

THE SOUND PATTERNS OF ENGLISH NICKNAMES

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The English lexicon has been found to reflect certain recognisable phonological preferences in relation to consonants, vowels, stress patterns and syllabic structure, and these trends have been reflected in sharper terms in analyses of particular subsets of vocabulary: phonaesthetic words (Crystal, 1995b) and first names (Cutler et al., 1994). Because nicknames are relatively impermanent informal names which allow users considerable linguistic licence in breaking the rules, this study analyses the phonological patterns of English nicknames in order to test the validity of the claims which have been made about English phonological preferences in general and specifically in names and favoured words. The study focuses specifically on nicknames reportedly used with positive social intent, in order to test whether positive nicknames follow more closely the phonological trends in phonaesthetic English words. The study reveals clear evidence of particular consonantal and vocalic preferences in nicknames as well as trends in terms of stress and syllabic structure, which can be argued to be linked to either the social intent of the nickname user or the gender of the bearer, which suggests evidence of some sound-symbolism at work in English nicknames.

1. Introduction

The English lexicon has been found to reflect certain recognisable phonological preferences (Gimson, 1972; Bauer, 1983; Carlson et al., 1985; Cutler et al., 1994, p. 472). In addition to the existence of higher frequencies of certain phonemes and stress patterns, several theorists have pointed out interesting links between phonological patterns and certain meanings in English (see Taylor, 1976; Brown, 1994), despite the general acceptance that sound and meaning have no connection. The definition of terms such as phonaesthesia, synaesthesia and sound symbolism is problematic, as the area is notorious for terminological confusion. According to Crystal (1991) *phonaesthetics* refers to the study of the aesthetic properties of sound and sound symbolism attributable to individual sounds; Crystal (1995b) reports certain phonological trends in his analysis of what he calls phonaesthetic English words, showing that certain consonants and vowels are euphonious, and are more likely to occur in words which have a positive meaning. Phonaesthetics is a term which is closely related to *sound symbolism*, a term used in semiotics to refer to a direct association between form and meaning in language; cases such as [i:] signalling smallness have been suggested as evidence for a limited sound-meaning correspondence in language, the sound units being referred to as *phonaesthemes* (Crystal, 1991, p. 257; Napoli, 1996, p. 170). For example, many words with /u:/ as primary vowel have negative connotations

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(e.g. *hoot; loon; goon; fool*), and words containing the sequence *unk* are often linked to awkwardness or unpleasantness (e.g. *slunk; clunk; chunk; flunk; junk; punk*) (Bolinger, 1984, p. 21). Brown (1994) presents a brief survey of basic English words (all of which are at least 100 years old) to give further support to the theory that there are surprisingly many semantic fields linked to particular phonological patterns. In arguing that 'there is a phenomenon here to be accounted for' (1994, p. 17), she presents a wide range of fairly convincing data along these lines (e.g. lists of words beginning with *gl-* relating in some way to light (e.g. *glance, glare, gleam, glimmer, glisten*); *fl-* to represent quick movement (e.g. *flap, flash, flare, flee, flinch*), *sl-* sharing a generally pejorative meaning with a negative view on the morals, dirtiness or clumsiness of the topic, e.g. *slack, slag, slang, slap, slattern* etc.).

The sounds reflect properties of the external world, as in cases of onomatopoeia and other forms of *synaesthesia*. Phonaesthesia is thus reserved for words with positive connotations, while *sound symbolism/synaesthetics* can apply equally to words with both positive and negative connotations. Such words are a clear but limited subset of exceptions to the norm of arbitrariness in word-formation, and, as Napoli (1995) puts it '... I do not know of any systematic theory of how phonesthemes behave' (Napoli, 1996, p. 170). 'The onomatopoeic and 'sound symbolic' or phonaesthetic part of language is of great significance but its extent in any vocabulary is quite small, and ... it must be realised that the vastly greater part of the vocabulary of all languages is purely arbitrary in its associations' (Robins, 1989, p.18).

This paper explores the phonaesthetic and synaesthetic aspects of English nicknames as a special subset of 'words', in an attempt to reveal possible underlying sound patterns which relate to the gender of the bearer or to the social function of nicknames. Thus, in order to test the validity of the claims which have been made about English phonological preferences in general (Cutler et al., 1994) and specifically in favoured words (Crystal, 1995b), the analysis seeks evidence of phonological conditioning in the coinage of nicknames, but not in the normal sense in which conditioning is either influenced by context and phonological properties of neighbouring allomorph(s) (Katamba, 1993, p. 28; Napoli 1996:90) or by grammatical conditioning. Instead it seeks to investigate the influence on the phonological shape of the nickname of the gender of a nickname bearer (see Lieberman & Mikelson, 1995), and/or the social function of the nicknames which are reported as being used with positive intent (e.g. as a signal of affection or endearment).

