## UP THE GARDEN PATH

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## 1. Introduction

In attempting to provide a definition of a garden path (GP) sentence one might easily be tempted to turn to visual arts and consider the analogy with optical illusions. The process of reading GP sentences, which owe their existence to the presence of an ambiguous element, and viewing images such as the ones shown below is in some ways rather similar.


Is what we see in Fig. 1 a picture of a man playing a saxophone or a portrait of a lady? Are they chalices or faces in Fig. 2? A sixteenth-century Italian painter, Giuseppe Arcimboldo, made a career of creating portraits made up of various objects, mainly fruits and vegetables but also flowers, books and even fish. Some of his paintings, such as the famous one in Fig. 3, are intentionally composed in such a way that when we first look at them, all we see is a heap of vegetables. And we must strain our eyes and imagination (or physically turn the picture as has been done above) to see that they, in fact and as if by chance, compose an entirely different image. In all of these optical tricks and illusions, we are led to believe that what we are looking at is what we see.

The analogy, however, has a shortcoming. These optical illusions contain two meanings and can be interpreted in two possible ways. In this respect, they appear to be much more akin to ambiguity than to garden paths, which allow only one possible interpretation. What makes the two phenomena so much alike is the immediacy with which we process the image and start the quest for the meaning. There is one fundamental
difference in the type of ambiguity between the picture and text. The pictorial ambiguity does not depend on context in the same way. People might differ in the order in which they parse the images, but the two meanings are really and truly (and also intentionally) encoded in the picture. The word bank is ambiguous on its own, as printed here, or even in a sentence "He reached the bank." unless some context is provided. And as soon as it is, the reader does not look for any other possible readings. The sentences "He reached the bank. As it was past six o'clock it was already closed and he had to find a cash machine." leave no room for debating ambiguity.

A GP sentence is a truly psycholinguistic phenomenon. As we start reading a sentence, our brain starts processing instantly. ${ }^{1}$ It does so at such a speed that it seems to be ahead of our reading, completing the sentence in a way in which it assumes the sentence is likely to continue. This is based on the fact that through our experience of language we have created certain expectations of what types of continuation can be anticipated in different contexts and cotexts. Yet, the GP sentence does not conform to the expected pattern, and there inevitably comes a clash between what we see and what the brain tells us we should understand. We reach an error signal, slow down, and start backtracking eventually to realize that what we saw was not what we were meant to get. This requires the ability to switch the pattern of the sentential components in the same way as with the optical illusions we need to turn off one of the images so that we can see the other one. Interestingly, the brain does not seem to be capable of processing the two interpretations at once. We either see a man with a saxophone or a young lady. To be able to see the other image, we have to switch over. This happens through a conscious effort which is similar to the process of analysing a GP sentence - here, likewise, it is through a conscious effort that we can see the real message. Sometimes, even the reader's brain seems to be shut to the true reading and the effort involved must be quite significant. Similarly, also, there are optical illusions which do not easily relinquish the hidden message, and considerable effort must be expended to decipher the code. Do we see anything in Fig. 4? In fact, is it a picture or just a congeries of black and white spots? Or do we manage to see a dog in it? Indeed, once we know which spots belong together we can see a dog and, unless our memory fails us, we will be instantly able to see it any time we look at the picture. In the same way, once we have selected the correct reading of a GP sentence, we will always be able to read it correctly without having to overexert our mental powers again.


Figure 4

[^0]Last but not least, the similarity between optical illusions and GP sentences lies in the fact that they both rely on the visual - both pictures and GP sentences exist only on paper. Once a garden path sentence has been read out loud, it has been correctly parsed, and owing to the attributed prosodic features it no longer presents the conundrum it once may have been for the reader. This is a constraint that does not apply to ambiguous utterances, most of which remain ambiguous even in spoken language. ${ }^{2}$

When considering the relation between ambiguous and GP sentences, it is essential to bear in mind that an ambiguous sentence has two deep structures, allowing two different readings. This is precisely what distinguishes it from GP sentences, which owe their imperspicuous character to the fact that they do not allow a second plausible understanding. Yet, both ambiguous and GP structures require an alert brain for their correct interpretation: one must be aware of the duality of meaning in order to appreciate ambiguity, as much as one must be able to reanalyse a linguistic structure to unravel a GP sentence. Understanding ambiguity requires knowledge, whilst reanalyzing a GP calls for at least a modicum of linguistic intelligence.

