HOW QUICKLY DO PEOPLE BECOME BORED WITH NEW INFORMATION?
A SURVIVAL ANALYSIS OF VOGUE WORDS APPEARING IN NEWSPAPERS

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ABSTRACT

The purpose of the study was to examine when new information becomes old. Muramoto (2007) studied the correlation between the frequency of use of vogue words in weblogs and TV shows [1]. In this study, we conducted a frequency analysis using newspapers and asked participants to evaluate the newness of topic keywords. We analyzed the frequency of use of vogue words in newspapers and compared the frequencies among the years 1997, 2002, and 2007. We considered the period between the peak usage and disappearance of a word as the word's lifetime, and conducted a survival analysis to compare survival curves among the years 1997, 2002, and 2007. The results showed that the survival period for vogue words was significantly shorter in 2007 than in 1997 (p < .05). In 2007, half of the vogue words disappeared in 4.7 months. Because people might start getting bored with vogue words before they disappear from newspapers, we conducted a survey wherein we asked participants to evaluate the newness of topic words. The results showed that the words were likely to be regarded as new words in the first month after their first appearance but as old words in the second month after their appearance. In brief, our study suggested that nowadays, people may become bored with a vogue word two months after its appearance and vogue words may disappear five months after their peak usage.

Keywords: weariness, vogue words, frequency, questionnaire

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1. INTRODUCTION

Nowadays, people are exposed to a large volume of information, from which they select the information they find interesting. However, we can become weary when an excessive amount of information is presented. Muramoto (2007) studied the correlation between the frequency of use of vogue words in weblogs and TV shows [1]. From a mathematical viewpoint, Nakagiri & Kurita analyzed the frequency of real events and proposed a mathematical model of booms [2]. In addition, Changizi & Shimojo proposed a psychological model on the relationship between the frequency of an event and our preference of the event [3]. In this paper, we analyzed the frequency of vogue words in the newspapers in order to estimate their lifetime. We also conducted two surveys regarding how quickly we would be bored with a vogue. Vogue and boredom play important roles in Kansei, and the understanding psychological mechanism of vogue and boredom will lead us to the better understanding of Kansei.

2. METHOD

2.1. Frequency analysis

We analyzed the frequency of use of vogue words in newspapers and compared the frequencies among the years 1997, 2002, and 2007. For each year, we selected 10 words from "vogue words of the year" (Table 1), and calculated the monthly frequency of use of each word in two major Japanese newspapers (The Yomiuri Shimbun and The Asahi Shimbun). The selected vogue words were nominated by readers of "Gendai yougo no kiso chishiki" (an annual list of popular contemporary Japanese terms, published by Jiyu-Kokumin-Sha); and they are the prize top ten the end of every year. Thus, these words are ones that are used frequently on TV or in newspapers. For our study, we searched the websites of the Yomiuri Shimbun and the Asahi Shimbun to find articles containing the selected vogue words and calculated the frequency of use of the words for each month.

Table 1: Vogue word list

1997	2002	2007
A Lost Paradise	Tama-chan	(Miyazaki wo) Dogenka
Tamagotchi	World Cup (Nakatsue-	sento ikan
Assessment of time	mura)	Bashful prince
Japanese big bang	Banks's forcible	Vanished pension
Transparent existence	withdrawal of money	Sonna no kankei ne
Princess Mononoke	Japanese we want to read	Dondake
Paparazzi	aloud	The power of insensitivity
My boom	Shinju fujin	Net cafe refugee
Gardening	Double prize	Heat wave
Postal 3 undertakings	Beckham-sama	Gluttony
	Muneo house	Food camouflage
	Whistleblower	
	Abduction	

In the analysis, for 24 of the 30 words, we could determine when each word appeared the most frequently in the newspapers (=peak) and when it disappeared (=disappearance). We excluded the remaining 6 words (2 words each year) from further analysis because the peaks and disappearances of the words could not be clearly determined (Figure 1).
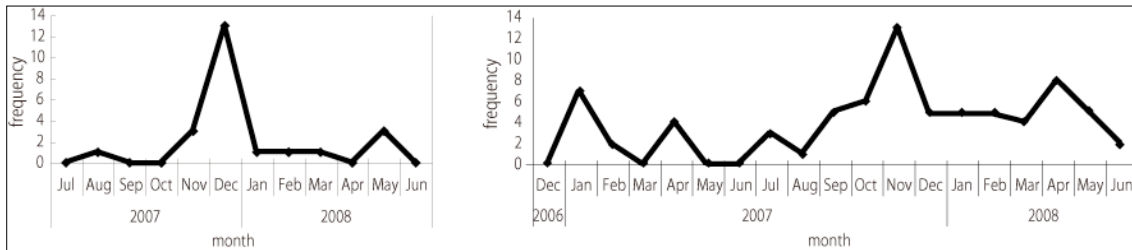

Figure 1: Examples of the frequency analysis of vogue words. The peak and disappearances can be seen clearly in the left graph but not in the right one.

