



Statement Analysis of Deception Detection

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Abstract

Deception detection can be achieved through the following linguistic method: Statement Analysis[®], which is illustrated by examples based mainly on the theories in lexicology, syntax, graphology, psychophysiology, kinesics, and cognition. The techniques are very significant to forensic context, business negotiation, job/school interview, and may be widely applied to law enforcement in crime investigation.

Keywords

Deception, Detection, Statement Analysis

Subject Areas: Linguistics, Psychology

1. Introduction

“Lie detection, also referred to as deception detection, uses questioning techniques along with technology that record psychological functions to ascertain truth and falsehood in response” (Wikipedia: “Lie Detection”). This is a general definition perceived by the public, because what we are most acquainted with, when mentioning lie detection, is the technique “polygraph” which is widely adopted in law enforcement areas to provide evidence or as an aid in the investigation of the suspect. Historically, deception detection techniques, which tended to produce significant errors, did not win too much credit and were even labeled “inexact science”, “charlatanry” by the critics. However, deception detection can still be achieved through linguistic approaches. There have been a great many of studies on this topic [1]-[7].

Statement Analysis is based on word definition and English grammatical rules. No one is for sure that he has the capacity to read people’s mind without mistake. Interpreting a subject’s statement can only provide inaccuracy since people from different backgrounds and cultures see things differently. Shaking one’s head means “yes” in Indian culture while in most of the countries it represents “no”; giving a silence expresses disagreement in the western culture, but for oriental people, they may fail to interpret this message. However, Statement Analysis (Statement Analysis[®] is a registered trademark of Mark McClish [8]) is believed to be able to detect lies. Given

the fact that people mean exactly what they say, it examines every word by its definition and pays close attention to the grammar that the subject uses. However, previous researches on Statement Analysis besides McClish [8] are rarely found.

This thesis might be the first to use Statement Analysis in the study of lie detection besides McClish [8]. The study is very significant to forensic context, business negotiation, job/school interview, and can be widely applied to law enforcement in crime investigation.

The thesis is dealt with from two aspects: verbal statement and written statement. In Section 2, we analyze lie detection respectively from word definition, the use of pronouns, of tenses, of passive voice and of articles. And in Section 3, we mainly argue that lies can be detected from the use of crossed out words, of statement balance and of punctuation. Finally we arrive at the conclusion that lies can be detected through the linguistic method of Statement Analysis.

2. Verbal Statement

2.1. Word Definition

As mentioned above, people mean exactly what they say. Although there are synonyms in English, they do not share the same definitions. A slight change in wording can reveal something that a person may tend to withhold. In Mark McClish's *Don't Be Deceived* [8], the author summarized some most common words that indicate deception. For example,

1) Never:

Question: "Did you break the window?"

Answer: "I never did that."

The question merely requires a "yes" or "no" answer. However, by addressing "never", it focuses on "not ever", which would be a right answer for "have you ever broken the window?" The statement fails to answer the question.

2) Actually:

Question: "What did you do last night?"

Answer: "Actually, I went to the park."

The one who answered the question gave a comparison with what the question indicated, such as committing a crime, so he cleared out the pragmatic meaning by adding word "actually". However, the point is the question just simply asks what the person did last night. There are no other signs to support a further interpretation.

3) With:

"I went to a theatre with my wife." versus "My wife and I went to a theatre."

In the first sentence the subject "I" was placed at the beginning while "my wife" in the end. In the second one they were put together. The difference lies in the distance. By using preposition "with", the speaker alienated his wife by word distance, maybe because their relationships had no more closeness. This is also applied to the words, "this-that; these-those", which imply the distance of a relationship, e.g. "I hate that guy" and "This gentleman helped me".