In the following lines, I will attempt to provide a description of structures that lead to the GP reading. In the collection of analyzed sentences, some are notorious examples, others are perhaps less well known. It needs to be pointed out that many of the sentences used not only here but also in similar studies bear an imprint of conscious, artificial construction.

## 2. Analysing garden path sentences - the principles of minimal attachment and late closure

In their seminal work, Frazier and Fodor (1978) described two principles applicable within a phrase-structure tree that seemed to be at play in syntactic parsing. According to the principle of minimal attachment, the parser constructs the meaning using a syntactic structure with the fewest phrasal nodes. Let us compare the following two sentences.
(a) He knows all of the songs by heart.
(b) He knows all of the songs are difficult.

In (a) the NP all of the songs functions as an object, whilst in (b) the same NP functions as a subject. As sentence (b) introduces a new node into the structure, it violates the principle of minimal attachment, and the reader's first instinct is to interpret the NP as an object of know. Clearly, some backtracking must then follow so that the correct syntactic function is reassigned. The situation is best illustrated by a comparison of the two syntactic trees:

[^1]

S


As for the principle of late closure, the parser attaches new words or phrases to the currently processed phrase rather than to a different one. The temporal adjunct in the sentence I'll do what I said on Tuesday. ${ }^{3}$ is thus interpreted as a part of the matrix clause, rather than the subordinate clause.

## 3. Example analysis

Type I
[perceived as:] premodified noun $\rightarrow$ [actually:] S - V
Let us start our analysis with a simple example.
(1) The prime number few.

The difficulty in reading this sentence stems from the fact that we are led to believe it starts with an NP consisting of the determiner, the adjective prime and the noun number, whilst, in fact, the NP consists only of the determiner and the noun prime (the result of partial conversion) and number functions here as a verb. The initial misreading is caused by several factors:

[^2]- the relative frequency of the compound noun prime number leading us to assume that within the sentence these two words 'belong together' to make a single unit of meaning;
- the relative infrequency of number used as a verb as opposed to the high frequency of the word used as a noun;
- the agreement in number obscured by the absence of the plural marker in the subject;
- the relative infrequency of the partial conversion of adjectives into nouns, indicated solely by the definite article.

The sentence is an example of the late closure principle. Besides, it appears that the partial adjectival conversion is especially prone to producing GP structures as the phrase "the + adjective + noun" is far more likely than the phrase "the + nominalized adjective + verb". Moreover, the verb is converted from a noun and it is in plural whilst the plural understanding of the prime is not instantly obvious. This fact further strengthens the impression of a "singular adjective + noun" phrase. The potential of this structure to produce GP sentences is so strong that we can quite easily generate sentences such as:
(1a) The poor people the planet.
(1b) The homeless people the area adjoining the railway station.
Also the notorious example (2) belongs to the same group:

## (2) The old man the boat.

This type of a GP sentence can be made even more opaque by introducing a homonymous component, such as the noun/verb park in the following, constructed example:
(2a) The English park on lawns.
Example (3) works in a similar way.
(3) The complex houses married and single soldiers and their families.

Here, complex is a noun with the same form as the related adjective. Also, the $-s$ can be either a plural marker or a verbal ending. Standing on its own, and out of context, the phrase the complex houses offers us no clue as to whether it can be interpreted as an NP or an SV sequence. There are two deep structures, rendering the phrase ambiguous. When it is used in a sentence, however, and possibly owing to the more frequent use of houses as a noun, it is more likely to be interpreted as an NP. Thus it results in a GP, which is signalled by the semantic incompatibility of houses and married.

