An Abbreviation:
The Factors Affecting Its Pronunciation

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Kim, Boyoung. 2013. An Abbreviation: The Factors Affecting Its Pronunciation. *SNU Working Papers in English Linguistics and Language 11, 49-61.* English language incorporates countless abbreviations in its vocabulary stock, and yet the factors contributing to reading them as a word–acronym -- or a series of letters – initialism – have not yet been clearly defined. This paper aims to investigate which factors bear more importance in determining the choice between the two options. An experiment was conducted with 27 native speakers of English, all of whom are working as English teachers in Korea. The participants of the experiment were asked to read various abbreviations which were purposely chosen to be unfamiliar and indicate their choice in a multiple-option questionnaire. The results of the study have revealed that there exists a scale of priority among the intervening factors, the primary one being the phonotactic plausibility. Other factors to be considered were homograph avoidance and length. Overall, pronunciation patterns revealed from the study are ascribed to speakers' desire to facilitate articulation. **(Seoul National University)**

Keywords: abbreviation, acronym, initialism, hybrid form, phonotactic plausibility

1. Introduction

English speaking and writing system freely allows changes which help compress ever more words. Abbreviated forms – initialisms and their pronounceable counterpart, acronyms – are preferred over reading the entire phrases. Specialists share the abbreviations specific to their field to facilitate communication. Young people use and create increasingly more abbreviations for economical online communication. According to Mencken (1921: 31), the phenomenon derives from "the characteristic American habit of reducing complex concepts to the starkest abbreviations."The test of time has proved that some of the abbreviations have truly become new words. *ATM machine* is one

example, as the speakers uttering this word are not intentionally uttering, redundantly, *automated teller machine machine*. Curiously, though, there seem to be no certain rules regulating pronunciation of an innovative abbreviation. In other words, whether it is read as an acronym, an initialism, or a hybrid form appears to depend more on convention than on a fixed rule.

It is the motivation of this paper that certain factors should be regarded as playing important roles in determining the pronunciation of abbreviations. Such factors intervene with the purpose of facilitating articulation for the speakers. This paper is organized as follows: first, the necessary terminology needed for this study is provided. Second, the method of the experiment is explained. Third, the data which has been gathered from participants is described, followed by the results and discussion. Finally, the last section offers a summary and conclusion of the paper.

2. Abbreviations, Acronyms, Initialisms and Hybrid Forms

An *abbreviation* (from Latin *brevis*, meaning *short*) is defined as "a shortened form of a word or phrase. Usually, but not always, it consists of a letter or group of letters taken from the word or phrase. For example, the word *abbreviation* can itself be represented by the abbreviation *abbr.*, *abbrv.*, or *abbrev*" (Wikipedia, n.d.).

It has long been noted that there are two main subclasses of abbreviation in English: *acronyms*, where the sequence of initials taken from the source phrase or sentence is pronounced as a phonological word, and *initialisms*, where each letter of the abbreviation is pronounced as a series of letters. Typical examples of the former include *NATO*, North Atlantic Treaty Organization, /neɪtoʊ/; *SCUBA*, Self-Contained Underwater Breathing Apparatus, /sku:bə/ and *UNICEF*, United Nations International Children's Emergency Fund,

/ju:nɪsef/;while typical examples of the latter include *USA*, United States of America, /ju:eseɪ/;*FBI*, Federal Bureau of Investigation, /efbi:aɪ/ and *CIA*, Central Intelligence Agency, /si:aɪeɪ/.

Another minor subclass of abbreviation is the hybrid of the two pronouncing methods above, thus termed *hybrid form*. A typical example is *JPEG*, Joint Photographic Experts Group, /ǰeɪpeg/. The first part of the pronunciation follows the pattern of an initialism, /ǰeɪ/, while the latter part follows the pattern of an acronym, /peg/.

