Abstract: A comparison was made of the levels and patterns of emotional tone scores in four successive versions of three stories that have been translated from German by Ellis to illustrate his argument that the Grimm Brothers made extensive revisions from the purported manuscript of the stories to their celebrated first edition versions. This objective analysis was based upon the evaluation, activity, and potency of the emotions connoted by those of the 1000 most frequent English words detected by the computer as occurring in the narratives. The stories were: The King's Daughter and The Enchanted Prince: Frog King, Sleeping Beauty, and The Little Brother and Little Sister (Hansel and Gretel). Changes in story length, in mean levels of emotional tone, and in patterns of emotional tone across story versions support Ellis's judgement that subsequent revisions were less drastic than the first one, from the manuscript. It was also shown that the stories are quite different from each other in level and pattern of emotional tone.

Key Words: evaluation, activity, potency, emotional tone

Introduction
It has been argued by Ellis (1983) that the stories in the first edition of the collection made by the Grimm Brothers were extensively rewritten from their manuscript forms which were sent to Brentano and published by Lefftz (1927). To support and illustrate this argument Ellis provided English translations of the manuscript form, the first edition, second edition and one other revision for each of three stories: The King's Daughter and The Enchanted Prince: Frog King, Sleeping Beauty, and The Little Brother and Little Sister (Hansel and Gretel).

The question addressed in the present study was, "How much did the changes made by the Brothers Grimm from the manuscript to the first edition of the stories affect their level and pattern of emotional tone?" The measures of emotional tone used were evaluation (pleasantness), activity (arousal), and potency (toughness vs tenderness), as indexed by the connotative meaning of the 1000 most frequent English words occurring in the four versions of each story. These scores were obtained by the standard methods that have been reported in Anderson and McMaster (1986, 1982). Once collected, the scores are averaged across the whole story, or in blocks of 100 of the total words in the story, or in any other size of unit based upon the count of total words.
The proposition being tested was that the differences between the manuscript and the first edition of these stories are larger than differences between subsequent editions.

**Evaluation of Differences Between Manuscript and Editions Story lengths**

The total number of words in the stories in their manuscript and successive edition versions are shown in Table 1. The edition labelled "Last" is the third edition of Frog (the King's Daughter and the Enchanted Prince: Frog King), the sixth edition of Beauty (Sleeping Beauty), and the fifth edition of Hansel (the Little Brother and Little Sister). The increase in number of words from the manuscripts to the first editions averaged 593 words over the three stories, while the increases from the first to the second and from the second to the last averaged 203 and 249 words respectively. The story Frog is just 80 words longer than Beauty, on average, but Hansel is more than 1000 words longer than the other two, over double their length. An overall chi-square test for the significance of the differences in these cell entries was 61.68 (6, N = 16120), P < 0.001. This means that the amounts of change across editions were not the same for each story. The second largest increase in length was from the first to the second edition in both Frog and Beauty, and between the second edition and the last for Hansel. In every case the increase in story length from the manuscript to the first edition was greater than any subsequent increase.

**Emotional Tone Levels**

After the evaluation, activity, and potency scores had been obtained for each of the 1000 most frequent English words occurring in these texts, mean values were collected for every block of 100 total words. The number of 'hit' words within each block was around 25% of the total. The number of blocks, of course, depended upon the length of the story. These mean values per block are thought of as emotional tone scores, and their mean values for each story version are shown in Table 2.

Incidentally, sometimes it is suggested that differences in the length of stories are enough in themselves to affect mean emotional tone levels. That this is not so is nicely demonstrated in Table 2 by the last version of Frog and the manuscript version of Hansel. These are close to the same length of 13 one hundred total word blocks, but are very different in levels of evaluation and of potency.

To determine which of the differences in mean emotional tone values between stories, story versions, and scores, were statistically significant a repeated measures analysis of variance was done over all. The evaluation, activity, and potency scores were the repeated measures. A significant main effect was found for Stories, which differ over all scores and versions from each other, F(2,