What seems to play the strongest role here is the type of the initial NP functioning as a subject. A noun with adjectival premodification appears to be expected as a norm. This is the principle of late closure at play again. If the brain spots an adjectival form followed by a substantival form, it tends to accept this sequence as the first reading as if nothing
else could follow after an adjective but a noun. And when the processed phrase fits the pattern, processing carries on until we receive the error signal and realize we have been led down the garden path.

The occasional difficulty of interpreting conversion may give rise to puns such as the famous one in example (4). Here, the reader is "tricked" into following the garden path by first being provided with a parallel, seemingly identical structure as the one which causes the confusion.
(4) Time flies like an arrow; fruit flies like a banana. ${ }^{4}$

In the first sentence, the subject is time and the verb is flies. In the second sentence, the subject is arthropodal, and the verb is like.

## Type II

[perceived as:] premodified S - V $\rightarrow$ [actually:] S - zero relative - S
Example (5) is of a different type. Yet again, there is a sequence of what can be interpreted as an adjective followed by a noun. But this time, we are dealing with a structure containing a zero relative pronoun which in combination with the ellipsis of the definite article before fat masks the correct interpretation of the structure as a relative clause.
(5) Fat people eat accumulates. ( $\rightarrow$ The fat that/which people eat accumulates.)

Similarly, in example (6), the GP reading is substantiated by conversion in combination with the zero relative pronoun.
(6) The cotton clothing is usually made of grows in Mississippi.

At a glance this seems to be a sentence starting with the converted noun cotton which modifies the head of the noun phrase clothing. Yet again, this appears to be the canonical adjective plus noun functioning as a subject of what appears to be a passive sentence. The error signal comes when we reach the second finite verb which, in this structure, would appear to have no subject. It is only then that we reanalyse the sentence as one containing a juxtaposed relative clause which postmodifies the subject noun cotton. Again, conversion plays some role here as well. In this respect, cotton is ambiguous and when followed by another noun it tends to be interpreted as an adjective. But semantics plays an important part here as well. It is not just any sequence of two nouns which allows such interpretation - the collocation formed in this process must be a plausible one. Hence, if we alter the example by changing the subject of the relative clause but maintaining the clause structure, the garden path effect is lost:
(6a) The cotton people usually make clothing of grows in Mississipi.

[^3]In (6a) we might experience a slight delay in reading the sentence upon encountering the second noun, but the semantic incompatibility of cotton and people induces a more or less instantaneous correct reading. As shown in a study by Ferreira et al. (2001:4) the ease of the disambiguation process is greatly affected by the length of the ambiguous phrase, or in other words, the delay with which the error signal is received. In sentence (6), the error signal does not come until the pre-penultimate word of the sentence, whilst in (6a) it comes with its third word.

## Type III

[perceived as:] S - past tense $\rightarrow$ [actually:] S postmodified by past participle
The reduced relative clause is a frequent cause of the GP effect as evidenced by one of the most commonly cited examples:

## (7) The horse raced past the barn fell.

The confusion arises from our expectation of the canonical S - V word order. Hence, at the first encounter of a plausible verb form, the principle of late closure is satisfied and the phrase is instantly completed: raced is interpreted as the main verb of the sentence.

Only when another verb appears at the end of the sentence does it become clear that raced past the barn should have been understood as a reduced relative clause. The other factor here is, of course, the identical form of the English preterite and the past participle of most verbs. Again, this type of syntactic structure can easily generate GP sentences, such as:
(8) The coffee spilled on the rug was difficult to conceal.
(9) The elephant squeezed into a telephone booth collapsed.
(10) The soldiers warned about the land mines changed their locations.
(11) The raft floated down the river sank.
(12) The tomcat curled up on the cushion seemed friendly.

