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CLOSED-CAPTIONED TELEVISION PRESENTATION SPEED AND VOCABULARY

This study summarizes an extensive research project on closed-captioned television. Caption data were recorded from 205 television programs. Both roll-up and pop-on captions were analyzed. In the first part of the study, captions were edited to remove commercials and then processed by computer to get caption speed data. Caption rates among program types varied considerably. The average caption speed for all programs was 141 words per minute, with program extremes of 74 and 231 words per minute. The second part of the study determined the amount of editing being done to program scripts. Ten-minute segments from two different shows in each of 13 program categories were analyzed by comparing the caption script to the program audio. The percentage of script edited out ranged from 0% (in instances of verbatim captioning) to 19%. In the third part of the study, commonly used words in captioning and their frequency of appearance were analyzed. All words from all the programs in the study were combined into one large computer file. This file, which contained 834,726 words, was sorted and found to contain 16,102 unique words.

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In 1972, public television station WGBH in Boston did a unique experiment in which *The French Chef*, a cooking program featuring Julia Child, was open-captioned. The success of this first attempt at captioning led WGBH to rebroadcast daily an open captioned version of *ABC World News Tonight* for deaf and hard of hearing people. During the 1970s, this was the only regularly broadcast television program in America designed to be accessible to deaf people. It was wildly popular in the deaf community because it was the only televised news program deaf people could understand.

When WGBH began rebroadcasting *ABC World News Tonight*, there were no rules for captioning. Captioning policy developed on a day-to-day basis as captioning problems arose. The guiding principle at that time was to make the program accessible to every deaf viewer regardless of reading ability. Because studies conducted by the Gallaudet University Office of Demographic Studies (Jensema, Schildroth, and O'Rourke, 1975; Trybus and Karchmer, 1977; Jensema and Trybus, 1978) indicated that the average graduate from an educational program for deaf and hard of hearing students read at about a third-grade level, WGBH extensively edited the program script. The word count was cut by about a third and the reading level was cut from roughly the sixth-grade level to the third-grade level. All passive-voice sentence construction was removed, nearly all idioms were removed, contractions were eliminated, clauses were converted into short declarative sentences, and even jokes and puns were changed if it was felt the deaf and hard of hearing audience would not understand them. These

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captioning techniques, which almost everyone now considers overediting, continued for many years. Part of the reason for this was that deaf people were so delighted to have captions that they accepted almost anything thrown on the screen.

As captioned television became a standard part of television services in the late 1980s, deaf people began to examine the quality of captioning more closely. Deaf viewers wrote letters to caption companies indicating they wanted access to whatever was spoken on the audio and that captioners should not play the role of censors. According to conversations with captioning company officials, caption companies have tended to interpret this as meaning deaf people want straight verbatim captioning.

Counting both broadcast and cable, about 100 hours of captioned television programs are shown on national television in the United States each day, yet heretofore no formal data on the characteristics of the captions on these programs have been collected. Are programs now captioned verbatim? How much editing is done? What is the caption presentation speed of programs currently being shown on television? How does this presentation speed vary with the type of program? These and other questions are addressed in the research study reported here.

Table 1
Programs Selected for Study by Type and Number

Regular Programs Programs	N	%
Children's animation	20	11
Children's educational	11	6
Children's action	6	3
Prime-time dramas	26	14
Situation comedies	26	14
Films	21	11
News	20	11
Documentaries	17	9
Talk shows	10	5
Soap operas	9	5
Music specials	6	3
Sports	6	3
Live performances	5	3
Total Programs:	**183**	***98**
Music Videos		
2- to 5-minute songs	22	
Total number of programs:	**205**	

*Percentage sums to less than 100 because of rounding.

Method

Recording

Caption data for the present study were obtained from a sample of television programs recorded as they were telecast. A ten-member advisory panel met to select and analyze programs to be studied. This panel consisted of: Dr. Robert Davilla, New York School for the Deaf; Dr. Judy Johnson, Gallaudet University; Ellie Korres, Gallaudet University; Mardi Loetermen, WGBH; Beth Nubbe, NCI; Judith Brentano, The Caption Company; Martin Block, VITAC; Brenda Battat, SHHH; Dr. Linda Gambrell, University of Maryland; and JoAnn McCann, U.S. Department of Education. Jeff Hutchins of VITAC was the technical consultant for the project. Based on the recommendations of these captioning experts, a sample of 183 programs stratified by program type was selected and recorded in late 1994. Table 1 provides a breakdown of the program types and the number of programs selected for each type. The programs varied in length from a half-hour to about four hours, with the film Gettysburg being the longest. The programs represented a total of approximately 180 hours of airtime. Recording was done using the cable television service in a number of different homes. The exception was for some movies shown over premium cable channels. It proved easier to rent the films from a local video store than to record them from the cable system. All recording was done on a consumer-quality four-head videocassette recorder (VCR). In addition, the project staff gained access to 22 captioned music videos, each of which was between two and five minutes long. These were analyzed separately because they were so different from the regular programming.