This definition may be perceived as problematic for some readers, because there are several abbreviations pronounced in multiple ways. For example, many internet terms abbreviated for efficiency, such as *LOL, ROFL, URL* as well as *SQL* have more than one “acceptable” pronunciation. However, the ambiguous examples such as these will largely be ignored in this paper.

Also worth noting is that, as suggested by Baum (1955), rarely do abbreviations seem to be pronounced as letters after previously being pronounced as a word, but many acronyms have started out pronounced as letters and tended to be pronounced as a word later on. *AWOL*, Absent Without Leave, is such an example, as it was first pronounced as a string of letters and gradually began to be pronounced as a word,/eɪwɔ:l/ (p.105).

3. Experiment

3.1 Hypothesis

This study assumes the following hypotheses (1).

(1a)**Phonotactic plausibility**: An abbreviation is read as a word when its internal syllable structure makes the pronunciation phonotactically plausible.

(1b)**Length**: Length of an abbreviation also counts as an important factor.

(1c) **Blocking by homograph**: An abbreviation which exhibits an identical form with an already existing word is pronounced as individual letters to avoid confusion.

Hypotheses (1) will be proved by comparing the rates of responses to the survey items which were designed to put these hypotheses to the test. Observations made from the experiment other than these three hypotheses will also be discussed.

3.2Methods

3.2.1 Subjects

A total of 27 subjects were collected for this study. All of them are native speakers of English working as English teachers in Seoul and Daegu, Korea. The subject group consists of various backgrounds. The ages range from 22 to 47. The nationalities are American, Canadian, British, Australian, New Zealander and South African.[1]

3.2.2Items and Tasks

The abbreviations used in survey items were taken from existing abbreviations[2]. However, only the items which could be unfamiliar, or strange, to most speakers of English were purposely chosen. This procedure was carried out to strictly control factors other than preexisting intuitions of the participants when encountered with a neologism.

To measure the participants' tendency towards reading abbreviations, multiple-choice survey method was chosen. All of the survey items are listed in the Appendix Ⅱ. The subjects were given the identical survey

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[1] The distribution of age and nationality of the subjects is described in detail in a line graph attached in Appendix Ⅰ.

[2] All of the survey items were taken from *www.acronymfinder.com*

items and were provided in the introduction part with the definition and related examples of acronyms, initialisms, and hybrid forms. Then they were asked to read the following 25 abbreviations and indicate which option they agree to be the most fitting description.

4. Results

Below are the results of the experiment organized in tablet (2):

(2) The Rates of Responses to the Questionnaire

	Acronym	*Initialism*	*Hybrid form*
#1 ON	8 (29.6%)	18 (66.6%)	1 (3.7%)
#2 IOA	1 (3.7%)	26 (96.2%)	•
#3 DCC	4 (14.8%)	23 (85.1%)	•
#4 LIM	19 (70.3%)	7 (25.9%)	1 (3.7%)
#5 CAJ	7 (25.9%)	18 (66.6%)	2 (7.4%)
#6 STEQ	17 (62.9%)	2 (7.4%)	8 (29.6%)
#7 SERI	23 (85.1%)	2 (7.4%)	2 (7.4%)
#8 KLUG	23 (85.1%)	1 (3.7%)	3 (11.1%)
#9 FARC	20 (74.0%)	4 (14.8%)	3 (11.1%)
#10 SPLED	22 (81.4%)	3 (11.1%)	2 (7.4%)
#11 BFAB	3 (11.1%)	3 (11.1%)	21 (77.7%)
#12 TOPG	2 (7.4%)	14 (51.8%)	11 (40.7%)
#13 AIR	15 (55.5%)	12 (44.4%)	•
#14 SET	15 (55.5%)	11 (40.7%)	1 (3.7%)
#15 TOSSM	12 (44.4%)	6 (22.2%)	9 (33.3%)
#16 RIKL	22 (81.4%)	4 (14.8%)	1 (3.7%)
#17 XMCQDPT	•	21 (77.7%)	6 (22.2%)
#18 HIVEMIR	14 (51.8%)	3 (11.1%)	10 (37.0%)
#19 RIMSRCIS	12 (44.4%)	10 (37.0%)	5 (18.5%)