Ferreira et al. (2001: 18) suggest that experiments should be carried out in order to test what readers actually understand in these sentences. So, for example, would the readers of sentence (10) actually answer the question of whether the soldiers warned somebody about the landmines in the affirmative, if they had not been previously warned that they are processing problematic sentences?

It is worth noting that the mental complementation by the presumed object happens only when it is logically acceptable. Thus, example (13) results in a GP since shop is a common and highly plausible subject for sell. If, however, we change the subject for one which cannot semantically function as the subject of the verb as in (13a), the reader has no problem in assigning the sentence the correct syntactic structure without being garden-pathed first. Whilst shop is a plausible subject of sell, property is not.
(13) The shop sold to the bank was quite old.
(13a) The property sold to the bank was quite old.

Another commonly quoted example belonging to this category is (14):
(14) The lawyer examined by the judge was silly.

Interestingly, this sentence, presented to an intermediate learner of English was parsed in a different way. The learner read it correctly without any hesitation and questioning why a lawyer should be examined by a judge. The native speaker, however, knows that the S - V sequence lawyer - examine is very likely and as examine is a transitive verb he expects the complementation by an object to be next in the sequence. If the subject of the sentence is changed, the GP reading no longer works, as shown in (14a).
(14a) The evidence examined by the judge was silly.

We could argue, however, that the presence of the preposition by clearly indicates the passive and thus precludes the GP reading in the first place.

Within Type III we can identify an interesting subtype with the rather rare occurrence of a past participle with an active meaning. This is again initially interpreted as preterite:
(15) The man returned to his house was happy.

## Type IV

[perceived as:] S agent - active preterite - Od affected $\rightarrow$ [actually:] S (recipient) past participle (reduced passive relative clause with $\mathrm{S}=\mathrm{Oi}$ in the underlying active clause) - Od affected

The GP reading in this type consists in the homonymy of the preterite and past participle forms. The GP interpretation is based on the subject functioning as an agent, whilst it actually is an indirect object of the corresponding active:
(16) The girl bought a bathrobe already had one.
(17) The florist sent the bouquet of flowers was very flattered.
(18) The girl told the story cried.
(19) The tycoon sold the offshore oil tracts for a lot of money wanted to kill JR.

Examples (16) and (17) appear rather artificial and construed owing to the fact that neither buy nor send is a central ditransitive verb. Buy is more frequently monotransitive, and send takes a locative complement: He sent me here/away.

## Type V

[perceived as:] S - transitive verb - O $\rightarrow$ [actually:] S - transitive verb + deleted O-S
One of the most common types of GP sentences is based on the reader's interpreting an intransitive verb as transitive, thus relegating the subject of an adjoining, juxtaposed clause to the function of an object of the preceding verb.
(20) While Anna dressed the baby spit up on the bed.

So in example (20), the baby can serve as the object of dressing and it produces an S V - O sentence pattern. The error signal is transmitted by the appearance of the second verb, and the reader has to backtrack and reclassify the sentence pattern of the first clause as $\mathrm{S}-\mathrm{V}$. This is yet another example of the principle of late closure. Clearly, much could be helped by the appropriate use of punctuation. Several similar examples, where the S V - O word order is inferred instead of just $\mathrm{S}-\mathrm{V}$, can be found:
(21) When Fred eats food gets thrown.
(22) The man who hunts ducks out on weekends.
(23) When Mary was knitting the socks fell to the floor.
(24) While Bill hunted the deer ran into the woods.
(25) Because he always jogs a mile seems a short distance to him.

As in so many of the previous examples, much depends on our semantic expectations. The erroneous classification of the subject of the second clause as the object of the verb in the first one can occur only if the $\mathrm{S}-\mathrm{V}-\mathrm{O}$ sequences thus produced are logical, as in Fred eats food, the man hunts ducks, Mary knits socks, the criminal confessed his sins etc. If we change the sentences, the conditions for the GP reading are not satisfied (see 21a-22a):
(21a) When Fred eats cuttlery gets thrown.
(22a) The man who hunts works even on weekends.
(23a) When Mary was knitting her husband fell to the floor.
Example (26) is a slight variation of Type V, in that it contains a deleted indirect object, and a zero subordinator introducing the second clause.
(26) The doctor believed the patient was lying.

