CHAPTER I

INTRODUCTION

1.1 Background of the Study

Language is altered as one progress from youth to old. Certainly the content of language of youth is commonly known to be quite different from that of the more mature person. As one enters age, the themes of conversation assume new comments of older reflect their overwhelming concern for their families, past events, and their current state of personal well-being. Not only are there profound changes in the content of language from youth to old, but the speaking and vocal characteristics are changing as well.

According to Walker et al in Lass there are some factors that influence the speech and language in the aging. They combine both physical and perceptual aspect. Living situation, social milieu, health, education, sex and other aspects can influence the speech and language in the aging (Walker et al in Lass: 1990:152).

With respect to the way language is used, Yairi and Clifton have conducted a study in 1972. They reported that there were a significantly greater numbers of dysfluencies in the speech of the elderly when compared with of the senior high school students. Interjections, word repetitions and dysrhytmic phonations were found to be more frequent in older subject. These are assumed to be a result of cognitive interference (Yairi and Clifton in Lass: 1990).

According to Diana Syper, perceptual and sensory changes have a significant effect on communication and are either peripheral or central. There seems to be a

decreasing in vision, hearing, taste, and smell with increasing age (Syper :1992). Further more Gravell says that as person gets older, we can observe changes in comprehension, expression, and the way language is used, as well as changes in speech and voice quality (Gravell : 1988).

Actually, everything we find about a person in communication, whether they are messages, voices or colors, are stimuli, which directly or indirectly get into our senses. These stimuli are then shaped in our mental process and produce response. Judgements and inferences drawn from these stimuli with such comments as above are our way to give meaning to the stimuli caught by our senses. Rakhmat (1985) says that this process of giving meaning to the sensory stimuli will later form our perception. In addition, Crystal (1989:23) says that age and sex are proved to be the easiest tools to identify from such cues as paralinguistic feature.

Related to perception of the aging voice, current research, although not extensive, identifies several prominent characteristics, which cue the listeners to the age of the speaker. Ptacek and Sander (1966) noted that listeners were highly accurate in identifying older subjects (age 65 and above) compared with younger subject (age 65 and below). The making accurate age judgements were rate of speech, pitch usage, voice quality, loudness, and fluency (Ptacek and Sander in Lass: 1990).

The changing of speech, especially on paralinguistic features such as pitch, loudness, and voice quality in the aging is closely related to physical decline. Changes in the respiratory system make it harder to control the breath supply for speech and hence there are changes in voice quality. Whereas problems in dentition

and dental prostheses may have been significant contributing factor in aging to have less precise articulation.

Several interesting inferences have been drawn to describe the relationship between paralinguistic features of speech in aging people. A research about the speech especially the voice quality in older subject has been made by Virginia G. Walker et al in 1990. They noted that of the 62 aging subject, 42 or 67.8% were judged to have normal voice quality, while 32.2% of the subject were judge as having some types of vocal abnormality. It is likely that, as the larynx ages, the change in laryngeal tissue resiliency is apt to be the prime factor in producing the aperiodic movement which are so prominent in the perception.

Another study about the perception of the pitch in the aging which is also done by Walker et el showed that from thirty-nine subjects, 62.9% had normal pitch level functioning. Fourteen subjects had pitch levels judged to be lower than normal, while six subjects had the lowest pitch levels. From these, we can say that there is a tendency to have voice disorder among older people.

Studies on the relation between paralinguistic feature and the aging people as mentioned above have become undoubtedly evidence of the phenomena. The question is in what extend that such phenomena of paralinguistic feature such as pitch, voice quality, or loudness display a significant relation. Another question is listener's judgement about the speaker's age based on such paralinguistic feature.

In this study, I attempt to focus on the relation between voice quality, which is one of the paralinguistic features of speech and the increasing age in aging people. I am interested in this study because little is known about the pattern of speech and language change that affects older people. Research on the nature of these changes is

still in its earlier stages. By doing this study, the writer wants to give a little contribution toward this matter.

1.2 Statement of the Problem

In connection with the background of the study the problem and hypothesis can be stated as follows:

1. Is there any relationship between the voice quality and the increasing age based on the listeners' perception?

Hypotheses:

Ho: There is no relationship between the increasing age and the voice quality.