2. Preferred Phonological Patterns in English

The lexicon is open-ended, and words are formed in terms of 'phonotactic constraints which function as a filter to allow entry of only phonologically well-formed words and combination of sounds that are permissible in the language' (Katamba, 1993, p. 82).

2.1. Stress

Although there is not general agreement on the form that the rules for English stress take, there does seem to be agreement that stress in most English words follows very general rules: in words of more than three syllables, stress is on the antepenultimate syllable (e.g. *apology*; *charlatan*), unless a final tense vowel comes later than that syllable, in which case it gets stressed (hence *kangaroo*, *mayonnaise*), or unless the penultimate syllable is closed by a consonant cluster (e.g. *agenda*; *asbestos*) (Bauer, 1983, p. 116). English consists predominantly of words of more than one syllable, starting with strong syllables, and the most common word pattern in English is a bisyllable with initial stress, such as we find in *utter rubbish* (Carlson, et al., 1985). Analyses have revealed that polysyllables also typically start with a strong syllable (only 30% of them start with a weak syllable), and words with strong initial syllables are used more often than those with weak initial syllables in spontaneous spoken conversation (Cutler et al., 1994, p. 472). Indeed, this English preference for strong initial syllables has been shown in experiential evidence to be used by listeners as a strategy in determining word boundaries (Cutler et al., 1994, p. 472). According to Fry (1947, cited in Gimson, 1972, p. 301), in running conversational text, monosyllables account for 84% of all words, bisyllables 12%, trisyllables 3% and polysyllables only 1%. In Crystal's 'favoured words', in conformity with Cutler et al.'s (1994) findings, 65% of all polysyllabic words had stress on the first syllable.

2.2. Consonants

In addition to stress preferences, phonemes can also be ranked in terms of preferences: Crystal (1995b) analysed so-called 'attractive' English words,¹ and revealed certain phonological patterns which he suggests may be representative of an underlying preference for certain sounds. Using as a basis for comparison the analysis by Fry (1947, cited in Gimson, 1972, p. 219) of the frequency of English consonants in ordinary conversation, Crystal found, in contrast, that only eight consonants accounted for over 73% of the occurrence of all consonants (l:16%, m:11%, s:9%, n:9%, r:8%, k:7%, t:7%, d:6%); frictionless continuants were the most frequently used, followed by plosives, fricatives and affricates; the labial position occurred most often, with clusters infrequent and voicing apparently not relevant patterns of occurrence.

2.3. Vowels

As has been found in ordinary conversation, unstressed /ɪ/ is the commonest vowel, owing to the high frequency of polysyllabic words generally (Fry 1947 cited in Gimson, 1972). Vowel rankings for these words revealed that /w/ was the most favoured vowel (20%), followed by /æ/ (10%), /e/ and /i:/ (6%), /ai/ and /ɔ:/ (5%).

3. Phonological Aspects of Names

According to Crystal 'it is impossible ... to separate sound and meaning totally ... on the whole, pleasant-sounding words have positive and desirable meaning or represent favoured semantic domains, such as birds or flowers' (Crystal, 1995b, p. 8). However, English names are a special subset of the lexicon which do allow one to separate sound from meaning to a certain extent, since as proper nouns in English, names are terms of reference, generally lacking the signification or meaning so typical of verbs, nouns and adjectives; indeed, to the vast majority of users they are completely semantically opaque. Choices of names which symbolise affection and positive feelings should therefore reflect most strongly the very patterns which are genuinely preferred in English.

Names differ from other words in two additional important ways: firstly, speakers have some licence in coining these words (unlike the bulk of the lexicon which is fairly stable); and secondly, memory and retrieval rate for proper names have also been shown to be lower than for other lexical material (Cohen, 1989 cited in Cutler et al., 1994, p. 472); the way our minds classify names seems to be different from our storage of other words, and psycholinguistic evidence (Semenza & Zettin, 1978; Van Lancker & Klein, 1990, cited in Cutler et al., 1994, p. 472) shows that they are stored in a separate area of the brain, and in aphasic patients they are either lost in isolation or retained when other lexical items are lost.

Nicknames serve a range of functions over and above the typically referential function of the first name; they are frequently semantically transparent and their usage reveals insights into the characteristics (personal and physical) of their bearers, as well as into their role in society (Leslie & Skipper, 1990; McDowell, 1981; van Langendonck, 1983) and in the subculture which devised and uses them (Raper, 1987; Landman, 1986). Such names evolve spontaneously among small groups of people who know each other intimately, and are frequently indicative of a need to express particular attitudes and feelings (such as warmth, affection (e.g. *Ingrid* > *Ingipoo*),

solidarity (e.g. *Dude*), friendship and playfulness (e.g. *Bugs*, *Ginga Ninja*) which would not be expressed in the use of the full first name. In early childhood these names are typically terms of endearment, often with a humorous flavour, but those which offer a more significant insight into cultural, social and interpersonal relations are those which are assigned at school, during adolescence, when there is heightened awareness of social and gender-related roles.