Data Extraction

The videotapes were replayed with the signal being run through a special closed-caption decoder which read the closed-caption information from line 21 of the vertical blanking interval and fed that data into a computer file. Special software was written to read the computer's clock and attach a start time and an end time to each line of caption data. This time-and-caption file was the basic raw data analyzed for each program.

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Programs recorded from the commercial networks and pay channels had advertisements, and even those on the PBS network were occasionally interrupted by station breaks or promotional material. All of this nonprogram material was edited out of each data file. This was done by importing each data file into a spreadsheet and deleting the nonprogram parts, a lengthy and time consuming process. The result was a final "clean" data file for each program.

Time Analysis

Analysis of the time data was much more complex than it might seem. Captions and the control codes associated with them are transmitted in a steady, binarily coded stream in the television signal, but the actual appearance of captions on the screen is not necessarily exclusively sequential. There is much time overlap in the caption lines.

There are two kinds of captions, each with different characteristics. Roll-up captions scroll up the screen, usually in a three-line format. As one line rolls off the top, a new line rolls up from the bottom. Although three lines are usually used, two-line and four-line captions also are possible. The roll usually has a steady speed, but the captioner can increase or decrease it as needed to keep up with the program audio. Pop-on captions are blocks of words consisting of one to four lines. These captions pop onto the screen and pop off after a few seconds. There may be more than one block of pop-on captions on the screen at one time. For both kinds of captions, the words are transmitted as one long stream of data, but control codes in the data stream make the decoder divide the words into caption lines, which sometimes have an overlap in screen display time.

The "clean" data files in this study were analyzed with a custom computer software program. Ten kinds of information were outputted by the computer program. The two most important were total time of program (the actual time from when a program begins to when it ends, including break time and commercial time; it does not include commercials or break time before and after a program) and total time of captions on screen (the time during which program captions are present on the screen; it does not include break time, commercial time, or program time during which no captions are shown). All of the analysis in this study is based on total time of captions on screen. Other kinds of information outputted by the computer program were total number of caption lines, total number of words, total number of characters, mean number of caption lines per minute, mean number of words per line, mean number of characters per line, mean number of words per minute, and mean number of characters per minute.

Editing Level

People who are deaf and hard of hearing have repeatedly indicated through letters to caption companies that they prefer verbatim captioning. They know they are not always getting perfect verbatim captioning because they sometimes see an actor speak a word or group of words for which there is no caption on the screen. The problem is that no one seems to know how much editing is done and how much is lost in the conversion from audio to captioning. In the present study, 26 programs (2 for each of 13 program types) were randomly selected, and for each program a sample of 10 minutes of audio was compared to the words that had been captioned. The results were tabulated to give an indication of the percentage of audio usually captioned for each program.

Word Analysis

What words are used in captioning? What is the frequency with which words appear in captions? To provide some insight into these questions, all the words in all the programs in the present study were combined into one large computer file. This file, which contained 834,726 words, was sorted and the 16,102 individual, unique words were arranged into a frequency distribution.

Results and Discussion

Program Characteristics

A total of 205 programs were analyzed: 183 regular programs and 22 short (two- to five-minute) music videos. Among the 183 regular programs, 78 ran a half-hour, 75 ran one hour to 90 minutes, 25 ran two hours, and 5 ran more than two hours. Overall, there were roughly 180 hours of video.

Caption Speed

In Table 2, data on caption speed are provided by category for the 183 programs analyzed for the present article. (We will discuss the 22 short music videos separately.) For each program grouping, the mean, standard deviation, maximum value, minimum value, and range are given for words per minute (WPM), characters per minute (CPM), characters per word, caption lines per minute, words per line, and characters per line. For all programs, the mean values were 141 WPM, 736 CPM, 5.2 characters per word, 38.7 caption lines per minute, 3.7 words per line, and 19.2 characters per line. WPM and CPM are the two indexes usually used to measure caption speed. WPM has more intuitive meaning for most people, even though it can be affected by differences in word length.