Hi: There is a relationship between the increasing age and the voice quality.

1.3 Objective of the Study

The objective of the study is to find out whether there is a relationship between the increasing age and the voice quality.

1.4 Significance of the Study

I hope that the result of the study is useful for readers, especially for those who are interested in paralinguistic features study, as one of subcomponents of an act of communication and in the study of speech and language characteristics of normally aging people.

In addition, this study is conducted as an attempt to review the information available concerning the communication abilities of healthy individual older people.

1.5 Theoretical Framework

This study deals with the change of linguistic and speech characteristic in the aging. As I have written before, the change of speech in the aging is closely related to their physical decline, therefore beside the theories on language or paralinguistic features, this study also employs the theories on the change of voice in normally aging.

The first theory is the theoretical model of communication change in the aging proposed by Walker et al. This theory is made by the authors to view the changing language and speech status of normally aging adults. The theory can be seen on figure 1.
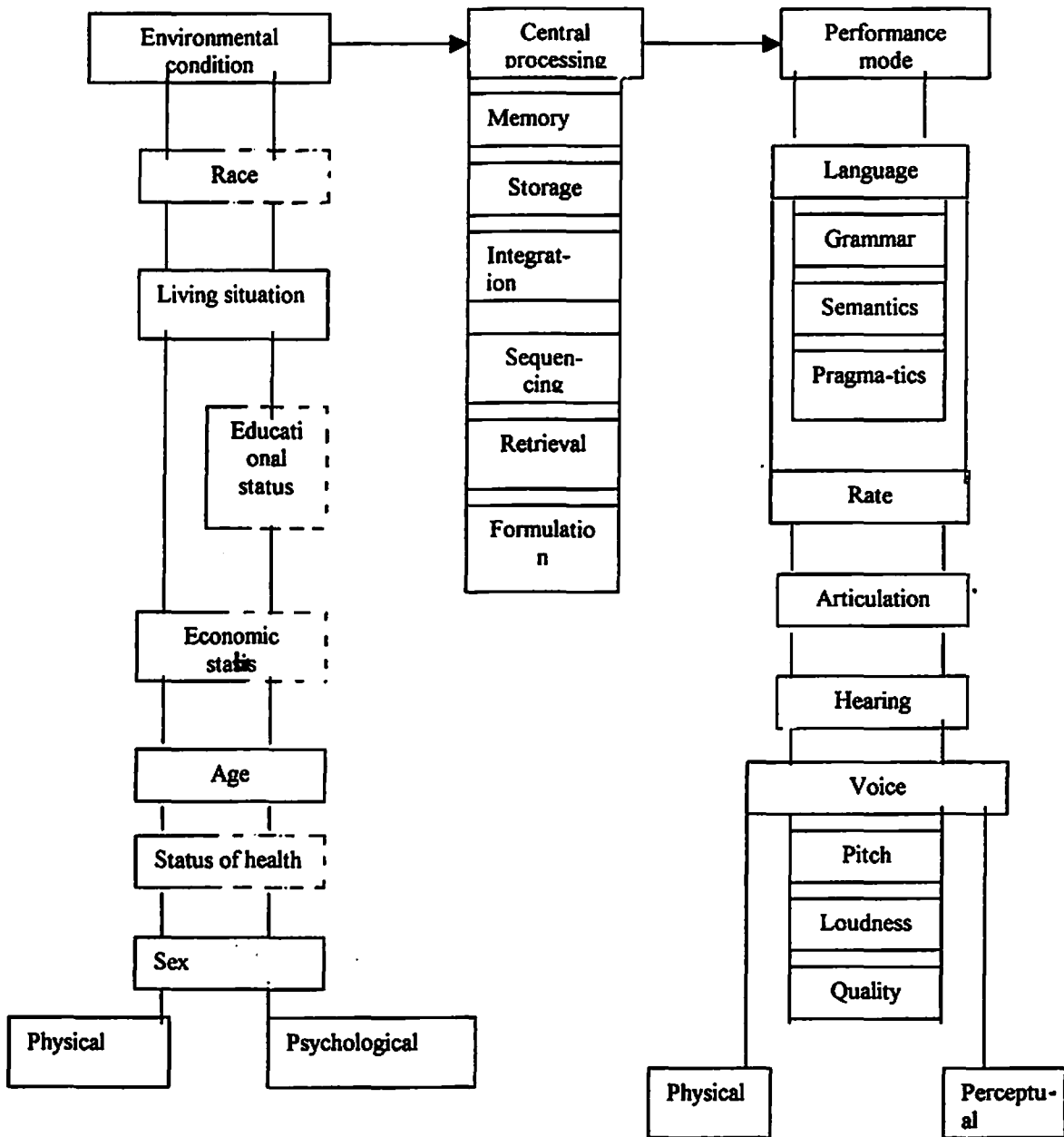
Figure 1. A theoretical model of communication change in the aging