The factors influencing the choice of first names among English-speaking parents vary widely, and include a desire to follow tradition, or to allude to some famous personality from history, literature or religion (see de Klerk & Bosch, forthcoming) and (less commonly) the etymology or meaning of the name, one of the factors which undeniably influences choice of the child's name is the sound it has, whether it has a euphonious ring in conjunction with the second name and surname, or whether the abbreviated forms of the name (including initials) would be acceptable and pleasing to the ear - 'the aural impact was usually the deciding factor in name choice, dominant after all other influences had left their mark' (Morgan et al., 1979, p. 25). Lieberman and Mikelson (1995) report on a survey of unique or innovative naming patterns over 75 years in the United States, in which they demonstrate strong links between the phonological trends in names and the gender of their bearers: of 16 randomly selected 'unusual' names (e.g. *Husan*, *Shameki*, *Cagdas*, *Furelle*) there was a very high degree of consensus (median 77.8%, mean 78.1%) among 224 subjects as to what the bearers' gender was, and the majority guess was correct in 13 of the 16 cases (*Chanti* was incorrectly guessed as a girl's name by 89%). This strongly supports the view that certain phonological patterns are more or less appropriate depending on the sex of the bearer.

Cutler et al. (1994) show that, in conformity with the phonological patterns of English nouns generally, names too are very likely to start with a strong syllable in English.ⁱⁱ In their study they also found that while there is little to differentiate English male and female names superficially (e.g. *John* versus *Jane*), there are significant differences between male and female names in terms of stress patterns and syllables: while 85% of all names started with strong initial syllables, (nearly identical to the proportion in English nouns) the average for female names was 75% versus 95% for male names. This trend was even sharper when looking at the most popular names only, which revealed no weak syllables in any male names compared with a relatively high number among the female names (e.g. *Elizabeth*, *Michelle*, *Amanda*).

The analysis also showed that English female names tended to be longer, while male names were proportionately more often monosyllabic than nouns; female names were less often monosyllabic than nouns, and this trend was again even more marked among popular names. It is

commonly claimed that male names have a higher frequency of occurrence, and are more 'masculine' in being phonetically shorter, often derived from surnames and less affectionate than female names (Busse, 1983, p. 302-3; Phillips, 1990; Koopman, 1979; Neethling, 1994; Bosch, 1994). But while masculinity appears to inhere in the short CVC structure of many male names such as *Jim* or *Bill*, and many female names are typically bisyllabic (e.g. *Jenny* instead of *Jen*), this does not automatically make monosyllabic female names (such as *Gail*) unfeminine, and native speakers' intuition confirms this (Wierzbicka, 1992, p. 228). Instead of asking about the value of the short form, one should examine the effect of the morphological process and the alternative names available: the shortening of a masculine name (*William* > *Bill*) may well heighten masculinity, but this is not always the case (*Sebastian* > *Bas*).

What is more important, as Wierzbicka points out, is the need to distinguish between those first names which have commonly accepted (standardised) abbreviated forms (e.g. *Bill*ⁱⁱⁱ for *William*; *Gill* for *Gillian*) from those that do not (e.g. *Bas* for *Sebastian* or *Che* for *Cheryl*), because the pragmatic value of using the former is very different from that of the latter: in using the full form *Benjamin* instead of the expected standard form *Ben*, one is making a marked and particular statement, different from the pragmatic force of choosing the full form *Cheryl* instead of *Che*. It is far more marked (and affectionate) to use the form *Che* for *Cheryl* or *Bas* for *Sebastian* than it is to use *Ben* for *Benjamin*. For this reason, names such as *Ben* and *Gill* often develop additional 'affectionate' forms (*Benjy*, *Gilly*), to provide that additional nuance already present in the use of *Che*.^{iv}

Finally, while in general the vowel preferences in names were very similar to those in English nouns, Cutler et al. (1994) report that female names were significantly more likely to contain stressed /i:/ and less likely to contain /ɪ/, /ɘ/ or /ə/ than male names. Lieberman & Bell (1992, p. 520) and Lieberman & Mikelson (1995, p. 937) report similarly that this ending occurs only among the top girls' names, not boys' names. They also report that 'for both African Americans and Whites, among the 100 most popular girls and boys names, there is a massive difference in the frequency of names ending with [schwa] ... we implicitly know that such an ending almost certainly indicates a girl's name' (1995, p. 935). Between 1973 and 1985, they report that 51% of all unique names for African American girls and 38% of all unique names for Whites ended in schwa. The tendency for popular male names to end in a consonant is reportedly 87% (Lieberman & Bell, 1992, p. 520), and 'for both African Americans and Whites, the frequency of unique names ending in a hard *d* is at least several times greater among boys as among girls' (Lieberman & Mikelson, 1995, p. 937).

