such as *cran-berry*, which is said to be a meaningless morpheme (see Aronoff 1976).

Disclosure statement

No potential conflict of interest was reported by the authors.

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