From the figure above, we can see that the left side of the model shows the environmental conditions that become altered, as one grows older. The right side of the model indicates the performance aspects of speech and language. The middle section displays the components of central processing. The four categories at the

bottom left and bottom right, physical – psychological and physical – perceptual represent channels of influence in the environmental condition and performance mode. In the category of environmental condition, the living situation and the economic status both overlap physical and psychological channels. This overlap indicates that these conditions affect both. When a dotted line appears in the column, it suggests that the factors have some influence but not as much as where the solid line appears.

All of the performance mode factors seen on the right side of the figure are shown to overlap the physical and perceptual channels of influence. This general overlap indicates that there is always a physical and perceptual components, which influences the speech and language product.

Another theory is the theory about the voice changes in the aging. According to Barbara Kozier and Glenora Erb changes in the voice occur throughout life as a result of hardening and decreased elasticity of the laryngeal cartilages. These processes are completed by middle age. With age, the laryngeal muscles atrophy and vocal cord slacken. The voices becomes higher pitched, less powerful, and restricted in range (Kozier and Glenora :1983: 285). In addition, Gravell says that as person gets older, we can observe changes in comprehension, expression and the way language is used, as well as changes in speech and voice quality (Gravell :1988).

Related to the theory about paralinguistic features, Sarah Trenholm and Arthur Jensen state that words are spoken through the medium of voice, which has characteristics of its own, apart from the content of what is said. These characteristics are called vocalic or paralanguage (Trenholm and Jensen: 1996:73).

Furthermore James C Hardy proposes the theory about voice disorder. According to him voice disorder refers to an abnormal use or function of the vocal folds. They include to those who speak (1) too softly; (2) too loudly: (30 with vocal pitch that too high or too low: or (4) with an abnormal voice quality (James T Hardy: 1980: 59).

Particularly about voice quality in the aging, Laver says that organic factors influencing voice quality change slowly overtime, through growth on youth and atrophy in old age (Laver: 1980:). Furthermore a research done by Walker et al notes that as the larynx ages, the change in laryngeal tissue resiliency apt to be the prime factor in producing the aperiodic movements which are so prominent in the perception of harshness and hoarseness.

1.6 Methods of the Study

This study attempts to gain generalization over the phenomenon of the relationship between the abnormal voice quality and the increasing age. To know whether the relation is significant, the study employs inferential statistics. Hence, a quantitative analytic method is used.

1.6.1 Definition of Key Terms

a. **Paralinguistic** is nonverbal behavior that accompanies a person when he speaks with own characteristic apart from the speech.

b. **Voice quality** is the personal attributes of a speaker's voice, regardless of whether they result from actions of the vocal cords or of other vocal

organs. Organic factors influencing voice quality change slowly overtime and through atrophy in old age.

c. **Listener** is the person who is to construct impression upon expression and information or cues provided by the speaker.

d. **Speaker** is the one who does the expression and transmits information as to be the cues for the listener.

e. **Aging people** is the people whose ages are around 65 and above.

f. **Abnormal voice quality** is one of the voice disorders, which its characteristics are different from the normal voice. They include the breathy, hoarse/harsh, or the vocal tremor voices.

g. **Normal voice quality** is the voice that has relatively consistent quality running through everything is said.

h. **Perceptual Characteristic Study** is a study about voice perception done by listeners from the ear.