In the present study, we found that roll-up captions generally present more words over a given period than pop-up captions (151 WPM vs. 138 WPM), and that roll-up captions are used for a wider range of audio speeds, from very slow (74 WPM) to very fast (231 WPM).

Sports programs and music specials had the slowest caption speeds. Sports are visual in nature, and most viewers take more interest in screen action than in commentary. Music specials follow the pace of the music, and the lyrics often are sung more slowly than they

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Table 2
Caption Speed Statistics

		Words/min.	Chars./min.	Chars./word	Lines/min.	Words/line	Chars./line
All programs (N = 183)	*M*	141	736	5.2	38.7	3.7	19.2
	SD	21	108	0.2	6.0	0.5	2.7
	Maximum	231	1,171	6.2	55.3	5.0	25.9
	Minimum	74	357	4.7	19.1	2.8	14.0
	Range	157	814	1.5	36.2	2.2	11.9
Roll-up captions (N = 48)	*M*	151	781	5.2	34.8	4.4	22.5
	SD	31	165	0.2	7.2	0.3	1.8
	Maximum	231	1,171	5.6	55.3	5.0	25.9
	Minimum	74	357	4.8	19.1	3.4	16.3
	Range	157	814	0.8	36.2	1.6	9.6
Pop-up captions (N = 135)	*M*	138	719	5.2	40.0	3.5	18.1
	SD	15	73	0.2	4.9	0.3	2.0
	Maximum	177	832	6.2	49.6	4.4	22.9
	Minimum	87	463	4.7	24.4	2.8	14.0
	Range	89	369	1.5	25.2	1.6	8.9
Talk shows (N = 10)	*M*	177	897	5.1	40.4	4.4	22.2
	SD	30	151	0.1	6.4	0.3	1.3
	Maximum	231	1,171	5.3	55.3	5.0	24.6
	Minimum	142	713	4.9	33.2	4.1	20.7
	Range	89	458	0.4	22.1	0.9	4.0
Sports (N = 6)	*M*	106	535	5.1	23.2	4.6	23.0
	SD	15	79	0.1	3.0	0.2	1.2
	Maximum	126	645	5.2	26.3	4.9	25.0
	Minimum	88	442	4.9	19.1	4.1	21.4
	Range	38	203	0.3	7.2	0.7	3.6
Soap operas (N = 9)	*M*	154	778	5.1	36.7	4.2	21.2
	SD	15	72	0.1	3.3	0.3	1.2
	Maximum	178	896	5.2	44.1	5.0	24.3
	Minimum	138	696	4.9	33.1	4.0	20.3
	Range	40	200	0.3	11.0	1.0	4.0
Situation comedies (N = 26)	*M*	147	758	5.2	43.1	3.4	17.7
	SD	10	51	0.1	3.8	0.3	1.3
	Maximum	162	825	5.4	49.6	4.0	20.3
	Minimum	119	593	5.0	35.3	3.0	15.5
	Range	43	232	0.4	14.3	1.1	4.8
Prime-time dramas (N = 26)	*M*	146	748	5.1	42.9	3.4	17.5
	SD	10	52	0.1	3.5	0.2	1.1
	Maximum	164	814	5.4	48.5	3.9	19.6
	Minimum	120	605	4.9	35.6	3.2	16.0
	Range	45	210	0.5	12.9	0.7	3.5
News (N = 20)	*M*	157	835	5.3	36.2	4.3	23.1
	SD	15	86	0.2	4.1	0.3	1.5
	Maximum	183	978	5.7	43.2	4.9	25.9
	Minimum	123	652	4.9	28.7	3.9	20.7
	Range	60	326	0.7	14.5	1.0	5.2
Music specials (N = 6)	*M*	107	551	5.2	29.0	3.7	19.2
	SD	24	135	0.2	8.1	0.5	2.6
	Maximum	144	729	5.4	41.6	4.5	22.4
	Minimum	74	357	4.8	19.2	3.2	16.3
	Range	70	372	0.6	22.4	1.3	6.1
Live performances (N = 5) (no music)	*M*	137	725	5.3	36.5	3.7	19.8
	SD	19	88	0.1	2.6	0.4	1.9
	Maximum	156	808	5.4	39.3	4.4	22.5
	Minimum	115	623	5.2	34.4	3.3	17.8
	Range	41	185	0.3	4.9	1.1	4.7
Children's educational (N = 10)	*M*	124	667	5.4	34.6	3.5	18.7
	SD	18	99	0.2	4.9	0.3	1.7
	Maximum	154	791	5.7	38.8	4.1	21.7
	Minimum	87	463	5.0	24.4	3.1	16.8
	Range	66	328	0.7	14.4	1.0	4.9
Children's animation (N = 20)	*M*	125	660	5.3	39.4	3.2	16.8
	SD	13	61	0.2	3.9	0.2	1.0
	Maximum	148	784	5.7	46.3	3.5	19.0
	Minimum	105	574	4.9	33.4	2.9	15.2
	Range	43	210	0.8	12.9	0.6	3.9
Children's action (N = 6)	*M*	131	685	5.2	40.2	3.3	17.0
	SD	20	101	0.1	5.0	0.2	1.4
	Maximum	152	788	5.5	45.7	3.5	19.1
	Minimum	95	494	5.1	33.2	2.9	14.9
	Range	57	294	0.4	12.6	0.6	4.2
Film (N = 22)	*M*	140	710	5.1	41.3	3.4	17.3
	SD	13	59	0.2	3.9	0.4	1.9
	Maximum	177	832	5.4	47.9	4.2	20.5
	Minimum	121	607	4.7	32.1	2.8	14.0
	Range	56	225	0.7	15.8	1.4	6.4
Documentary (N = 17)	*M*	139	766	5.5	35.7	3.9	21.6
	SD	12	43	0.2	3.4	0.4	1.7
	Maximum	161	829	6.2	45.6	4.9	25.4
	Minimum	113	698	5.2	31.0	3.3	18.1
	Range	48	131	1.0	14.6	1.6	7.3