## Type VI

[perceived as:] S - V - pronominal O with a possessive pronoun $\rightarrow$ [actually:] S - V zero subordinator - $S$

In this type, the source of confusion is the transitive verb followed by the pronoun her which can be both possessive or objective. If we replace it with a different pronoun, the GP reading is lost, as in example (27a). Similarly, the GP reading can be prevented by avoiding the zero subordinator (27b).
(27) I convinced her children are noisy.
(27a) I convinced him/them children are noisy.
(27b) I convinced her that children are noisy.

## Type VII <br> [perceived as:] S - V - O $\rightarrow$ [actually:] S - transitive V-zero subordinator- clausal O

Sentences in type VII easily lend themselves to the GP reading mainly owing to the presence of the zero subordinator after a transitive verb which leads to the presumed S - V - O word order.
(28) I know the words to that song about the queen don't rhyme.
(29) She told me a little white lie will come back to haunt me.
(30) The troops who found the enemy spy had shot himself were later mentioned in the press report.
(31) The Australian woman saw the famous doctor had been drinking quite a lot.
(32) The criminal confessed his sins harmed many people.

The disambiguation, made difficult by the absence of the conjunction, can be furher delayed by post-modification of the subject of the second clause. This, in effect, delays the arrival of the error signal (see examples 33 and 33a) and lengthens the backtracking process.
(33) The author wrote the novel was likely to be a best-seller.
(33a) The author wrote the novel about current social issues was likely to be a best-seller.

## Type VIII <br> [perceived as:] S - V - O $\rightarrow$ [actually:] S - V - deleted O - juxtaposed clause

In type VIII, the GP reading is caused by the absence of the direct object, the immediate continuation of the sequence by a juxtaposed clause, conversion, and the lack of punctuation.
(34) The man who whistles tunes pianos.

Example (35) is an interesting variation which owes its opaqueness mainly to conversion.
(35) Until the police arrest the drug dealers control the street.

Many of the examples cited so far have an important factor in common, namely the absence of a marker of a sentence boundary. ${ }^{5}$ If, for instance, we start a sentence with an adverbial clause of reason as in example (25), we adjoin the matrix clause by a mere juxtaposition, in written style often without using any punctuation. As there are no overt markers of a sentence boundary, all we have to rely on is semantics, and/or the syntactic structure of the whole sentence. We are probably helped in this process by frequency - as the $\mathrm{S}-\mathrm{V}$ - O pattern is frequent, we tend to apply it in our sequential analysis of the pro-

[^4]cessed text. Using the pattern of the initial adverbial clause and the $\mathrm{S}-\mathrm{V}-\mathrm{O}$ propensity we can easily generate other GP sentences modelled on those listed above, such as:
(25a) Because he always smokes cigarettes are lying all round the place.
(21a) Before he entered the room was unusually quiet.
(29a) He was told the truth about his parents would never be revealed to anyone else.

## Type IX <br> [perceived as:] S - V - infinitival O $\rightarrow$ [actually:] premodified S - infinitival postmodification

Example (36) illustrates an interesting example of a GP arising from the function of the infinitive.
(36) The government plans to raise taxes were defeated.

Here again, we are tempted to complete the $\mathrm{S}-\mathrm{V}$ - O pattern: plans is classified as a verb and the infinitive as its object, whilst in reality plans is a noun and the infinitive functions as its postmodification.

## Type $X$

[perceived as:] nominal content clause $\rightarrow$ [actually:] a relative clause introduced by that

There are several factors causing the GP effect in example (37). The most important one is the confusion between the $\mathrm{S}-\mathrm{V}-\mathrm{Oi}-\mathrm{Od}$ structure and the restrictive relative clause. This is made possible by the fact that: a) tell is a ditransitive verb, b) the relative that is homonymous with the conjunction introducing a nominal content clause, c) the error signal is deferred as, in fact, it is formed by the deferred preposition.
(37) The fireman told the man that he had risked his life for to install a smoke detector.