While there are certain predictions one can make about the phonological form of English names in general, nicknames are even more likely than first names to reveal predilections for specific sound patterns, in view of their less serious, informal role, which allows users linguistic licence in breaking the rules, free from the social and cultural expectations to which parents conform when selecting their child's first name (Morgan et al., 1979, p. 42). The phonological aspect of nicknames plays an even more significant role than it does in first names. Nicknames, because they act as an avenue for creativity and the expression of some of the pure enjoyment that the sounds and meanings of words can give, provide name-users and name-bearers with considerable freedom in manipulating and bending linguistic resources. They provide evidence of the ongoing enjoyment that human beings find in playing with language and creating new words which experiment with patterns of sounds (e.g. alliteration, assonance, rhyme and rhythm) similar to what one finds in early nursery rhymes and child-directed speech (Cazden, 1976; de Klerk & Bosch, forthcoming).

4. The Main Study

The data in this study comprise two sets of the nicknames of English-speaking people: 58 names of first-year school entrants (36 female, 17 male), and 292 names of adolescents (164 female, 128 male) in their final year of school. The nicknames of the younger children were reported by their parents in a survey of naming practices in local Grahamstown schools carried out in 1994; the nicknames of the adolescents were obtained in a separate survey carried out in Grahamstown in 1995. This latter data included self-reported nicknames and nicknames reportedly belonging to their peers, and included questions relating to the origins of the names and intentions in using them. Both surveys were multilingual, and elicited nicknames from English-, Afrikaans- and Xhosa-speaking informants in the Eastern Cape. Only the names reported by English-speaking informants have been included in this analysis.

It was assumed that all the nicknames of young children as reported by parents in the questionnaires concerning the nicknames of young children were typically affectionate names with positive connotations used in family contexts. However, it was important to distinguish between nicknames which were positively regarded or used with the intention of expressing endearment or friendliness, from those nicknames which were reported as being used in order to be hurtful, mocking or sarcastic.^v All positive nicknames were then analysed in order to test the existence of synaesthetic links between phonological patterns, the gender of the nickname bearer and/or the social intention of users.

5. Results

5.1. Consonants

Nicknames were analysed in terms of the distribution of initial consonants, and the results are displayed in Table 1. Columns 1 and 2 report the overall frequencies before the exclusion of nicknames used with an explicitly negative intent; columns 3 and 4 give sex-based results for positive nicknames, and column 5 shows overall frequencies for all positive nicknames. Chi-square tests were applied only to the differences between male and female scores of positive nicknames (columns 3 and 4), since they are the focus of the study. Percentages within each group have been given, with numerical frequencies shown in brackets:

Table 1. Consonants in Nicknames

	1		2		3		4		5	
	<i>All Nicknames</i>		<i>Positive Nicknames</i>		<i>Positive Nicknames</i>		<i>Positive Nicknames</i>		<i>Chi Square</i>	<i>Overall</i>
	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>M</i>	<i>F</i>	<i>Chi Square</i>	<i>Overall</i>		
b	12.0 (17)	9.1 (18)	15.0 (15)	9.1 (15)	1.52					11.0 (30)
p	9.1 (13)	11.0 (22)	8.9 (9)	12.0 (19)	3.57					11.0 (28)
k	9.8 (14)	9.6 (19)	8.9 (9)	10.0 (17)	2.46					9.8 (26)
m	6.3 (9)	12.0 (24)	7.9 (8)	11.0 (18)	3.85*					9.8 (26)
n	2.8 (4)	11.0 (21)	2.0 (2)	12.0 (19)	13.76***					7.9 (21)
t	4.2 (6)	7.6 (15)	5.9 (6)	9.4 (15)	3.86*					7.9 (21)
s	16.0 (23)	6.6 (13)	12.0 (12)	4.8 (8)	0.80					7.5 (20)
ʔ	6.3 (9)	6.6 (13)	5.9 (6)	6.7 (11)	1.47					6.4 (17)
d	7.7 (11)	2.0 (4)	9.9 (10)	1.2 (2)	5.33*					4.5 (12)
r	2.8 (4)	5.1 (10)	3.0 (3)	5.5 (9)	3.00					4.5 (12)
l	0.7 (1)	6.6 (13)	1.0 (1)	6.7 (11)	8.33***				4.5 (12)	
ɹ	3.5 (5)	4.0 (8)	4.0 (4)	4.2 (7)	0.81					4.1 (11)
g	9.1 (13)	0.5 (1)	8.9 (9)	0.0 (0)	6.40*					3.4 (9)
h	3.5 (5)	1.5 (3)	3.0 (3)	1.8 (3)						2.3 (6)
w	1.4 (2)	1.5 (3)	1.0 (1)	1.8 (3)						1.9 (4)
ʒ	0.7 (1)	2.5 (5)	0.0 (0)	1.8 (3)						1.5 (3)
f	1.4 (2)	1.0 (2)	2.0 (2)	1.8 (3)						1.1 (5)
y	0.0 (0)	1.0 (2)	0.0 (0)	1.2 (2)						0.8 (2)
z	1.4 (2)	0.0 (0)	1.0 (1)	0.0 (0)						0.4 (1)