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Table 3
Speed Rates for Programs with Fastest and Slowest Captioning Captioning

	Program type	Caption type	Mean words/min.	Mean chars./min.	Mean caption lines/min.	Mean words/line	Mean chars./line	Mean chars./word
Programs with fastest captioning								
Later with Greg Kinnear	Talk show	roll-up 3-line	231	1171	55	4.2	21	5.1
Last Call	Talk show	roll-up 3-line	229	1134	46	5.0	25	5.0
Connie Chung	News	roll-up 3-line	183	920	38	4.8	24	5.0
Guiding Light	Soap opera	roll-up 3-line	178	870	36	5.0	24	4.9
Meet the Press	Talk show	roll-up 3-line	177	930	40	4.4	23	5.3
		M	**199**	**1005**	**43**	**4.7**	**24**	**5.0**
Programs with slowest captioning								
ABC Sports: Golf	Sports	roll-up 2-line	94	463	20	4.7	23	4.9
TNT Basketball	Sports	roll-up 3-line	88	442	19	4.6	23	5.0
Sesame Street	Children's Ed.	pop-on	87	463	27	3.2	17	5.3
Billboard Music Awards	Music special	roll-up 3-line	87	430	19	4.5	22	5.0
Whitney Houston	Music special	roll-up 3-line	74	357	22	3.4	16	4.8
		M	**86**	**431**	**22**	**4.1**	**20**	**5.0**

would be spoken. The result is a slower caption rate. There are exceptions, however, as we later show in the discussion of music videos.

Although we found children's programming to have a slow captioning rate, that rate was faster than expected. For children's educational, animation, and action programs, the rates were 124, 125, and 131 WPM, respectively. The overall mean for children's programs was 126 WPM. Program speed ranged from 87 WPM for *Sesame Street* to 154 WPM for *Bill Nye the Science Guy*. A trend toward faster caption rates for programs aimed at older children can be discerned; this initial finding, however, warrants more research.

In the middle range of caption speed were performances (137 WPM), documentaries (139 WPM), films (140 WPM), prime-time dramas (146 WPM), and situation comedies (147 WPM). These kinds of programs tended to cluster around the mean captioning speed of 141 WPM which was found for all 183 programs analyzed.

Soap operas (154 WPM), news programs (157 WPM), and talk shows (177 WPM) had the fastest caption speeds. The mean speed for talk shows was boosted by two late-night programs, *Later With Greg Kinnear* (231 WPM) and *Last Call* (229 WPM). Table 3 provides statistics on the programs with the five fastest and five slowest caption speeds. The five programs with the fastest speeds had a mean caption rate more than twice that of the five programs with the slowest speeds.

We had suspected that programs considered more difficult to read might have a longer mean word length. This was not the case. For example, although the captioning for *Sesame Street* was easier to read than for *Meet the Press*, the captions for both programs have a mean word length of 5.3 characters. More difficult material is not necessarily characterized by longer word length, and we cannot take word length as an indication of reading difficulty.

