

Levels of Linguistic Ambiguity

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(ABSTRACT)

This paper aims at presenting the reader with a systematic analysis of the linguistic phenomenon of ambiguity. Unintentional ambiguity, as a feature of human speech, is a source of much misunderstanding among individuals. Intentional ambiguity, on the other hand, is quite often exploited as a source of linguistic humour.

The paper is divided into five sections each allotted to one of the levels of linguistic analysis. The first section deals with phonological ambiguity, the second with morphological ambiguity. The third section, which deals with syntactic ambiguity, is divided into four sub-sections, each illustrating one of the different types of class-reference which can result in producing an ambiguous utterance. The fourth and fifth sections deal with lexical and semantic ambiguity, respectively.

The paper also includes an introductory section that reviews the four different scales of linguistic deviation, viz. ungrammaticality, unacceptability, nonsensicality, and ambiguity, establishing the linguistic criteria that distinguish one type of deviation from the other. It also tries to define the concept of 'ambiguity' as different from the concept of 'vagueness' or 'obscurity'.

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Introductory

There are four major scales of linguistic evaluation, namely:

grammatical	vs.	ungrammatical
acceptable	vs.	unacceptable
meaningful	vs.	nonsensical
clear	vs.	ambiguous

A well-formed sentence, as the majority of sentences are, will be grammatical, acceptable, meaningful, and clear. However, a speaker (or a writer) may sometimes deviate from this norm, whether intentionally or unintentionally. Such deviation may occur on one, or more than one, of the above mentioned scales.

The following examples are intended to illustrate the negative values referred to above:

- ungrammatical: They have been with us since two years.
 Pass that exam, can she?
 Having had finished the housework, she is going to go out shopping.
- unacceptable: My jacket is warmer than my office.
 Her husband and her house are very nice.
 He was more joyful than most television programmes.¹

- nonsensical: This table must be aware of all the facts.
 I met her on my way to Mars.
 That door is very attached to me.
- ambiguous: They found the man standing at the corner.
 The doctor's examination lasted long.
 She defended the man she loved with all her heart.

We can establish the basic differences between the four scales by noting the reaction of a native speaker to each of the negative values exemplified above. To an ungrammatical sentence, a native speaker will react by trying to correct or replace a wrong grammatical item (e.g., the tense of the verb, a misplaced preposition or pronoun, subject-verb agreement, etc.), or by changing the order of the grammatical items. To an unacceptable sentence, a native speaker may react by saying: "Oh, well, I wouldn't exactly express it this way;" then, he would try to formulate a completely new sentence that would better express the situation. To a nonsensical sentence, the spontaneous reaction might be something like: "This is absurd." And to an ambiguous sentence -- i.e., where the context of situation cannot help to clear the ambiguity -- the reaction would be an attitude of perplexity, confusion, or else demanding an explanation as to which of the two (or more) meanings is the intended one.

However, the values embodied in these scales are not as clearcut and arbitrary as they may seem to be. It is sometimes very difficult to pass an accurate linguistic judgement concerning a certain utterance. Hence, these scales, together with the values attached to them, must be regarded as of relative value. This means that the linguistic judgements to be passed will not always be of the good / bad type, but of the type high / rather high / rather low / low, on any of the above-mentioned scales. In many cases, however, the sentence under consideration will be a clearcut case of deviation, as is shown in the above-cited examples.

It is also the case that linguistic deviation among the four scales, as judged by a native speaker, is not of equal status. For instance, grammatical deviation is easier to detect (also, easier to correct) than deviation of acceptability.² And while the question of grammaticality can, in most cases, be settled by referring the issue to a language authority, the question of acceptability can only be referred to the personal judgements of native speakers -- i.e., to a representative part of the speech community -- and is always a relative matter. The following utterances, for example, vary, according to an authority on

English usage, concerning their exact location on the scale of acceptability (from high to low) : (Leech, 1969 : 31)

1. many moons ago
2. ten games ago
3. several performances ago
4. a few cigarettes ago
5. three overcoats ago
6. two wives ago
7. a grief ago
8. a humanity ago

Likewise, sentences can be judged to be meaningful or meaningless only within a certain context or situation. A sentence which may appear utterly nonsensical to an adult, can be meaningful in the context of 'fairy tales' or 'science fiction.' This scale is also notionally related to the actual facts of our universe, i.e., things which are either true or false, e.g.,

- The sun is rectangular in shape.
- It was Napoleon who built the Pyramids of Egypt.
- Man will never reach the moon.