Chi-square tests: * = $p < .05$; ** = $p < .01$; *** $p < .001$

Only nine nicknames began with other consonants, once only in each case, and these have not been reflected in the table. When only the positive nicknames are analysed, all the eight

consonants which Crystal (1995b) reports as having a high frequency in phonaesthetic words in English occur in the top twelve (with slight differences in ranking), and four new ones have been added: p, b, ɿ and ʔ. Owing to the relatively low incidence of negative nicknames, it would be unwise to suggest any trends in terms of dispreferred consonants apart from simply noting the slightly higher incidence of s (16), p (7), k (7) and m (7) in negative nicknames. It is nevertheless important to note that many of the nicknames reported as being used with negative social intent also had negative meanings (e.g. (male) *Stunted; Dildo; Ghost; Fatboy; Ego; H2S; Pseudo; Jewboy*; (female) *Chops; Dweeb; Poopall; Rambolina; The Butt; Maggot; Whitefang; Hairwoman; Buffalo Bev; Gappy; Butcher*).

Of more interest is the distribution in consonants in terms of gender, which are different with respect to particular sounds: the nasal continuants occurred more frequently in female names (*m*: $\chi^2(1, N=26)=0.049$) and *n*: $\chi^2(1, N=21)=2.075E-4$) as did unvoiced plosives (*p; t; k*) (χ^2 for *t*: $\chi^2(1, N=21)=0.049$), while in male nicknames voiced plosives (*b; d; g*) occurred far more frequently (χ^2 scores for *d* and *g* were both significant: *d*: $\chi^2(1, N=12)=0.02$; *g*: $\chi^2(1, N=9)=0.01$). Liquids also occurred more frequently in female names (*l*: $\chi^2(1, N=12)=3.89E-3$).

Table 2 provides a comparative summary of the reported findings with regard to the preferred consonants in ordinary conversation (as reported by Fry, 1947 as cited in Gimson, 1972, p. 219), favoured words (as per Crystal, 1995b) and the nicknames in this study.^{vi} While this table does compare consonant frequency in text (a type) with consonant frequency in two words lists (tokens), no attempt is made to draw any statistical inferences from the data; the comparison simply aims to reveal interesting consistencies across all three columns, with /n/, /t/, /s/, /r/, /m/ and /k/ occurring fairly high up in all three sets.

Table 2. Comparative Consonant Preferences (Percentages)

	Conversation		Phonaesthetic words		Nicknames	
1.	n	7.6	l	15.6	b	11.0
2.	t	6.4	m	10.6	p	11.0
3.	d	5.2	s	9.2	k	9.8
4.	s	4.8	n	8.7	m	9.8
5.	l	3.7	r	7.6	n	7.9
6.	ð	3.6	k	7.4	t	7.9
7.	r	3.5	t	6.9	s	7.5
8.	m	3.2	d	6.3	ʔ	6.4
9.	k	3.1	f	3.1	d	4.5
10.	w	2.8	b	2.9	r	4.5
11.	z	2.5	p	2.6	l	4.5
12.	v	2.0	v	2.1	ɿ	4.1
13.	b	2.0	=	2.1	g	3.4
14.	f	1.8	w	2.1	h	2.3

15.	p	1.8	g	1.8	w	1.9
16.	h	1.5	z	1.8	ɹ	1.5
17.	ʔ	1.1	s	1.8	f	1.1
18.	g	1.0	h	1.5	j	0.8
19.	s	0.9	ɹ	1.3	z	0.4
20.	j	0.8	ʔ	1.3		
21.	ʔ	0.6	j	1.3		
22.	ɹ	0.4	ɹ	0.8		
23.	ɹ	0.3	æ	0.2		
24.	æ	0.1	ð	0		