#20 IOMSRA	5 (18.5%)	14 (51.8%)	8 (29.6%)
#21 OSFNA	6 (22.2%)	16 (59.2%)	5 (18.5%)
#22 GLUGP	3 (11.1%)	15 (55.5%)	9 (33.3%)
#23 FSPAAD	1 (3.7%)	10 (37.0%)	16 (59.2%)
#24 ROUGE	22 (81.4%)	3 (11.1%)	2 (7.4%)
#25 LEGION	23 (85.1%)	2 (7.4%)	2 (7.4%)
Total	257 (38.0%)	249 (36.8%)	169 (25.0%)

5. Discussion and Interpretation

It was stated in (1a) that the phonotactic plausibility refers to the phonological configurations which make plausible for an abbreviation to be read as a word. Such a syllable structure is likely to be achieved with the alternation of vowels and consonants, and is exemplified in the items number 4 and 7.Constructed of the form CVC and CVCV respectively, they are read as words without much difficulty, and the rates of responses being the highest in the *acronym* option meet the expected outcome. On the other hand, abbreviations consisting solely of either vowels or consonants, such as abbreviations number 2, 3 and 17, create the phonotactically implausible environment which makes them difficult to be pronounced as words. Thus, most subjects agreed that they should be read as intialisms. The results of the mentioned items above show that a phonotactically plausible syllable structure is, in itself, a powerful factor.

Syllabic consonants deserve our attention in this regard. A brief look at the items number 15 and 16 may lead one to assume that the existence of consonant clusters blocks syllabicity. Taking a closer look, however, syllabic nasal of item number 15 and syllabic liquid of item number 16 make conducive environment for syllabicity, which, in turn, make phonotactically plausible environment. The plausibility is echoed by the rate of respondents who indicated that these abbreviations should

be read as words being the highest.

Another interesting point concerning the phonotactic plausibility is drawn from the items which contain consonant clusters. The rates of responses to the items number 8, 9 and 10 demonstrate that abbreviations containing consonant clusters present in English (/kl/, /rk/ and /spl/) are phonotactically plausible and are more likely to be read as acronyms. In the same line of reasoning, those containing consonant clusters not present in English (/bf/, /pg/, /gp/ and /fs/)are phonotactically implausible and are not read as acronyms, as displayed by the rates of responses to the items number 11, 12, 22 and 23. According to the results, while items number 11 and 23 which contain the unpronounceable consonant cluster in the onset position of the syllable are more likely to be read as hybrid forms (/bi:fæb/ and /efespæ:d/), items number 12 and 22 which contain it in the coda position are more likely to be read as initialisms. The observation of the two similar abbreviation groups behaving in two different patterns reveals that an abbreviation is read as a hybrid form when it contains consonant cluster not present in English in the onset position, but is read as an initialism when the same consonant cluster occurs in the coda position.

A final point to be made about the phonotactic plausibility is that it may be overridden by a particular sound. Abbreviations number 5 and 6, in which vowels and consonants are alternating to create a phonotactically ideal syllable structure, each end with a consonant – namely, *j* and *q*– which does not normally occur in word-final positions in English. Whereas respondents were more inclined to read item number 6 as a word, they chose to read item number 5 as a series of letters. The contrast in the results seems obvious, as English speakers are more familiar with /k/ sound than /ž/ sound. The data makes it evident that the speakers' choices are more dependent on the familiarity of sound than the spelling itself. It also explains why certain phonotactically plausible syllable constructions are read as initialisms.