Example (38) shows that the ellipsis of the relative pronoun can result in a GP structure as well. Here, the subject of the relative clause is taken to be the direct object of the preceding ditransitive verb as if the word order of the sentence was $\mathrm{S}-\mathrm{V}-\mathrm{Oi}-\mathrm{Od}$.
(38) Mary gave the child the dog bit a bandaid.

## 4. Garden path sentences or ambiguity?

As has been said above, garden path sentences owe their existence to the presence of an ambiguous element but they are not ambiguous themselves. At most, we might understand them as ambiguous 'up to a point'. The immediately apparent reading is ungrammatical and often does not actually make sense, the hidden reading is the true
one, but up to a certain point (the error signal) there are two readings one of which has to be abandoned. So far we have dealt with GP sentences where this has been the case. Despite the local apparent dual deep structure, one of the two possible readings was always ungrammatical. All of the sentences contained an error signal which alerted the reader to the fact that his interpretation of the sentence was based on a wrong syntactic structure.

Surprisingly, in literature on the topic, we also find examples whose syntactic structure is ambiguous and both of the readings are fully grammatical. They are sometimes classified as garden path sentences as well. I would argue, however, that these examples should be classified simply as vague or ambiguous.

In example (39) binoculars can be assigned either the instrumental or the post-modificational interpretation. They are both plausible, and both are correct. If we wanted to determine which of the two readings is more likely, we would have to carry out a survey.
(39) The soldier saw the spy with binoculars. (i.e. Who had the binoculars?)

Example (40) is a variation on a theme, but this time logic determines the more likely interpretation. Yet, again, both readings are structurally sound.
(40) Enraged cow injures farmer with ax. (i.e. Who had the ax?)

There are many similar examples involving prepositions, e.g.:
(41) We painted the wall with cracks.
(42) Put the apple on the towel in the box.

Example (41) offers two readings. One in which cracks were painted on a wall, and the other in which a cracked wall had been painted. The apple in example (42) is either to be moved from its current position on a towel into the box, or it is to be placed on a towel inside the box. It could also mean that there is an apple on a towel outside the box, and they are both to be put inside it. Whilst sentences containing ambiguity require reanalysis and thus result in a slower reading speed, they cannot be classified as GPs as they contain two fully grammatical, if often pragmatically unlikely, structures.

## 5. Stylistic factors

Whilst garden path sentences are slow to process they can be used effectively in advertising or journalism, for example as newspaper headlines. Headlines are often intentionally written in order to surprise or even shock, to draw the attention to the article. A garden path sentence such as example (2) certainly has this potential. Sentence (1) is even more effective as it is basically a pun on quantity words (prime, number, few).

Otherwise, these sentences are best avoided and reformulated. Several alternative constructions can be found, such as the cleft sentence, e.g. It is the old that man the boat.,
which, however, is not identical with regard to FSP; or the paraphrase using the full noun phrase Old people man the boat. Such rewordings would, however, make rather lengthy and awkward headlines.

## 6. Conclusion

The ten types of garden path structures that have been identified by no means exhaust all possibilites. The key factors leading to the GP reading appear to be especially incorrect interpretation of conversion and homonymy, and the inability to identify a zero relative or a zero subordinator where one is actually present. This causes a delay in perceiving the true syntactical structure of the utterance. Another factor is that we tend to read in chunks, our eyes spot frequently occurring words and interpret them as a collocation without looking further to see whether the interpretation is actually correct. In this way, GP sentences give us a valuable insight into how language is processed. It seems that analysis happens sequentially (incrementally) and is influenced by canonical forms, frequency, plausibility, semantic expectations and context. Another factor that plays a role is semantic compatibility. The absence of an element, be it due to ellipsis or the missing boundary marker, affects our ability to decode sentences (cf. computer translation). We also tend to prefer more local dependencies than those that are farther removed. As to why this seems to be the case, we can probably only wonder. Is it that the parsing speed of our brain works faster than our reading speed? Or is it that when we read we rely on our working memory, and hence we see anything that is further as a memory obstacle? Or could it have to do with the actual reading span of our eyes which sometimes manage to take in the whole sequence including the error signal in one glance, and at other times they do not manage to spot the error signal until they have moved along the line? These questions can hardly be answered by linguistic analyses, but rather by carrying out psycholinguistic experiments which would take into account reactions of a significant number of readers.