The music videos were analyzed as a separate category. Music videos were included in this study mostly as a matter of curiosity because they represent a unique kind of caption material. The caption speed for the 22 music videos varied from 60 to 311 WPM, a much wider range than was found in the regular program categories. In many music videos, images flash on the screen for a brief time. This makes captions harder to read because the viewer's attention is distracted. Rap music videos had the fastest and most difficult-to-read captions. For example, the captions for the song *Freak It* (311 WPM) proved impossible to understand without repeated viewing.

Caption Editing

For each of the program categories, two programs were randomly selected, and a 10-minute segment of each was analyzed to see if there were any words spoken but not captioned. The results are provided in Table 4. Several programs were 100% captioned. The most heavily edited program was a golf program on the ABC network for which only 81% of the spoken words were captioned. This program was clearly an anomaly because it was captioned live and roll-up captions were used, meaning that there were many times when captions could not be put on screen without obscuring a player in the act of putting or a ball rolling toward a cup.

Among the 26 programs examined, the average was 94% captioned. When the golf program was excluded, the average was 95% captioned. To take a closer look at the material being edited, we selected two programs and made a word-by-word inspection. A situation comedy, *Hangin' with Mr. Cooper*, was chosen because it was the most heavily edited program with pop-on captions (87% captioned). At 91%

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captioned, the *Today* show was chosen as an example of a heavily edited program with roll-up captions.

Appendix Table 1 shows the changes made in a captioned segment of *Hangin' with Mr. Cooper*. The first column gives the exact words which were spoken. Most of the editing does not alter the meaning of the text. The changes usually do no more than provide a slight simplification of the sentence structure. Perhaps some of the changes were made because the captioner's supervisor gave instructions to caption at a certain WPM rate. For example, replacing "you know you don't have" with "you don't have" saves two words but has little effect on length or readability. Another possibility is that the studio provided the captioner with a script and the captioner captioned the program verbatim, but then the studio decided to go over the program again and "sweeten" the audio after it was captioned.

Appendix Tables 2, 3, and 4 illustrate two different kinds of editing applied to the *Today* show. Parts of this program, such as the opening segment and news updates, follow a script; other parts, such as interviews, do not. For the scripted segments, the caption company is given a copy of the script before the show airs. The company converts the script to captions and feeds these captions into the broadcast at airtime. The program's hosts and other on-air staff see the script on a TelePrompTer, but they do not always say exactly the same words that they read. The result is "editing" in the form of ad-libbing. Appendix Table 2 is an excerpt from a scripted segment in which several people are interacting. There is considerable ad-libbing. Appendix Table 3 is an excerpt from a scripted segment consisting of straight news reporting. The newscaster stays with the script, and there is very little difference between the spoken and captioned versions. Appendix Table 4 is an excerpt from an interview on *Today* that was captioned live by a stenocaptioner. There is much editing, but the essential information is still there.

Table 4
Percentage of Captioned Audio

Program type	Program title	Percent captioned
Soap opera	*The Bold and the Beautiful*	100
	Guiding Light	100
Documentary	*Wild America*	100
	Great Railroad Journey	99
Film	*Ace Ventura, Pet Detective*	98
	Madame Butterfly	97
Talk show	*Late Show with David Letterman*	99
	Tonight Show with Jay Leno	96
Live performance	*Clio Awards*	97
	Seigfried and Roy	95
Prime-time drama	*Arly Hanks*	97
	ER	94
Music special	*Whitney Houston*	100
	Billy Ray Cyrus Special	91
News	*ABC News*	98
	Today	91
Children's action	*Power Rangers*	96
	California Dreams	90
Children's animation	*Animaniacs*	97
	Batman - The Series	89
Children's educational	*Kids Songs*	93
	Barney	88
Situation comedy	*In Living Color*	91
	Hangin' with Mr. Cooper	87
Sports	*CBS Sports: Figure Skating*	90
	ABC Sports: Golf	81

Word Analysis

The caption scripts from all the programs in the present study were combined into one large computer file. This file was edited to remove punctuation and anything else that was not a word. Certain nonstandard utterances such as uh, mmm, and ahh were kept, since they are commonly used in captioning to indicate certain sounds in the audio. The resulting word list was sorted and arranged into a frequency distribution. The file had 843,726 words, of which 16,102 were unique. Just 10 words (the, you, to, a , I, and, of, in, it, that) accounted for 176,793 of the 834,726 words (21%). Half of all the words captioned were accounted for by 79 unique words. Just 250 words accounted for more than two-thirds of all the words used in the captions. The graph at Figure 1 depicts the cumulative frequency of the 4,000 most frequently occurring unique words.

