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The Diary of a Suicidal Youth: A Linguistic Analysis

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ABSTRACT

A Linguistic Analysis using a Computer Program (LIWC) for the 58 entries over the last year of life of a young woman who died by suicide revealed 3 significant changes and 5 trends over time. In particular, the woman showed more anger as her death grew closer, and she focused less on the future. These results differ from those obtained from other studies of diaries, suggesting the importance of a psychological typology for suicides.

INTRODUCTION

Those who die by suicide leave little behind that may give clues to their state of mind prior to killing themselves. About one quarter of suicides leave a suicide note, and there have been many studies of these notes [1]. Since some published poets have died by suicide, such as Sylvia Plath and Anne Sexton, their poems have been studied for clues to the psychodynamics of their suicide. For example, Lester edited a special issue of Death Studies, in which contributors discussed the suicide of Sylvia Plath using her autobiographic novel and poems [2].

It is rare for suicides to leave diaries that are found and preserved after their death. No more than a dozen are known. An edited version of the diary of the Italian novelist, Cesare Pavese, has been published, while others have been collected by suicidologists [3,4]. Occasionally, these diaries have been analyzed qualitatively to obtain clues to the psychodynamics behind the suicide [5,11].

For the diary of a young college student who died by suicide, Pennebaker and Stone applied a computer program to identify trends in words over the last year of her life. Pennebaker and Stone identified several trends over the five books comprising her diary [6]. For example, there was a decline in the use of personal pronouns (I, me) over the five books, a decline in death words, an increase in religious words, a decline in words concerned with negative emotions and an increase in words concerned with positive emotions. Lester and Barnes applied the same computer program to analyze the letters over a period of two years to a friend of a young man who died by suicide, and they found a decrease in words indicating negative emotion and an increase in death-related words [7].

The present study reports a linguistic analysis of the last year of diary written by a young woman who died by suicide [8].

ELECTRA

Electra was born to a single mother and lived in the early years with Electra's maternal grandparents who supported them. Electra's mother neglected Electra,

going out overnight for parties and not taking care of her (for example, leaving her cold in her crib with no clothes on). The mother was rarely affectionate with Electra.

When Electra was 8, her mother decided to move into Manhattan with a boyfriend. The plan was to enroll Electra in a gifted program. Two years later, Electra and her mother moved into their own apartment after Electra told her mother that a male friend of the mother had sexually abused her. The grandparents brought Electra home with them when her mother decided to go to Singapore for a week but did not return for 8 months.

Electra was pleased when her mother had returned. However, the mother was ill with cervical cancer. She refused treatment, was abusing alcohol and having hallucinations. She let a man move in with her and Electra who was a convicted felon and forced Electra's mother to hand over her cash at gun point. Eventually, the felon departed, the grandparents came, and Electra's mother was hospitalized, detoxified and diagnosed with metastatic cervical cancer. Electra's mother took two years to die and, at the same, time the grandmother developed Alzheimer's dementia.

By age 10, Electra was reading at a high school level and had many friends. She was beautiful. Electra's mother died when Electra was 15. Electra lived for a while with an uncle and aunt with whom she did not get on. When her aunt and uncle planned to go to Jamaica without her, Electra took an overdose of pain pills but informed her uncle that she had taken them. She was hospitalized and treated with antidepressants and, in family therapy, she revealed sexual abuse at the ages of 5 and 8. The abuse at age 5 was probably what Electra was told about by her mother, but Electra recalled the abuse at age 8 – by whom it is not revealed.

Electra was costing the family a great deal of expense, and Electra seemed to act as if it was her right to continue at the private school and have luxuries (such as eating at expensive restaurants). Over the years, Electra caused a great deal of friction between her aunts and uncles, some of whom gave in to her demands while others tried to set limits.

For college, Electra was told she had to apply as an independent student with a little financial help from the family. She was awarded a scholarship at the Wharton School in Philadelphia, which was where Electra's mother had wanted her to go. She went despite the financial strain on her and the family. Electra stopped taking her medication. She ignored the meal plan her aunts and uncles bought for her and ate out in expensive restaurants. Her grades deteriorated, but she lied about them to her aunt and uncle. At the end of her sophomore year, she lost part of her scholarship and, again, she hid this from the aunt and uncle.