5.2 Vowels

The vowels of the stressed syllables, which receive prominence, were analysed, and Table 3 shows the patterns of distribution. *c* does not feature, since it is an unstressed vowel. The greater frequency of *i:* and *w* in female nicknames was highly significant (*i:* $\chi^2(1,N=79)=6.066E-4$; *w* $\chi^2(1,N=65)=1.78E-3$). Table 4 reveals that the top ten most frequently occurring vowels, occurring in all three sets, are *w*, *e*, \square , *i:*, *c+*, *æ* and *Z* (*c* was omitted from analysis since the analysis focused on only the stressed syllables of nicknames). Nicknames were also analysed in terms of their endings, and it is of particular interest that a significantly higher proportion of female nicknames ended in */i:/* (spelled in various ways). Altogether 94 nicknames had this ending, 33% male and 67% female. When negative nicknames were excluded (6 male, 5 female) this difference was sharpened somewhat, with 70% female.

Table 3. Vowel of Stressed Syllable in Nicknames

	1 All Nicknames		2 Positive only		3 Positive		4	5	
	M	F	M	F	Chi Square	Overall			
<i>i:</i>	13.0 (20)	21.0 (41)	11.0 (11)	20.0 (34)	11.75***	17.0 (45)			
<i>w</i>	10.0 (15)	15.0 (30)	8.7 (9)	17.0 (28)	9.75***	14.0 (37)			
<i>æ</i>	13.0 (19)	14.0 (28)	12.0 (12)	13.0 (22)	2.94	13.0 (34)			
\square	11.0 (16)	4.0 (9)	14.0 (15)	4.8 (8)	2.13	8.5 (23)			
<i>a:</i>	9.4 (14)	7.1 (14)	7.7 (8)	7.8 (13)	1.19	7.7 (21)			
<i>Z</i>	7.4 (11)	6.6 (13)	9.6 (10)	5.4 (9)	0.05	7.0 (19)			
<i>u:</i>	6.0 (9)	8.6 (17)	4.8 (5)	7.8 (13)	3.55	6.6 (18)			
<i>e</i>	4.0 (6)	6.6 (13)	4.8 (5)	7.2 (12)	2.88	6.3 (17)			
<i>ɹ:</i>	6.7 (10)	3.6 (7)	7.7 (8)	4.2 (7)	0.06	5.5 (15)			
<i>c+</i>	6.7 (10)	3.6 (7)	7.7 (8)	4.2 (7)	0.06	5.5 (15)			
<i>+</i>	4.0 (6)	5.1 (10)	3.8 (4)	4.8 (8)	1.33	4.4 (12)			
<i>ew</i>	6.7 (10)	2.0 (4)	6.7 (7)	2.4 (4)	0.18	4.1 (11)			
<i>f:</i>	2.0 (3)	2.0 (4)	1.9 (2)	1.9 (2)		1.5 (4)			

Chi-square tests were applied only to the differences between male and female scores of positive nicknames (columns 3 and 4), since they are the focus of the study.

Table 4: Comparative Vowel Preferences (excluding *c*)

	Conversation (% of all sounds)		Phonaesthetic (% of vowels)		Nicknames (% of vowels)	
1.	<i>w</i>	8.3	<i>w</i>	19.7	<i>i:</i>	17.0

2.	e	3.0	æ	9.6	w	14.0
3.	aw	1.8	e	5.6	æ	13.0
4.	□	1.7	i:	5.6	□	8.5
5.	ew	1.7	aw	5.2	a:	7.7
6.	i:	1.6	c ₊	5.2	z	7.0
7.	c ₊	1.5	□	4.8	u:	6.6
8.	æ	1.4	z	4.0	e	6.3
9.	z	1.4	ew	3.2	j:	5.5
10.	j:	1.2	u:	2.8	c ₊	5.5
11.	u:	1.1	j:	2.8	+	4.4
12.	+	0.9	a:	2.8	ew	4.4
13.	a:	0.8	f:	1.6	f:	1.5
14.	a ₊	0.6	wc	0.8		
15.	f:	0.5	awc	0.4		
16.	ec	0.3	a ₊	0.4		
17.	wc	0.2	+c	0.4		
18.	jw	0.1				
19.	+c	0.1				

5.3. Stress Patterns and Syllabic Structure

In contrast to Crystal's (1995b) finding that phonaesthetic words tend to be polysyllabic, the trends for English first names (see 2.1) are closely mirrored in the nickname data of this study, with a markedly strong preference for bisyllabic names carrying stress on the first syllable. These trends were heightened in each case when negative nicknames were removed from the analysis. However, contrary to previous reports of the high frequency of monosyllabic male names (Busse, 1983, p. 302-3; Phillips, 1990; Koopman, 1979; Neethling, 1994; Bosch, 1994), more female names were monosyllabic in these data and the score difference was highly significant ($\chi^2(1, N=87)=7.35E-3$).