For comparison, the frequency distributions of the words in about a dozen individual programs were examined. All the cumulative frequency graphs for these programs were very similar. Figure 2 provides a cumulative frequency graph for the 678 unique words used in an episode of *Wings*, a situation comedy typical of those currently shown on the air. For comparison purposes, the graph also includes the cumulative frequency curve for the 678 most frequently used words among all programs. The *All Programs* line provides a lower band for the frequency curve of any individual program, since it represents all unique words available among all programs in this study. In this *Wings* episode, just 51 unique words accounted for half of all words used in the captions and 174 words accounted for 75% of the words used. The important point is that captioned television (and, by inference, the

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Figure 1
Cumulative Frequency Percentage for 4,000 Most Frequently Occuring Unique Words

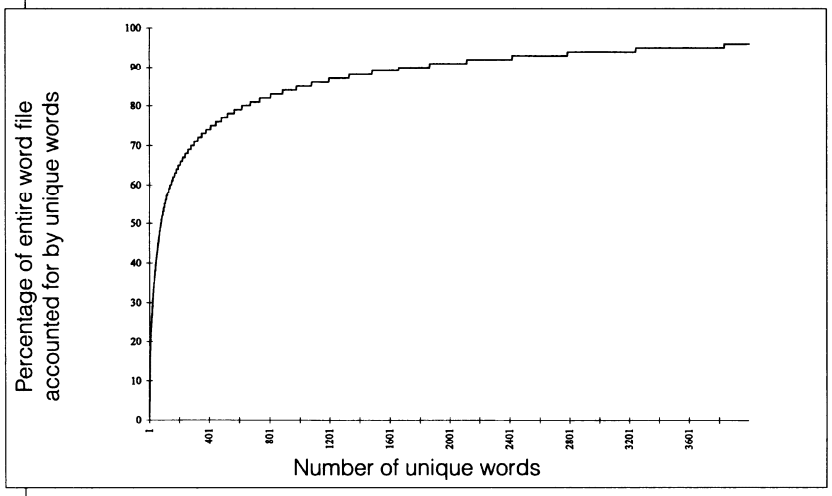
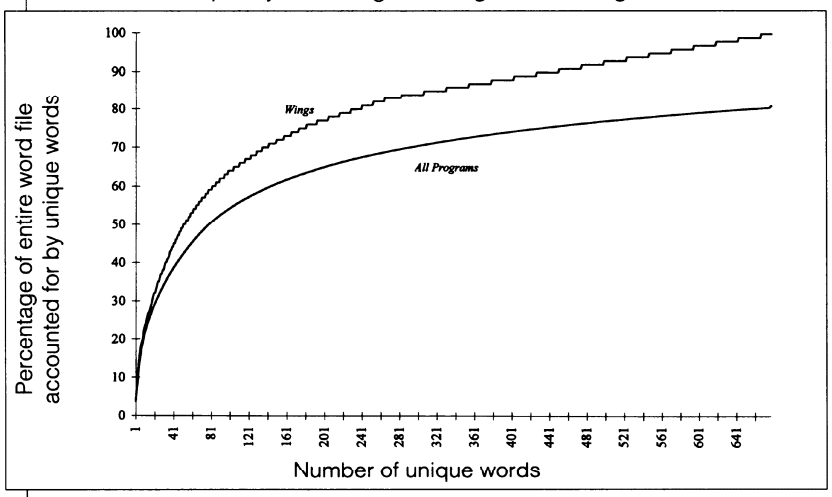


Figure 2
Cumulative Frequency Percentage for *Wings* and *All Programs*



audio that the captions represent) uses relatively few unique words. There are at least 500,000 words in the English language, but mastery of fewer than 500 words will help a viewer to understand most of the vocabulary in any television program shown in the United States today.

Conclusion

This research has examined the statistical characteristics of the closed captions in 205 television programs, a broad sampling of the material currently available over broadcast and cable television. The overall mean caption speed among all programs was 141 WPM, but this does not indicate the wide variation among television programs. The slowest program (a *Whitney Houston* music special) had only 74 WPM, while a late night talk show (*Later With Greg Kinnear*) had 231 WPM.