1.6.2 Location and Population of the Study

This study is held in Surabaya. The population of the study themselves are people who live in Surabaya. In this case the writer chooses one of aging institution in Surabaya- panti werdha "Hargo Dedali".

Since this study aims to learn about a listener's impression of speaker's voice quality and about the accuracy of the speaker's age, I need two kind of population.

The first population is called the speakers. In this case, I classify this population into seven groups. The first group represents the age decade between 30

represents the age decade between 60 and 69. The fifth group represents the age decade between 70 and 79, the sixth group represents the age between 80-89 years and the last, and the seventh group represents the age decade between 90 and above. The reason is that in this study I want to know whether there are changes in the speech of aging people, particularly in paralinguistic features by comparing their speech with the younger ones. For the speakers, I look for those who have no history of speech and neurological disorder since I would like to know the characteristic of their speech, particularly in paralinguistic features, not the content of their language. In addition, the population in this study is native Javanese speakers. The reason is to avoid difference in the style of speech, which may result in the way voice, is produced.

The second population is called the listeners. The listeners here are Surabaya people whose ages are between 25-30 years. The reason is that in such ages, they still can identify such paralinguistic very well. In addition, they must have good hearing.

1.6.3. Sampling

In order to get data for this study, I take samples because the size of the population is too large. The sample of the speakers and listeners are taken by using purposive sampling method, which involves the process of seeking out people based on some criteria.

1.6.3.1 Sample of Speakers

For the sample of speakers, I take seven people from the first population who represents each of age decade. The age of the youngest speaker is 39- year- old, while the oldest speaker is 92-year- old. They all must suit the criteria mentioned in the first population.

1.6.3.2. Sample of Listeners

By means of purposive sampling, I take thirty respondents to be the sample of listeners. The respondents must have the criteria of the second population of this study.

1.6.4 Technique of Data Collection

In collecting the data, I use the instrument of the study, the voice. I record the voice of those seven people, in a recording process. The speakers are asked to speak in a conversational fashion for a minimum of 1.5 uninterrupted minutes. In this case, the speakers are engaged in a lively conversation until lengthy responses were elicited of the required minimal length. Then, I ask the listeners to listen to the recording. The recording is played three times. Then the listeners are asked to rate the speakers' voice quality. Since voice quality is aspect of sound, which is subjectively perceived by our auditory sensation, and therefore is difficult to be measured, I ask the listeners to rate the voice quality on a semantic differential scale. On this scale, there are seven lines, which have score from one to seven. Score seven is the highest score which represents the normal voice quality, and score one is the lowest score which represents the abnormal voice quality. The listeners are asked to

give mark on the score closest to their perception about the speakers' voice quality. Based on the speakers' voice quality, the listeners are also asked to judge the speakers' age decade also in a semantic differential scale. They are asked to ignore the content of the speech, and to notice the voice alone, and then rate the speakers' age based on the voice quality.

In short, the steps for collecting the data are:

1. Doing the procedure to get seven samples of speakers.

2. Finding respondents of listener.

3. Asking the listeners to listen to the recorded voices.

4. Asking the listeners to rate the speakers' voice quality based on their perception.

5. Asking the listeners to rate the speakers' age based on the speakers' voice quality.

1.6.5. Techniques of Data Analysis

In analyzing the data, first I need to calculate the semantic differential scales on voice quality and on the age decade of the speakers. The calculation is done by finding the mean score of the ratings for each speaker. Secondly, I test the results of the scale calculation using correlation test. To know whether the correlation shows significant relation, I do the second correlation test to know the age decade ratings perceived from the speakers' voice quality. Finally, from the result of the correlation test and the data obtained, I do the interpretation of the result.

In short, the steps for analyzing the data are:

1. Calculating the semantic differential scale.

In short, the steps for analyzing the data are:

1. Calculating the semantic differential scale.

2. Doing the correlation test on speakers' voice quality

3. Doing the correlation Analysis on speakers' age decade based on their voice quality

4. Making conclusion.

CHAPTER II

GENERAL DESCRIPTION OF THE OBJECT OF THE STUDY