The second part of our hypotheses (1b) expected the length of an abbreviation to exert influence on the choice. Item number 1 is closely linked to a constraint on minimal length. It appears to create just as ideal phonotactic environment as item number 3, but the results show that it is more likely to be read as an initialism than an acronym. Thus, an abbreviation should at least be three-letter-long to be read as an acronym, however ideal its phonological configuration may be. Interesting remarks can also be made about the longer abbreviations. Polysyllabic abbreviations number 18, 19, 20 and 21 were observed to operate in two quite different pronunciation patterns within themselves. Consider first the results of items number 18 and 19. Although their phonotactic environments are not so favorable and the resulting pronunciations are somewhat obscure and awkward, more participants preferred reading them as words, reflecting their wish for condensation in order to communicate more efficiently. Conversely, most participants chose to read items number 20 and 21 as initialisms. The variation between the rates of responses to items number18, 19 and 20, 21 may be accounted for by the fact that while the phonotactic plausibility is guaranteed to some extent in abbreviations number 18 and 19, it is completely blocked out by cluster of vowels and consonants in abbreviations number 20 and 21. The observation on length manifests that although it certainly is a crucial factor, the phonotactic plausibility takes precedence in determining the pronunciation of an abbreviation.

Last part of the hypotheses, (1c) conjectured that abbreviations whose form is identical with an existing word would be read as initialisms to avoid confusion with its homograph. Responses to monosyllabic abbreviations number 13 and 14,homographic to existing words, seem to cross the initial hypothesis, as the rates of responses corresponding to *acronym* choice are slightly higher than the other two choices. Compare the results, however, to those of 24 and 25.The response rates of the *acronym* option are significantly higher than those

of the other two options. That is, with an abbreviation homographic to an existing word given, the subjects more or less hesitated to read it as a word when it was monosyllabic, but read it with more conviction as a word when it was polysyllabic. The results reflect the respondents' inclination to avoid confusion by reading the homographic abbreviations as initialisms, but, again, the length proves to be a powerful intervening factor in the choice of pronunciation of the abbreviations.

Baum's statement mentioned in the earlier part of this paper suggested that the speakers encountered with a novel abbreviation would likely read it as an initialism and then the initialism itself would gradually advance to gaining its position as a word. His suggestion may not stand, though, at least in this study. Consideration of the total figure of this experiment enables one to assume that more English speakers would read unfamiliar abbreviations as words than a series of initials.

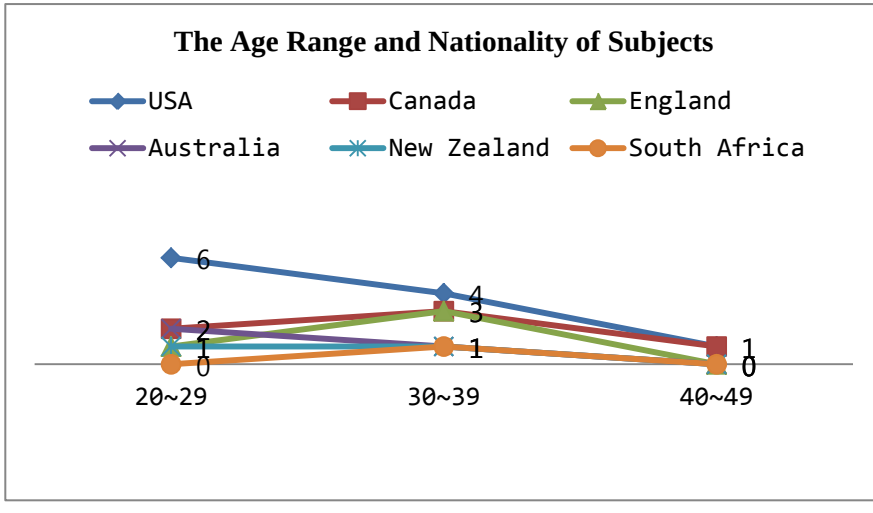
6. Conclusion

This study investigated the factors influencing the choice of the English speakers in reading abbreviations. Even though it was difficult to reveal significantly prominent factors due to diverse individual preferences, some meaningful results were gathered. It has been elucidated that there exists a scale of priority among the intervening factors. Being the most compelling force by default, the phonotactic plausibility is at times overridden by other factors. With the results of the research added up, the following guideline to reading a novel abbreviation is established: as long as the abbreviation satisfies the phonotactic plausibility and homograph avoidance, it is readily read as a word. Furthermore, it should be at least three letters long to be read as a word, and if it is polysyllabic, the likeliness of reading it as a word increases even if the phonotactic plausibility and homograph avoidance are not fully

satisfied. In all the other cases, it is read as a series of letters.