Most captioning shown today appears to be near-verbatim. Variance in caption speed is mostly a function of the audio speed rather than a function of captioning techniques or editing. For example, the slow captions (74 WPM) on the *Whitney Houston* program were compared to the program audio and were found to be straight verbatim captioning. In the cases where considerable caption editing was found, there were usually good reasons. A golf program was found to have the most editing (only 81% of the audio was captioned), but this editing was done because the roll-up captions would have obscured on-screen action and seriously detracted from the program. When editing was found on programs, much of it was attributable to program circumstances and technological limitations, rather than careless captioning or a deliberate editing policy. Overall, captions match program audio about 95% of the time.

Captions, and by extension the spoken language they represent, use relatively few unique words, but they use them often. Just 250 unique words represented two-thirds of all 834,736 captioned words in the programs. The captions on a typical half-hour program use about 700 unique words. It would seem that mastery of the use of just a relatively small number of words is important to understanding captioning.

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Appendix Tables

Appendix Table 1
Changes in a Captioned Segment from *Hangin' with Mr. Cooper*

Spoken	Removed	Added	Caption
TURN IT UP, I CAN'T HEAR ANYTHING.	I CAN'T HEAR ANYTHING.		TURN IT UP.
SHH! HE'S ON THE PHONE.			SHH! HE'S ON THE PHONE.
COME ON, BABY.			COME ON, BABY.
YOU KNOW YOU DON'T HAVE	YOU KNOW		YOU DON'T HAVE
TO GO SHOPPING.			TO GO SHOPPING.
YOU KNOW WHAT BIG DADDY			YOU KNOW WHAT BIG DADDY
WANT FOR HIS BIRTHDAY.			WANT FOR HIS BIRTHDAY.
HOLD ON			HOLD ON
LET ME CALL YOU BACK, ALL RIGHT.			LET ME CALL YOU BACK.
WHAT DOES HE WANT?			WHAT DOES HE WANT?
HEY, BIG DADDY.			HEY, BIG DADDY.
WE'RE SORRY COUSIN MARK.	COUSIN MARK		WE'RE SORRY
WE WERE JUST TRYING TO FIND OUT	WERE JUST TRYING	WANTED	WE WANTED TO FIND OUT
WHAT YOU WANTED			WHAT YOU WANTED
FOR YOUR BIRTHDAY.			FOR YOUR BIRTHDAY.
WELL YOU KNOW YOU TWO SHOULDN'T	WELL YOU KNOW...TWO		YOU SHOULD'NT
BE EAVESDROPPING.			BE EAVESDROPPING.
CAUSE YOU NEVER KNOW	CAUSE		YOU NEVER KNOW
WHAT YOU MIGHT HEAR,			WHAT YOU MIGHT HEAR,
LIKE HOW TYLER'S			LIKE HOW TYLER'S
PARENTS ARE SENDING HIM	PARENTS ARE SENDING HIM	BEING SENT	BEING SENT
TO MILITARY SCHOOL.			TO MILITARY SCHOOL.
THE FEW, THE PROUD,			THE FEW, THE PROUD,
THE BIG-HEADED.			THE BIG-HEADED.

Appendix Table 2
Changes in Scripted *Today* Show Segment: People Interacting

Spoken	Removed	Added	Caption
AND WELCOME TO TODAY			>>>AND WELCOME TO TODAY
ON THIS THURSDAY MORNING.			ON THIS THURSDAY MORNING.
I'M KATIE COURIC.			I'M KATIE COURIC.
AND I'M MATT LAUER, FILLING IN FOR	FILLING IN FOR		>>AND I'M MATT LAUER,
BRYANT GUMBELL WHO IS ON	GUMBELL WHO		BRYANT IS ON
VACATION THIS WEEK.			VACATION THIS WEEK.
AND MATT AHEAD IN OUR FIRST HALF	AND MATT		>>AHEAD IN OUR FIRST HALF
HOUR THIS MORNING,	THIS MORNING		HOUR,
WE'RE GOING TO GET AN UPDATE	RE GOING TO	LL	WE'LL GET AN UPDATE
ON THE LATEST DEVELOPMENTS			ON THE LATEST DEVELOPMENTS
IN THE O.J. SIMPSON CASE			IN THE O.J. SIMPSON CASE
AND HEAR WHAT NICOLE BROWN			AND HEAR WHAT NICOLE BROWN
SIMPSON'S SISTER HAD TO SAY			SIMPSON'S SISTER HAD TO SAY
OUTSIDE THE COURTROOM.			OUTSIDE THE COURTROOM.
WE'LL ALSO LOOK			WE'LL ALSO LOOK
AT THE BIZARRE AND VERY TRAGIC	VERY		AT THE BIZARRE AND TRAGIC
STORY OUT OF SWITZERLAND,			STORY OUT OF SWITZERLAND,
WHERE 48 PEOPLE DIED			WHERE 48 PEOPLE DIED
IN A MASS SUICIDE.			IN A MASS SUICIDE.
MATT, AND ANOTHER SAD	MATT	VERY	>>AND ANOTHER VERY SAD
STORY THIS MORNING — KATIE	KATIE		STORY THIS MORNING
THE PARENTS OF A YOUNG AMERICAN BOY	AMERICAN		THE PARENTS OF A YOUNG BOY
KILLED BY BANDITS IN ITALY			KILLED BY BANDITS IN ITALY
A WEEK AGO TODAY.			A WEEK AGO TODAY.