2.2. Pronouns "I", "We", "Us", and Possessive Pronouns

The law enforcement investigator noted that a truthful person will use first person, singular pronoun "I" in his statement. Any deviation from this norm requires close scrutiny, for this an indication that the person is not committed to his story. Therefore, he does not tell the whole truth. In April, 1993, President Bill Clinton appeared in the public with some scratches on his face. It was believed that First Lady Hillary Clinton threw something at the president and left some scratches with her fingernails during a couple's fight. The White Press secretary addressed that "I believe the president cut himself shaving." And for the president himself, he explained:

4) "I got this playing with my daughter, I'm ashamed to say. Rolling around acting like a child again. I reaffirmed that I am not a kid anymore".

The statement generally consists of three sentences and each one has the pronoun "I" except the second fragment sentence "Rolling around acting like a child again", which is the key sentence to explain the reason about those scratches. The president is devoid of his personal involvement. The actions could be given by any other people instead of the speaker himself, so the president did not want to take the responsibility of the story he

made up.

On the contrary, if a person overuses “I”, the statement also needs to be doubted. For instance, “I got up at 9 and I washed up face and I went to kitchen to grab a loaf of bread. Because I was late I rushed to work without putting my jacket first...”. The person may be under stress or tension and tried to convey what he lied in his story. “A lie...involves additional mental efforts...this extra efforts tends to manifest itself with ...more repeated words and phrases, and so forth” [9]. Deception can be possible.

The pronoun “we” or “us” also shows the closeness and partnership. When interviewing a project leader about the process, often he will use “we” in his sentence in an effort to tell the other that they work as a team. However, improper using of the pronoun “we” may indicate deception:

5) “He forced me into his car and drove me to an abandoned house. We went to the house and he raped me” [8].

The rape victim states the case by using the pronoun “we”, which shows closeness. It needs to be considered that how a victim shows this kind of relationship with a person who forced her to enter the house. Comparing “we went to the house” with “he forced me into the house”, it may be indicated that the alleged victim went to the house by her own will.

The same is true for the use of the pronoun “us”.

Possessive pronouns, e.g. “my, his, her, and their”, show something or somebody is associated with the subject. By dropping the pronoun or shifting it to use an article “the” or “a/an” the speaker may decline the possession. For example, “I was cleaning my gun. I was putting my gun away. Then, the gun discharged”. When the gun was under maintenance, it was his gun. However, when the gun was triggered, it no longer belonged to him—it was just a gun.

2.3. Verbal Tense

Verbal tense indicates what time—past, present, or future—an event happens. A truth teller will recall a story in past tense, but a deceiver may misuse the tense by using present one because he does not draw the information from memory but is creating a story from his imagination. For example,

6) “It happened Saturday night. I went out on my back deck to water plants. It was almost dark. A man runs out of bushes. He comes onto the deck, grabs me and knocks me down” [10].

However, in some cases using past tense also reveals the deception.

On October 25, 1994, Susan Smith from Union, South Carolina, reported that an African American male had stolen her car with her two children in the backseats. The police launched a research and she was crying in the TV interview, “My children wanted me. They needed me and now I can’t help them” [11].

According to the statistics, most people will believe their missing or abducted family members are alive and thus, use present tense in their statement. But in Susan Smith’s case, she told the media in past tense, indicating she knew her children were no more alive. It turned out that she deliberately left her children in the car and pulled up the brake, letting the car drive into the lake and her two children were drowned.

2.4. Passive Voice

In English writing textbooks, sometimes, students are taught to use passive voice as a method to avoid mentioning subjects in order to convey coercion, formality, obstacle effects, etc. For example, when President John F. Kennedy was assassinated in 1963, the news headline reads “President Assassinated”. In this way, the focus turns to the president, but not who killed him.

This writing technique can also be used in deception.

“While walking, I heard a pistol cocked. I looked down and he had the pistol at his side. I asked him what he was doing. He made a statement that I would never trust him again. Then he moved the gun up and it immediately went off and he fell” [8].

The gun cannot fire itself unless someone pulls the trigger. In this case, the wife claimed that her husband shot himself, using the passive voice (though not grammatically correct) because she refused to commit that she was the killer.