Table 5. Syllabic Structure

Nr of Syllables	All Nicknames		Positive Nicknames		Chi	All Positive square
	M	F	M	F		
One	26.4 (41)	34.6 (69)	28.1 (31)	34.1 (56)	7.18****	31.7 (87)
Two (174)	51.6 (80)	47.2 (94)	49.0 (54)	48.1 (79)	4.69*	48.6
Three	21.9 (34)	18.0 (36)	22.7 (25)	17.6 (29)	0.29	19.7(0)

Table 6. Stress Patterns (excluding monosyllabic nicknames)

Stressed Syllable	All Nicknames		Positive Nicknames		Chi square	All Positive Nicknames
	M	F	M	F		
First (151)	80.2 (89)	79.0 (99)	79.0 (65)	83.0 (86)	2.92	81.1

Second	9.9 (11)	5.6 (7)	8.5 (7)	5.8 (6)	0.07	6.9 (13)
Third+	9.9 (11)	15.0 (19)	12.0 (10)	12.0 (12)	0.18	11.8 (22)

6. Discussion

This analysis of nicknames gives qualified support to previously reported phonological patterns in English nouns as a whole and favoured words in particular. The preference for bisyllabic nicknames with stress on the second syllable is strong, and certain consonants and vowels seem to be used with higher frequency than others. Trends are often sharpened when negative nicknames are removed from the database, and it is these positive nicknames which can be regarded as representative of preferred English phonological patterns or phonaesthemes. In accounting for the differences which have emerged in this analysis, one has to consider both semantic and sociological factors.

6.1. Social Explanations

Lieberson and Bell (1992, p. 521) suggest as a possible explanation for the divergent tastes underlying naming patterns for males and females the fact that the reduced pressure for name continuity between mother and daughter and the tendency to assign a lesser social role to women allows greater creativity in girls' names, which are therefore relatively more decorative and open to fashion. 'They reflect a larger and more rapidly expanding pool of potential names since there is more 'play' with girls' names and innovation is often more acceptable' (1992, p. 521). This same explanation could be applied to the trends evident in nicknaming.

Cutler et al. (1994) tentatively suggest as an explanation for their finding that female first names tended to be longer than male names (not replicated in the nicknames in this study) that the masculine bias so evident in English vocabulary, with words for male professions unmarked and female equivalents being formed by suffixation (e.g. *author* > *authoress*), may account to some extent for the longer female names in the English name-stock, since many female names have been formed from male names by adding a suffix, resulting in an overall lengthening of female names (e.g. *Thomas* > *Thomasina*; *Stephen* > *Stephanie*); one might, as an indirect consequence of this, have expected longer female nicknames, since abbreviations and phonological contractions have been derived from a longer original source, but this was not the case, and in any event, such derivative nicknames were only a very small subset of the longer names in the database.

Their second suggested explanation also has its flaws (to which they readily admit): they

point out the existence of a general trend in English of ordering monosyllables before polysyllables in fixed expressions, with harder consonants and shorter vowels taking precedence (e.g. *rough and ready*, *bread and butter*) and suggest that because of the power difference between male and female over the past few hundred years, during which English was growing and evolving, and because of the reflection of this power-difference in the precedence of terms referring to males over those referring to females (e.g. *man and wife*), the male name, coming first, would tend to be shorter, in conformity with the pattern. However, there are obviously exceptions to such patterns of ordering (such as *ladies and gentlemen* and *mother and father*).

6.2. *Sound-symbolism*

As Section 5 above shows, there are discernable phonological preferences in nicknames in general as well as in gender-specific nicknames. Although grammatical processes and the link between words and their meanings are conventionally regarded as arbitrary, and a clear sound-symbolism relationship in language has yet to be scientifically substantiated, there is a growing body of evidence in support of at least some trace of a link between sound and meaning. Sherzer claims 'all languages have some iconicity and motivated symbolism' (1993, p. 221), and several other writers discuss synaesthetic sound symbolism (the use of sound to symbolise non-acoustic phenomena such as movement, size or shape), pointing out tendencies which tie sound to meaning (see Taylor, 1976).

The significantly higher rate of occurrence of the diminutive-forming /i:/ suffix in female than male nicknames (at a rate higher than that found in English nouns as a whole) conforms with the findings of Cutler et al. (1994, p. 478), and they suggest that this phenomenon (and the use of [in] or [inc] as standard suffixes for forming female names from male names) may well be related to the associations of the vowel with the concepts 'small', 'sharp', and 'bright' (1994, p. 480). In addition, both this analysis of nicknames and the analysis by Cutler et al. of first names showed that female names are significantly more likely to contain [i:] as their stressed vowel (e.g. *Lisa*; *Trini*; *Tina*) than male names. They write: 'if smallness is a concept associated with feminine characteristics rather than with masculine, then it may be that /i/ sounds will occur more often in female than in male names, not only in diminutive-forming suffixes, but in stressed syllable nuclei as well' (Cutler et al., 1994, p. 478).