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Appendix Tables

Appendix Table 3
Changes in Scripted *Today* Show Segment: Straight News Report

Spoken	Removed	Added	Caption
THE GRIM SEARCH			>>>THE GRIM SEARCH
CONTINUES THROUGH THE RUINS			CONTINUES THROUGH THE RUINS
OF BURNED-OUT HOMES	HOMES	HOUSES	OF BURNED-OUT HOUSES
IN SWITZERLAND.			IN SWITZERLAND.
IT'S THE AFTERMATH			IT'S THE AFTERMATH
OF AN APPARENT MASS SUICIDE			OF AN APPARENT MASS SUICIDE
BY MEMBERS OF A DOOMSDAY			BY MEMBERS OF A DOOMSDAY
CULT THAT HAS LEFT AT LEAST			CULT THAT HAS LEFT AT LEAST
50 PEOPLE DEAD			50 PEOPLE DEAD
IN SWITZERLAND AND IN CANADA.	IN		IN SWITZERLAND AND CANADA.
DETAILS NOW FROM NBC'S	NOW		DETAILS FROM NBC'S
KEITH MILLER.			KEITH MILLER.
THE POLICE SAY THE DEATH			>>THE POLICE SAY THE DEATH
TOLL COULD GO HIGHER.			TOLL COULD GO HIGHER.
INVESTIGATORS WAITED UNTIL			INVESTIGATORS WAITED UNTIL
THIS MORNING TO SEARCH			THIS MORNING TO SEARCH
A BURNT-OUT SKI CHALET	T	ED	A BURNED-OUT SKI CHALET
FEARING IT COULD BE			FEARING IT COULD BE
BOOBY-TRAPPED.			BOOBY-TRAPPED.

Appendix Table 4
Changes in Unscripted *Today* Show Segment: Captioned Live by Stenographer

Spoken	Removed	Added	Caption
WHAT HAPPENED?			WHAT HAPPENED?
>>WELL UH. INDIVIDUAL INVESTORS	WELL, UH		>>INDIVIDUAL INVESTORS
ACTUALLY HUNG IN THERE.			ACTUALLY HUNG IN THERE.
THE MARKET WAS DOWN THE			THE MARKET WAS DOWN THE
WORST WE'VE HAD ALL YEAR.			WORST WE'VE HAD ALL YEAR.
MOSTLY BECAUSE TECHNOLOGY STOCKS	MOSTLY		BECAUSE TECHNOLOGY STOCKS
TOOK A REAL HIT.			TOOK A REAL HIT.
>>AND DO YOU NOW RECOMMEND THAT, UH, SMALL	AND, NOW, THAT, UH,		DO YOU RECOMMEND SMALL
INVESTORS GET BACK INTO			INVESTORS GET BACK INTO
TECHNOLOGY STOCKS?			TECHNOLOGY STOCKS?
>>YES	>>YES		
>>AS A LOT OF PEOPLE ARE DOING	AS		A LOT OF PEOPLE ARE DOING
RIGHT NOW.	RIGHT NOW	THIS?	THIS?
>> THEY ARE. THEY ARE.	THEY ARE.		>>THEY ARE.
THEY HAVEN'T HAD MUCH CHANCE TO	MUCH		THEY HAVEN'T HAD A CHANCE TO
GET INTO THESE THINGS AT LOWER	THINGS		GET INTO THESE AT LOWER
PRICES.			PRICES.
BUT THEY'VE DONE THAT AND ALREADY THEY'VE	BUT, ALREADY THEY'VE	HAVE	THEY'VE DONE THAT AND HAVE
COME BACK QUITE STRONGLY. SO I THINK	QUITE, SO I THINK		COME BACK STRONGLY.
IT IS TIME TO GET BACK INTO	IS	'S	IT'S TIME TO GET BACK INTO
TECHNOLOGY.			TECHNOLOGY.

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