Electra saw a therapist, a post-doctoral psychologist. His diagnosis was acute major depressive disorder plus PTSD from the sexual abuse at age 8. The therapist thought he understood Electra, but Osborne judged that he had not pierced her façade. In addition, she lied to him (about medication, etc.). Her depression and hopelessness scores remained high and stable over time. Osborne thought that Electra had had deep-seated rage. She lied manipulated, exploited and abused those who were her resources, and she avoided responsibility - a personality disorder. Despite the fact that Electra's mother was a poor mother, often abandoned Electra and subjected her to traumatic situations with her boyfriends, Electra idealized her mother in her diary and frequently wrote that she missed her mother.

Analysis of electra's diary

Electra's life history is based on Osborne's description in her book on Electra, which also contains the diary [6].

Electra's diary begins April 25, 1995, and the last entry was April 2, 2002, the day of her death at the age of 22. For the present analysis, the 58 entries for the last year of her life were entered into Pennebaker's LIWC program. The 58 entries were not spread evenly over the one-year period, and so each was assigned a score corresponding to how many days since the start of the year. The first entry on April 3 was, therefore, numbered 1, the entry on April 5 numbered 3, and the entry on April 8 numbered 6, etc. A higher number indicates closer to the day of death.

The Linguistic Inquiry Word Count, while lacking a theoretical basis, scores texts for interesting content using 74 categories [9]. The LIWC relies on a built-in dictionary of more than 2,300 words and word stems. The LIWC counts words in text files and sorts them into categories, such as linguistic dimensions (e.g., word count, articles, prepositions, pronouns), psychological processes (e.g., positive and negative emotions, cognitive processes, social processes), relativity (e.g., time, space and motion), and current concerns (e.g., work, leisure, physical states, metaphysical). Words occurring in a text can be assigned to multiple categories. For example, the word "cried" is an element of four categories: sadness, negative emotion, overall affect, and a past tense verb.

RESULTS

Only 8 of the 74 categories showed trends over the year, about what would be expected by chance. Four trends were statistically significant (two-tailed $p < .05$) and four showed non-significant trends ($p < 0.10$) – see table 1. Two of the trends are of interest: the increase in negative emotions and, in particular, anger. It appears that Electra expressed more anger as the time of her suicide came closer. The decrease in words concerned with causation suggest that Electra was less interested in the reasons for her life's situation. The significant increase in words concerned with inhibition (block, constrain) suggests that Electra felt more trapped.

Table 1: Trends over the final year of the diary (58 entries).

Category	Pearson correlation	Examples of words (from the LIWC manual
Prepositions	-0.26*	on, from
Negative emotions	+0.23*	hate, worthless
Anger	+0.22*	hate, kill
Causation	-0.23*	because, hence
Inhibition	+0.31**	block, constrain
Future tense verbs	-0.27**	
Inclusive	+0.64***	with, include
School	+0.30**	class, student

DISCUSSION

The results from this linguistic analysis of the diary of a suicide indicate that there is great variation in the diaries of suicides. In the study of the diary of Katie had an increase in positive emotions over time, while Electra had an increase in negative emotions, in particular anger. One problem with the study of diaries is that there are not many diaries in existence. Lester [4] studied seven diaries, only three of which were diaries of ordinary people, given to him by their survivors. This suggests that it would be useful to have a reliable classification of suicides. In a study of medical examiner files for a large sample of suicides, compared the various typologies of suicides that had been proposed and found that five clusters emerged: escape, confusion, aggression, alienation, and depression/low self-esteem. Perhaps Electra fits into the aggression category [10].

This analysis also suggests that a linguistic analysis is not sufficient for understanding the psychodynamics of a suicide. A linguistic analysis should be supplemented with a qualitative analysis, and then the linguistic analysis can provide objective data to support the themes identified in the qualitative analysis. For example, in their analysis of the diary of a young man who died by suicide, Lester and Kaus [5] used a qualitative analysis to document themes over the nine months of the diary and found, for example, that suicidal thoughts increased over the period, whereas stress and depression decreased. The linguistic analysis indicated that words concerned with death increased over the 9 months (r +0.82) and words concerned with anxiety decreased (r=−0.79). In that case, the LIWC analysis was able to confirm subjective observations.

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