2.2. Survival analysis

The purpose of this analysis is to compare the amount of time that a word remained a vogue word in 1997, 2002, and 2007. The period between the peak and disappearance of a word is considered as the word's lifetime (Figure 2). We conducted a survival analysis in order to compare the survival curves.
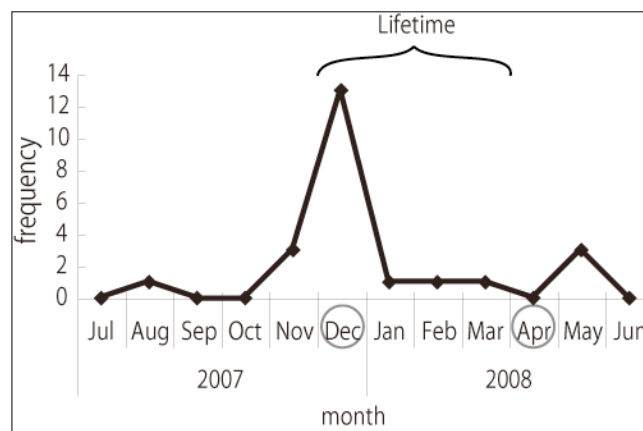

Figure 2: Example of a word's lifetime. The peak usage of this word was in December, and it disappeared in April. Therefore, the lifetime of this word is four months.

2.3.

2.4. Survey 1

Because people might become bored with a vogue word before it disappears from newspapers, we conducted a survey asking participants to evaluate the newness of vogue words.

2.4.1. Participants

The participants were 66 university students. They were asked to complete the questionnaire during a class.

2.4.2. Questionnaire

Participants were shown 18 topic keywords that had appeared in the preceding 8 months (Table 2). These were clear to observe when they happened and peaked. The participants indicated whether the keywords were new, old, or not known to them on a six-point scale with the following ratings: "new," "a little new," "moderate," "old," "a little old," and "not known."

Table 2: Topic keywords list. These topics appeared between November 2007 and June 2008.

2007/11	Mistaken case of murder in a hospital Shiroi koibito's resale Manager Osim's hospitalization caused by cerebral infarction
12	Random case of firing at Sasebo Policeman's suicide at Tokyo station Lee Myung-bak's election as president in Korea
2008/01	Governor election in Osaka NHK staff's insider trading JR East's ban on posters for the Somin Festival
02	Frozen gyoza made in China Aegis destroyer's collusion Burned-out Namdaemun
03	Japanese Experiment Module Kibo Intensification of riots in Tibet A strong yen and a weak dollar - The dollar has fallen to 90 yen
04	Zenko-ji's rejection to relay the sacred fire Reduction in petrol prices Opening of MITSUI OUTLET PARK IRUMA
05	Cyclone Nargis 2008 Sichuan earthquake
06	2008 Iwate-Miyagi Nairiku earthquake Indiscriminate murder case at Akihabara Izaka-ya Taxi Fire at Universal Studio in Japan

2.5. Survey 2

In the previous survey, we asked participants to complete the questionnaire at the same time and analyzed the responses on an individual basis. In this survey, we divided the participants into groups and analyzed the group responses; we observed the changes in the evaluations of the groups over time.

2.5.1. Participants

Participants were divided into three groups: groups A, B, and C, with 46, 27, and 17 university students, respectively.

2.5.2. Questionnaire

First, we selected 50 topic keywords and asked group A to evaluate the newness of the topics. This group clearly evaluated three of the words as "new" or "a little new." One month after the first survey of group A, we conducted a second survey among groups A and B. We asked them to evaluate the above three words. One month later, we conducted a third survey and asked groups A, B, and C to evaluate the three words.

2.6. RESULTS

2.7. Survival analysis

The average lifetime of vogue words in each year was 13.6, 8.4, and 4.6 months, respectively, and half of the vogue words (8 out of 16 words each year) disappeared in 8, 6, and 4.7 months, respectively. The survival analysis showed that vogue words survived significantly longer in 1997 than in 2007 ($p < .05$) (Figure 3).
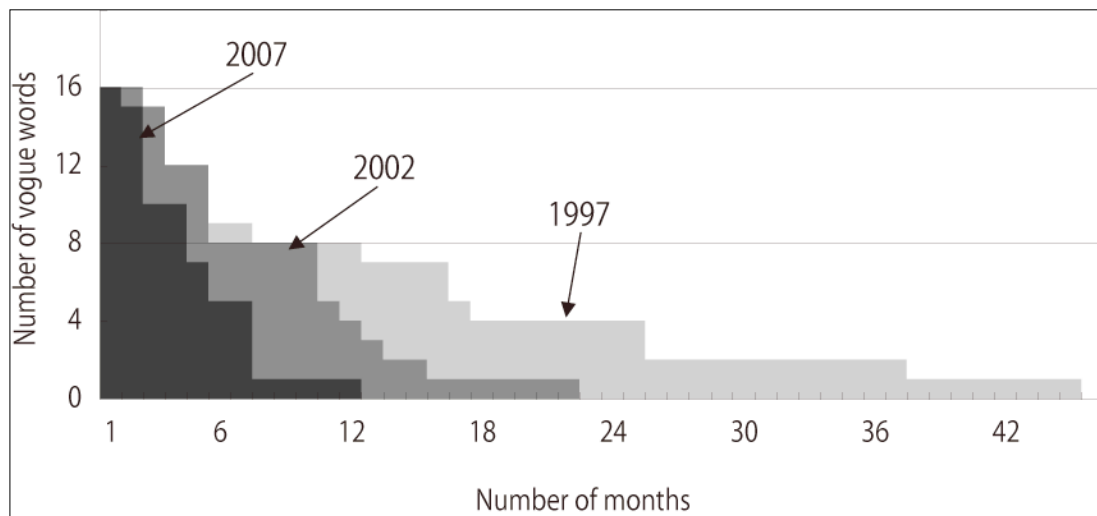