It is related, as well, to logical concepts; the following sentences, for example, are nonsensical because they are semantically illogical:

- I live on the fourth floor of a two-floor building.
- That very tall girl is very short.
- He never makes the same mistake once.

As to the last scale, which is the main concern of this paper, the following question may be raised : **What is linguistic ambiguity?** In answer to this question, the following three points have to be taken into consideration:

A) In general terms, ambiguity is either intentional or unintentional. Unintentional ambiguity can be caused by various mental, physical, or linguistic factors.³ On the other hand, the term 'an ambiguous sentence' is most commonly used to denote intentional ambiguity. In the restricted sense of this term, the speaker tries to confuse or mislead the hearer (for various purposes), or to allude to a subject which is socially considered as taboo in certain situations.⁴ In such cases, an ambiguous sentence is **one in which the more obvious or logical meaning is not the intended one.** A 'pun' is an example of this. (This device is sometimes very successfully employed by comedians in what is called 'linguistic humour'.)

B) The distinction clear / ambiguous is not the same as the distinction clear / obscure (or 'vague'). An obscure sentence is one that cannot be easily interpreted, if at all. An ambiguous sentence, on the other hand, is one that can be interpreted in two ways, or, in a few cases, more than two, e.g.,

- He found her a typist.
- They are discouraging people.
- This is the French history teacher.
- We were delaying instruments.
- He brought his friend, a doctor, and a gentleman.⁵

C) In a very broad sense, all speech is ambiguous. That is, we do not communicate with each other through the clearly-defined legal terms, or through the highly precise language of scientists and government officials; nor do we, as hearers, seek absolute clarity and exactness in every utterance that we hear. The written context or the practical situation, in most cases, imposes certain restrictions on our understanding and/or responses.

In the very narrow sense, then, ambiguity rarely results, since the contextual situation, in the great majority of cases, helps to clear the ambiguity.

The present paper is neither concerned with the broad plane, which is rather abstract, nor with the narrow plane, which is very exclusive. To try to describe either is an almost fruitless effort, if practical at all. This paper, rather, attempts to classify and describe the phenomenon of ambiguity at the different linguistic levels.

The following levels were found to be relevant:

1. The Phonological Level
2. The Morphological Level
3. The Syntactic Level
4. The Lexical Level
5. The Semantic Level

Each of these five levels is discussed, below, in some detail.

1. PHONOLOGICAL AMBIGUITY

1.1. Interpretation of Phonemes

When a hearer is at a loss as to 'which phoneme a certain sound represents,' ambiguity occurs, e.g.,

- They bought some ^{shares}
 _{chairs.}⁶

Confusion, here, results from the fact that the initial sounds in both words have certain phonetic features in common.⁷ Such confusion quite often results when the phonemes under consideration happen to share some such fundamental qualities as 'the manner of articulation' or 'the place of articulation'.⁸ In addition, the words which contain such phonemes must be situationally substitutable within the same context, e.g.,

- He brought the ^{bills}_{pills} home.
- They've sold the old ^{van}_{fan}.
- He talked to me about a certain ^{medal}_{metal}.

1.2. Interpretation of the 'Plus Juncture'.

Ambiguity may also occur, not as a result of confusion between two similar segmental phonemes, but as a result of overlappings among phonemes (i.e., misinterpretation of suprasegmental phonemes), e.g.,

- She is looking for ^{a name}_{an aim}.
- Look ! ^{Its wings}_{It swings}.
- I'll buy the socks ^{the tight shoes}_{that I choose} and slippers.

In this case, the confusion is caused by our interpretation of the exact location of the 'plus juncture' phoneme.¹⁰ This means that, unless the speaker's pronunciation clearly indicates the place of open transition, the two interpretations become accessible to the hearer.

1.3. Interpretation of Intonation Contours

Intonation contours, as suprasegmental phonemes, have a role in causing, or resolving, sentence ambiguity. The 'sustained intonation contour,' for instance, is usually represented in the writing system by the presence of an orthographical mark (e.g., 'One, two, three,'); its absence causes ambiguity, e.g.,

- | | |
|------------|---|
| | he died happily |
| is either: | - He died happily. |
| or: | - He died, happily. |
| And | she received a letter from her brother who lives in London |

- She received a letter from her brother who lives in London.