However, special attention needs to be drawn to the number of nicknames where /i/ was expressly avoided, often to develop nicknames for people whose names already ended in /i/, or whose nicknames would normally acquire an /i/ ending. For example, where the full form *Natalie*

is changed to *Nats* or the name *Nicola* becomes *Nicks*, the 'feminine' *-ie/-y* being noticeable by its absence. Back-formation of this kind results from a search for a nickname which expresses solidarity without sounding childish or too feminine (see Wierzbicka, 1992), and the resulting form is usually a short friendly name, frequently derived by the addition of a *s/z* as suffix; it occurred nineteen times (21%) in female adolescent self-reported names (e.g. *Julia* > *Jules*; *Michelle* > *Mo*; *Belinda* > *Bins*; *Catherine* > *Cat*; *Amanda* > *Moo*; *Sharon* > *Shaz*; *Jacqueline* > *Jax*; *Magdalena* > *Mags*) and eight times (19%) among male adolescent self-reported names, the final nickname usually a no-nonsense unsentimental (often slightly derogatory) form (e.g. *Gareth* > *G-man*; *Grant* > *Gruntal*; *Justin* > *J*; *Kenric* > *Keno-B*; *Dylan* > *Dildo*).

The preference in favoured female names for (gentle?) nasal and liquid continuants and the unvoiced plosives /p/, /t/ and /k/ versus the male trend in favour of the harder, louder, more energetic sounds /b/, /d/ and /g/ could also be explained in terms of sound-symbolism, although one would need a lot more evidence to support such a claim. In this connection, the findings of Lieberman and Bell (1992) and Lieberman and Mikelson (1995) that leading male names in America were much more likely than female names to end in a consonant (especially *-d*) is significant.

6.3. *Biological Explanations*

An alternative explanation for the vocalic trends is the biological one: Sapir's early experiment in 1929 with vowel symbolism had 80% of informants choosing /a/ (with an open mouth cavity) for big objects and /i/ (with a restricted mouth cavity) for small ones (cited in Farb, 1974, p. 130-1). This view is reiterated in Hinton et al. (1996), who also see the association between high pitch and smallness and low pitch with largeness as being rooted in biology. In similar vein, Ohala (1983, 1984) has argued that small vocal tracts which produce high-pitched sounds are typically those of smaller less-threatening beings - conceivably the more desirable attributes of females. 'This could be extended to a more general principle of phonological weight which would then embrace the tendency for weak, that is to say phonologically lighter, syllables to occur more often in female names' (Cutler, 1994, p. 480).

7. **Conclusions**

Although the trends in the phonological patterns of nicknames reported here conform broadly with trends reported in the language at large, and confirm findings that male and female

names differ phonologically in interesting ways, one needs to remember that the explanations for these phenomena can only be very tentatively offered. While it may be tempting to link patterns to sound-symbolism in language, and to be persuaded that the pervasive and subtle influence of iconism in words and names has a powerful hold on our conception (Bolinger, 1984, p. 24), we need to remember that language is primarily a system of signs, not symbols.

This analysis has shown that the linguistic construction of invented names reveals particular predilections for certain patterns depending on the gender of the bearer and on the intentions of the user. It would seem that certain linguistic characteristics are more appealing than others, and are unconsciously seen as more appropriate to either males or females. Although by and large, nicknames are linguistic innovations, as Barnett (1953, p. 181, cited in Lieberman & Mikelson, 1995, p. 928) puts it: 'No innovation springs full-blown out of nothing; it must have antecedents, and these are always traceable, provided that enough data are available for analysis. An innovation is, therefore, a creation only in the sense that it is a new combination, never in the sense that it is something emerging from nothing'.

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i. A range of informants identified these words on the basis of the fact that they sounded pleasing to the ear, and not in terms of their meanings.

ii. They analysed 1667 names in the Oxford Minidictionary of names, and compared them with English nouns.

iii. Names such as Bill (William) and Jim (James) are not simply "abbreviations" of the corresponding full names, but are conventionalised short forms.

iv. The *-y/-ie* ending, while it may often be affectionate (e.g. *Granty, Tessie*) is not always so, as is evident in the fairly neutral forms *Terry* or *Sally*.

v. The questionnaire requested adolescents to indicate whether they were trying to be funny, friendly, sarcastic or critical when using the nickname they were reporting.

vi. No figures are available from Cutler et al. (1994) for consonant distribution in first names, so their data have not been included in the Table.