Figure 3: Survival analysis

2.8. Survey 1

For topics that first appeared one month before the survey, a higher number of respondents evaluated the topics as new rather than old. However, this trend was reversed for topics that were more than 2 months old (Figure 4).
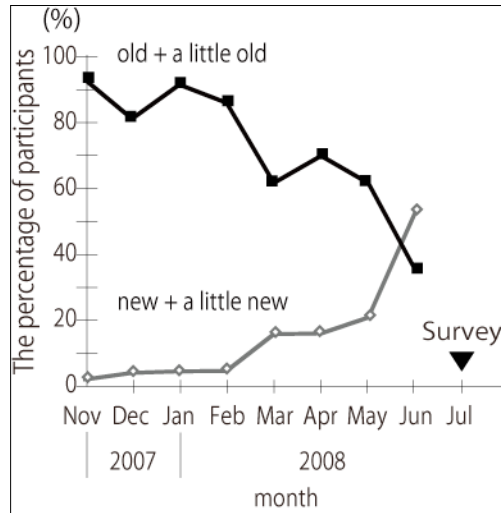

Figure 4: Evaluations of the participants

2.9. Survey 2

In the first survey, group A tended to evaluate topics as new or a little new. In the second survey, a little over the majority of group A evaluated the topic as slightly old rather than slightly new. While, group B's newer-evaluaiton was more percentage than older. In the third survey, groups A, B, and C evaluated the topic as old rather than new (Figure 5).
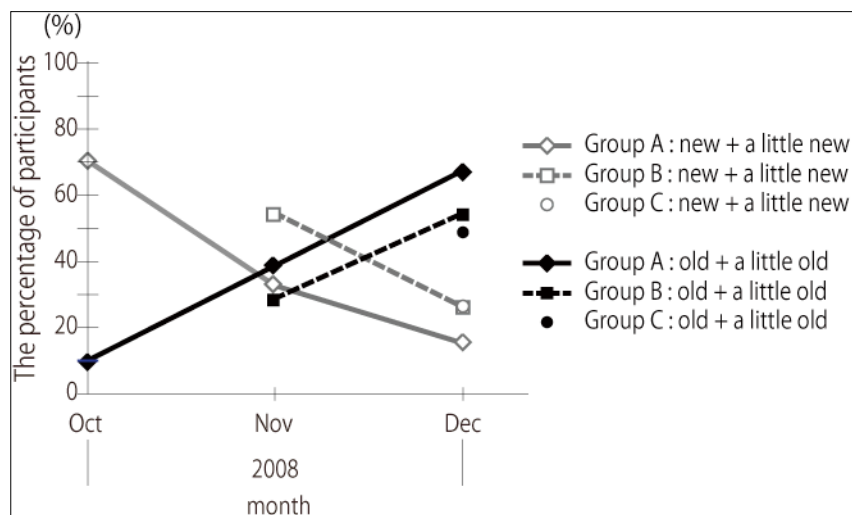

Figure 5: Evaluations of the participants. In three surveys, groups A, B, and C evaluated the newness of common topics.

2.10. DISCUSSION

The survival analysis showed that the vogue words survived significantly longer in 1997 than in 2007 ($p < .05$). Moreover, in 2007, the average lifetime of the vogue words was 4.6 months, and half of the vogue words disappeared in 4.7 months. These results suggested that the lifetime of vogue words used in newspapers have gradually shortened. Indeed, in recent years, vogue words have disappeared 5 months after their peak usage. The results of surveys 1 and 2 also showed that words were likely to be regarded as new during the first month after their first appearance, but they were likely to be regarded as old in their second month. These results together indicate that there is a difference between the usage of words as vogue words in newspapers and our impression of words as vogue words. That is, it seems that vogue words are used in newspapers for three months after people become bored with them. Further study is required to determine whether people become weary of vogue words within three months and whether the media continue selecting the words despite people's weariness of them.

ACKNOWLEDGMENTS

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