- She received a letter from her brother, who lives in London

1.4. Interpretation of Stress Placement

- This is a **little used** car.
- She has a **sharp pointed** nose.
- She is an **ill educated** lady.¹²

Some morphemes are phonologically identical. Thus, the plural morpheme Z_1 , the possessive Z_2 , and the verbal third person singular Z_3 , are homophonous morphemes. The following two sentences, for example, are ambiguous to the hearer (but not to the reader) :

- She put the ^{boy's} shirts in the wardrobe.
boys'
- The ^{sun's} rays meet (Palmer, 1971:133)
sons raise meat.

a) ing₁ (present participle) vs. ing₃ (adjectival)
b) D₂ (past participle) vs. D₃ (adjectival)
c) er₁ (adjective comparative) vs. er₂ (noun-forming suffix).

- They are discouraging people.
- They were entertaining ladies.
- We are transferring officers.

Ambiguity can be resolved, in this case, by inserting an adjective-qualifier (an 'intensifier') before the item containing **ing**, in order to mark one of the two meanings as the intended one. The other meaning is clearly marked as a verbal element through our ability to passivize the whole sentence.

In the second case, we often come across sentences such as the following (the first of which has often been cited) :

- She is reserved.
- The workers were relieved.
- The students were moved.

In order to resolve the ambiguity, we can apply the test referred to above. This keeps the two meanings distinct, one from the other.

The third case is the least frequent of the three. The homophonous morphemes er_1 and er_2 are not interchangeable in many contexts; the first being an adjectival suffix, the second a nominal one. However, one can suggest a situation in which the following utterances may arise:

- Which of the two would you choose?
- The lighter.

Other words containing a morph that can be assigned to either the morpheme er_1 or the morpheme er_2 , are :

drier
cooler
cleaner
opener
etc.

3. SYNTACTIC AMBIGUITY

At the syntactic level, the core of all linguistic levels, it was found out that ambiguity may result from any of the following factors:

1. Adverb reference.
2. Adjective reference.
3. Verb reference.
4. Pronoun reference.

3.1. Adverb Reference

In most cases, when a verb is modified by an adverbial element, this element follows the verb immediately (unless, of course, there is an

intervening object or complement). If the verb is the last main unit in the sentence, this would mean that the adverbial element will occur sentence-finally. In some such cases, the reader may well be at a loss as to whether the adverbial element refers to the verb only or to the sentence as a whole. There is, however, a basic restriction to these cases, namely, that the adverb should be contextually suitable for both the verb as a single unit and the sentence as a whole. The following sentences, as they stand, are ambiguous; but the ambiguity can be resolved in one of the two cases -- that of sentence-adverbial -- by shifting the adverbial element from the sentence final to the sentence initial position:

- She said she was coming today.
- The meeting was postponed then.
- He is not going to the party because she will be there.

The last example illustrates ambiguity which results from the occurrence of negation together with adverbial clauses of 'reason'. The reader becomes at a loss, in this case, as to whether the adverbial clause is related to the sentence as a whole -- i.e., accounts for the aspect of negation -- or is related to the verb only, in which case the semantic value of the whole sentence becomes positive, not negative (i.e., 'he is going, but not on account of her presence'). Similar examples are :

- The letter was not sent because of the conclusion we reached.
- He is not going to stop the lecture because he fears interruption.
- We are not staying here so that we can listen to you.

When the adverbial is in the pre-verbal position, it becomes sometimes confusing as to whether it modifies the sentence as a whole or just the noun it follows, e.g.,

- The party **afterwards** grew dull.
- The teacher **then** was Mr. Donald.
- The Prime Minister **at that time** was fond of speeches.

Ambiguity may also result from the placement of an adverbial in the sentence-final position, where the sentence contains two finite verbs. Quite frequently, such an adverbial is contextually suitable for modifying each of the two verbs, e.g.,

- He **found** the keys he **had lost** in the garden.
- He **repainted** the house he **had bought** in January.
- No children **are allowed to enter** the park when it **is not open** for more than one hour.¹³

In some other cases, when the adverbial occurs in the post-object position, confusion may also result as to whether it modifies the verb (as would normally be expected), or the preceding noun (as the context might sometimes permit), e.g.,

- She **met the man** at the corner.
- She **spoke to the boy** with a warm smile.
- He **found the boy** studying in the library.¹⁴

3.2. Adjective Reference

Simple adjectives usually precede the nouns they modify. Sometimes, however, a simple adjective is followed by more than one noun; and ambiguity ensues. The oft-cited phrase **old men and women** is an example of this. It may also be the case that the noun is preceded by two modifiers the first of which is an adjective, and the second a noun functioning adjectivally. It becomes confusing, then, as to whether the adjective modifies the head noun (the last item), or the adjacent adjectival noun, e.g.,

- This is the new **school building**.
- She is a French **history teacher**.
- These are the old **staff offices**.