Nonetheless, this study has several limitations. First, the bigger sample size of the subjects would have made this study more reliable. The total of 27 participants in the experiment is too small in number to say that they represent the entire English speakers. Second, syntactic and semantic constraints must be considered as well. So far, this study focused mostly on phonological constraints. A further study factoring in syntactic and semantic constraints will bring about more fruitful results.

APPENDIX Ⅰ



APPENDIX Ⅱ

Please read the following abbreviations and indicate whether it is read as acronyms (i.e. as words), initialisms (i.e. as letters) or hybrid forms (combination of acronym and initialism). There is no correct answer;

feel free to choose based on your intuition.
*example: NASA is read as word and is an acronym; CIA is read as letters and is an initialism; JPEG is read as [J-peg] and is a hybrid form.

1. ON (Object Number)
①acronym ②initialism ③ hybrid form
2. IOA (Institute of Astronomy)
①acronym ②initialism ③ hybrid form
3. DCC (Drug Control Center)
①acronym ②initialism ③ hybrid form
4. LIM (Low Income Measure)
①acronym ②initialism ③ hybrid form
5. CAJ (Confederation of Asian Journalists)
①acronym ②initialism ③ hybrid form
6. STEQ (Science and Technology Education in Quebec)
①acronym ②initialism ③ hybrid form
7. SERI (Socio-economic and Environmental Research Institute)
①acronym ②initialism ③ hybrid form
8. KLUG (Kalamazoo Linux Users Group)
①acronym ②initialism ③ hybrid form
9. FARC (Federation of Asean Research Conductors)
①acronym ②initialism ③ hybrid form
10. SPLED (Scaffolding Procedural Learning to Extended Discourse)
①acronym ②initialism ③ hybrid form
11. BFAB (Bermuda Feline Assistance Bureau)
①acronym ②initialism ③ hybrid form
12. TOPG (Technology Objectives Planning Guide)
①acronym ②initialism ③ hybrid form
13. AIR (Artificial Intelligence Research)
①acronym ②initialism ③ hybrid form
14. SET (Secure Electronic Transaction)

①acronym ②initialism ③ hybrid form
15. TOSSM (Testing of Spatial Structure Models)
①acronym ②initialism ③ hybrid form
16. RIKL (Raleigh International Kuala Lumpur)
①acronym ②initialism ③ hybrid form
17. XMCQDPT (eXtended Multi-Configuration Quasi-Degenerate Perturbation Theory)
①acronym ②initialism ③ hybrid form
18. HIVEMIR (HIV: An Electronic Media Information Review)
①acronym ②initialism ③ hybrid form
19. RIMSRCIS (Receive; Issue; Make; Start; Reconnoiter; Complete; Issue; Supervise)
①acronym ②initialism ③ hybrid form
20. IOMSRA (Isle of Man Squash Racket Association)
①acronym ②initialism ③ hybrid form
21. OSFNA (Oromo Sport Federation in North America)
①acronym ②initialism ③ hybrid form
22. GLUGP (Great Lakes Ultra Grand Prix)
①acronym ②initialism ③ hybrid form
23. FSPAAD (Fine Sun Pointing Attitude Anomaly Detection)
①acronym ②initialism ③ hybrid form
24. ROUGE (Recall-Oriented Understudy for Gisting Evaluation)
①acronym ②initialism ③ hybrid form
25. LEGION (Locally Excitatory Globally Inhibitory Oscillator Network)
①acronym ②initialism ③ hybrid form

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