I started the study by pointing out the seeming similarity with optical illusions. I cannot help wondering whether garden path sentences could actually be classified as syntactic illusions.

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## PO ZAHRADNÍCH STEZKÁCH

Resumé
Článek se zabývá popisem základních typů vět, které se označují jako „garden path sentences". Jde o věty, které přes svou gramatickou správnost vedou čtenáře $k$ chybné interpretaci vycházející z mylného přiřazení syntaktických funkcí víceznačným slovům či spojením. Pro správnou interpretaci je pak nutné opětovné čtení. Tento jev je typický zejména pro analytické jazyky a je předmětem bádání především psycholingvistů, kteří na něm zkoumají recepci textu.

Dokladový materiál pro článek byl sesbírán $z$ internetových zdrojů a z nejrůznějších lingvistických studií. Věty jsou podrobeny syntaktické analýze, díky níž je rozpoznáno 10 odlišných typů. Mezi klíčové faktory, které umožňují chybnou interpretaci vět, patří především homonymie tvarů různých slovních druhů (např. v důsledku konverze), elipsa či juxtapozice. Významným faktorem se zdá být i frekvence určitých spojení, jež podmiňuje čtenářovo očekávání pravděpodobného dokončení věty, které je však nakonec v rozporu s intencí autora. Některé tyto faktory jsou natolik silné, že je možné volně a produktivně generovat další věty založené na stejném vzorci.

Článek dále poukazuje na podobnost jevu s dvojznačností. Zatímco u dvojznačnosti existují vždy dvě odlišné hloubkové struktury, u vět popisovaného jevu je hloubková struktura pouze jedna. Dvojí interpretace vět „garden path" je možná až do určitého bodu, kdy si čtenář uvědomí, že musí celou strukturu přeanalyzovat. Jev si tak lze představit jako dočasnou dvojznačnost (ambiguity up to a point). Srovnáním s podobnou interpretací obrazů založených na optickém klamu autor navrhuje, že věty „garden path ${ }^{\text {c }}$ mohou být klasifikovány jako klam syntaktický.


[^0]:    1 The term incrementality, which is commonly used in this context, refers to the fact that we construct the meaning of an utterance word by word as we hear it or read it, i.e. incrementally. This is also referred to as parsing or incremental syntactic parsing.

[^1]:    2 This is not a rule, however; some ambiguities are based on the visual or even the written-visual relation, which is a common feature of puns, as, for example, in the notorious Tom Swifty: "This must be the end,' Sue sighed."

[^2]:    3 As shown by this example, the principle of late closure applies to other structures as well and not only to GPs. It is also worth noting the two different approaches to describing the nature of the ambiguity here, as offered by psycholinguistics and a syntactic analysis. Whilst the first uses the term late closure, the latter speaks of the scope of the adverbial phrase.

[^3]:    4 This is a variation of the old school joke: A: "Time flies." - B: "I cannot, they fly too fast."

[^4]:    5 The avoidance of these ambiguous structures can be easily achieved by inserting a comma between the two clauses. The comma then serves as a sentence boundary marker. The use of punctuation to avoid ambiguity is advocated by Burchfield (p. 162), who illustrates it by giving the example In the valley below, the villages look very small. Leaving the comma out would, in fact, result in a GP sentence, as we could easily take below to be a preposition and not an adverb.