If adjectives that are not of the simple type (i.e., adjectival phrases and clauses) follow a sequence containing more than one noun, the adjective may, then, modify either of the two nouns, e.g.,

- I can see **the door of that room** which is painted red.
- They met at **the corner of the street** that is very crowded.
- This is **the son of my friend** whom I told you about.

(Note that in all these cases, the sentence intonation would help a great deal in clarifying the intended meaning.)

Mention was, similarly, made earlier (in 'Section 1.3') to 'restrictive' and 'non-restrictive' clauses (where we cited the example: ... **her brother who lives in London**). In that same Section, we also discussed such examples as **little used car**, where we could have either two separate adjectives or an adjectival compound; in speech this is resolved through stress placement, in writing sometimes through hyphenation.

3.3. Verb Reference

This concerns the internal syntactic relationships that hold between a verb and its subject, object (or objects), or complement. When such

relationships are not clearly manifested, the sentence becomes ambiguous. Mention was made earlier to such sentences as:

- He brought his friend, a doctor, and a gentleman. ¹⁵

The verb **bring** occurs in many such ambiguous utterances, since it may be followed either by an object or by the sequence 'object plus objective complement,' e.g.,

- He brought her new dresses.¹⁶

The verb **find**, as well, occurs in many similar contexts. It is capable of taking either two objects, or an object plus an objective complement. The contextual situation, i.e., the relevancy of the separate meanings of the lexical items, contributes to producing such ambiguity. The following sentences, for example, could represent a scale of relative ambiguity, in descending order :

- He found her a good typist.
- He found her a pig.
- He found her a sandwich.
- He found her a used car.

Verb reference also includes genitive relationships. The example mentioned earlier (in 'Introductory'):

- The doctor's examination lasted long,

is an instance of this. The nominalized construction **the doctor's examination** is ambiguous since it does not reveal the exact syntactic relationship that holds between its underlying verb, its subject and its object. (That is, **the doctor** could be either subject or object to the underlying verb **examine**.) The same applies to the oft-cited sentence:

- The shooting of the hunters terrified me;

where the nominalized construction is derived from:

- | | |
|--------|-----------------------|
| either | - X shot the hunters. |
| or | - The hunters shot X. |

A similar, though not identical, example is:

- My brother's portrait was stolen.

This is multiply ambiguous, since genitivity here could be taken to manifest any of the following syntactic relationships:

- a) subject to object:
'my brother owned a portrait'.

b) verb to object :
'X portrayed my brother'.

c) subject to verb :
'my brother portrayed X'.

Ambiguity also arises from the occurrence of verbs which can belong to two categories (viz., 'intransitive' and 'linking'), when followed by words that can belong to two classes (viz., adverbs and adjectives), in their respective orders, e.g.,

- The boy grew fast.
- The student looks forward.
- She appeared unescorted.

In each case, the sequence exemplified is either 'a linking verb plus an adjectival complement,' or 'an intransitive verb plus an adverbial element.'

A sentence may also become ambiguous -- sometimes obscure -- when the syntactic relationships mentioned above are not manifested at all -- clearly or otherwise. Such manifestation normally takes the form of the presence of some 'structural markers' or 'function words.' H.A. Gleason discusses such an issue in the following extract:

" Beethoven Works On Hess Program
"Probably a number of other reader were startled
"as I was, taking **works** as a verb. Taking **works**
"as a noun gives a less incongruous meaning, one
"which the article clearly confirms as the head-
"line writer's intention. This kind of ambiguity
"is characteristic of a very special style of
"written English, largely restricted to headlines
"and telegrams. It arises, of course, from the
"omission of certain 'small words,' elements which
"contribute little or nothing to meaning, but fun-
"ction as pure structural signals.
" These 'small words' are commonly grouped as
"function words. The term is useful, but the con-
"cept is very difficult to define." (Gleason, 1969:156)

Other examples of the same kind were also quoted by Paul Roberts, e.g.,

- College demands change.
- Navy witnesses smoke.
- Box leaves today. (Roberts, 1962:34)

- The ^{sail}_{sale} is over there.
- This ^{read}_{red} yesterday.
- The ^{postman}_{postmen} arrived.¹⁷

5. SEMANTIC AMBIGUITY

Semantic ambiguity occurs when we take a certain item in a given sentence to denote more than one meaning. In this sense, most of our utterances are ambiguous, unless the contextual situation can supply the necessary semantic restrictions. Thus, an utterance like :

- She has just left,

must be ambiguous, unless the hearers (or readers) are contextually acquainted with the 'referent' **she**.