2.5. Articles

In the English language, the articles “a/an” and “the” refer to numbers and indicate if the subject recognizes the

object. Misuse of articles could be an indication of deception.

7) “I was standing at a bus stop when the van pulled up. A man jumped out of the van and told me to get in.” [8].

In the first sentence the van is mentioned with the article “the”. Most people would address “a/an” for an object that was introduced for the first time, and then used “the”, which the person used. This indicated that the person had already known the van was coming. His use of the article “the” betrayed his thought.

3. Written Statement

Those techniques mentioned in the last section can be applied to the written statement for deception detection as well. Unlike in the live conversation mode, analyzing one’s written statement has “technical affordances (e.g. asynchronicity and editability)” [12], in other words, nothing distracts the interviewer who can slow down the pace and takes necessary notes during the detection. By technical affordances they mean that written statement can afford to be technically analyzed, to be edited or to be truncated at other times, etc.

3.1. Crossed out Words

The interviewee will be asked to write down a statement of what he has said or done during a certain period of time. Thus, the conversation between the interviewer and the interviewee will become inerasable and some traces will also leave there in the statement, such as crossed out words.

8) “If we monitor you getting the money early, we may call you early to arrange an earlier delivery of the money and hence an earlier ~~delivery~~ pick-up of your daughter” [8].

In the random note, the word “delivery” is crossed out and is substituted to the compound word “pick-up”. The writer realized that kidnappers never sent the hostage back, but they often tell the family to where he can be found. The deeper reason for using “delivery” is that the hostage had been murdered so she cannot be picked up. The writer wrote his first thought down and then changed it to a version that looked like a random note.

3.2. Statement Balance

To take a writing course for example, the teacher will draw a curve to illustrate the development of a story. The peak of the curve is the climax of the story and the “before” and the “after” is placed at the two ends. In journalistic writing, specifically in writing a feature story, the overall structure is always like a diamond that the “during” takes up most of the body in the middle and the “before” and the “after” was on the top and bottom respectively. Therefore, any deviation from this norm can be seen as a deceptive story.

And according to the statistics given by [7] in Don’t Be Deceived, the “before”, “during”, and “after” take the proportion of a story of 25%, 50%, & 35% approximately.

For example, in an arson case, the man provided a 56-line account of what happened that day, divided as follows:

9) BEFORE the fire: 33 lines—59.0%

DURING the fire: 16 lines—28.5%

AFTER the fire: 7 lines—12.5% [10].

The calculation results show the most significant segment of the statement just takes up 28.5%, much lower than the “before”. This is because the writer was trying to make his story more believable by setting a large stage of the beginning, which is also buying him more time to keep his story rolling. The ending is so short because no consequence occurs and it does not matter to the deceiver.

3.3. Punctuation

Punctuation is usually used to divide clauses, or sentences. Apart from its grammatical function, people use it to symbolize their emotion, e.g. an exclamation mark conveys emphasis or a strong emotion—“This is not a drill!” and “I love her so much!”.

No period at the end of a sentence means some information is with hold or there is more to tell. This could explain why people usually do not type periods during online chatting, since the conversation is continuing and the people are prepared to send the next message.

10) “This is a tragic accident that how why it happened. I never wanted to let her go and don’t know how this

happened” [8].

This statement is given by a man who killed his wife by driving his car off the cliff. In his statement, the man failed to make the first sentence complete by omitting “I don’t know” and used the word “never” that mentioned earlier in this thesis which indicated deception. Moreover, he did not end his last sentence with a period. The investigators believe there is additional information that the man did not want to share.

4. Conclusion

Deception can be detected through linguistic means. One of these means can be Statement Analysis. This thesis deals with how Statement Analysis can be used to detect lies from the following two aspects: verbal statement and written statement. It is shown that people really mean what they say and lies can be thus detected by the definition of the word they use or by the grammar they choose in their speech.

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