In a broader sense, however, some lexical items do exhibit more than one meaning. This is referred to as 'polysemy,' i.e., one lexical item having more than one referential meaning. The verb **bear**, for instance, may mean either 'the act of carrying,' or 'the act of tolerating;' thus, the following sentence is ambiguous:

- I can't bear this child.

The following examples, representing all word classes, illustrate ambiguity that is caused by polysemy:

- | | |
|-------------------------|---|
| verb: | - The typist couldn't count on her fingers. |
| verb (D ₂): | - The meeting was overlooked by the police. |
| noun: | - I need some change . |
| pronoun: | - It was very cold. |
| verb/adj: | - The boy was on my right, the girl was left . |
| adjective: | - His sister got herself a second lieutenant. |
| adverb: | - The amount of money he earns monthly is hardly earned. |
| preposition: | - The conversation was going on about him. |

Semantic ambiguity results not only from polysemy, but also from the connotative values that are sometimes attached to the lexical items. An example of this that was given earlier is **He found her a pig**, where the word **pig** exhibits such connotative values, and would mean

'a person bearing the qualities of such an animal.' Judging by this, a sentence like:

- John is an ass,

is not ambiguous, since a hearer (or a reader) would instantly think of the connotative meaning, rather than the referential one. But a sentence like:

- Yesterday, we came across such a big ass,

must, in this case, be a clear case of ambiguity.

To conclude this paper, we might refer to an instance of semantic ambiguity (once cited, in one form or another, in "Readers' Digest"), which is restricted to the spoken level. (Since the emphasis is on speech, not writing, no capital letters are used throughout).

man (to library assistant): I am looking for harmony in marriage.

assistant (doubtfully) : sir, is this fiction?

NOTES

- (1) Note that these three sentences are grammatical since the compound parts of each sentence are derived from similar structures, e.g., **my jacket is warm, my office is warm**, etc. (They are, of course, both meaningful and unambiguous.)
- (2) Its occurrence, also, is due to reasons that are different from the reasons causing the latter form of deviation.
- (3) As a general rule, our utterances are often less precise when we are exhausted, ill, suffering from a shock, taken by surprise, etc.; or, sometimes, merely out of carelessness.
- (4) This frequently happens when one wants to refer to certain bodily functions, the discussion of which is socially deemed 'obscene.'
- (5) This last example (discussed by Nelson Francis in **The Structure of American English**, Ronald Press Co., New York, 1958, Ch. 5) can be interpreted in three ways, viz., 'he brought three persons,' 'he brought to his friend a doctor and a gentleman,' or 'he brought his friend who is a doctor and a gentleman.' Note that according

to the last of these senses there is no 'comma' after **doctor**, and that sentence intonation would differ according to the three senses.

- (6) The words **share** and **chair** form a 'minimal pair,' in the sense that they differ only in one sound.
- (7) The first is a voiceless palatal fricative, the second is its affricate counterpart.
- (8) That is, they may differ in 'voicing,' 'aspiration,' 'the fortis/lenis correlation,' or similar other less fundamental distinctions.
- (9) The confusion, in such cases, could also be the result of some speech/listening defect, physical or otherwise, in which case the ambiguity would be regarded as unintentional, or conditioned.
- (10) The 'plus juncture' phoneme is a suprasegmental phoneme which is characterized by a relative prolongation of the sound that precedes it.
- (11) Such syntactic relationships are discussed in more detail in the section dealing with syntactic ambiguity.
- (12) Note that some established practices of writing would insert a hyphen in-between the two modifiers (only when the first reading is the intended one).
- (13) Sentences of this type can generally thought of as badly formulated. We often come across such ambiguous (for being ill-formulated) instructions in public places.
- (14) This last example is cited in Frank Palmer (op. cit., p. 145). The criterion he establishes for resolving the ambiguity is formulating two passive sentences. In such passive sentences the modifiers would naturally stick to the units they modify, e.g., **The boy was found.....**, or **The boy studying in the library was found**
- (15) In case we take the sentence to mean 'his bringing three persons,' what we have is a compound object; in case we take it to mean 'his bringing two persons to his friend,' what we have is an indirect object followed by a direct one; and in case we take it to mean 'his bringing a person who is a doctor and a gentleman,' what we have is an object and a compound objective complement.

- (16) cf. **He brought her some new dresses**, which is unambiguous.
- (17) The two lexical items **postman** and **postmen** are pronounced the same.

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