

# Why and How Come

Chris Collins, MIT

## 1 Introduction

In this paper I will give an analysis of structures involving “why” and “how come”. In section two, I will present an analysis of “why” and “how come.” In section three, I will show how a wide range of syntactic facts follows from this analysis. In section four, I will show how a number of facts about quantifier interpretation follow from the analysis. In section five, I briefly discuss the analysis of “how come” of Zwicky (1971). Lastly, I will conclude with a discussion of some of the wider implications of my analysis of “how come”.

## 2 Basic Analysis

### 2.1 Why

I will assume that “why” is moved to the SPEC of CP, as in figure (1).

In figure (1)<sup>1</sup> “why” has been moved to the Spec of COMP. The base generated position of “why” is the “ec” adjoined to IP. The INFL dominated by COMP represents the movement of INFL to COMP. Later I will come back to some evidence that shows that it is not possible that “why” is interpreted in SPEC CP without binding a trace, as has sometimes been claimed (cf. Bromberger (1985)).

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<sup>1</sup>The order of the trace of “why” and the IP is irrelevant for this paper.

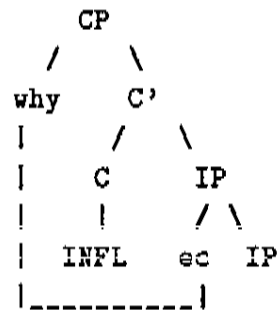


Figure 1: Why Question

Note that the D-S position of "why" may be adjoined to VP as well. One piece of data that suggests this is that "because" clauses can be generated adjoined to VP as the following example shows:

1. Leave because he was angry, John did t.

If the D-S position of a "because" clause reflects the D-S position of a "why" phrase, then it must be possible to generate "why" adjoined to VP.

## 2.2 How Come

A well known difference between “how come” and “why” matrix questions is the lack of auxillary inversion with “how come” questions, illustrated in the following sentences.

2.
  - a. Why did John leave?
  - b. How come John left?

This is consistent with an analysis where “how come” occupies the head of CP. If “how come” is in the head of CP, it follows that INFL cannot raise to this already filled position. This analysis is illustrated in figure (2).

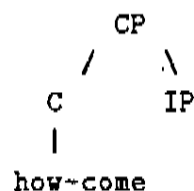


Figure 2: Head of CP

### 3 Empirical Consequences

In the following section I will show how the analysis of “why” as the SPEC of CP and “how come” as the head of CP accounts for a number of syntactic differences between “why” and “how come.”

#### 3.1 Long Distance Construal

Consider the following sentences.<sup>2</sup>

1.
  - a. Why did John say Mary left?
  - b. How come John said Mary left?

Sentence (1a) is ambiguous, “why” can either be associated with the upstairs clause or the downstairs clause. Sentence (1b) is not ambiguous, “how come” can only be associated with the matrix clause. This difference between “why” and “how come” with respect to long distance construal is immediately captured by the analysis given above. The derivations needed to get the lower clause association for “why” and “how come” are given below.

2.
  - a. [<sub>CP</sub> Why [did [<sub>IP</sub> John say [<sub>CP</sub> ec [<sub>IP</sub> ec [<sub>IP</sub> Mary left]]]]]]]
  - b. [<sub>CP</sub> How-come [<sub>CP</sub> John said [<sub>CP</sub> [C ec] [<sub>IP</sub> Mary left]]]]]

<sup>2</sup>This data was independently noticed by Zwicky (1971), who derives this difference between “why” and “how come” on the assumption that “how come” is a reduced clause.

Representation (2a) illustrates successive cyclic movement of “why”. The representation in (2b) however is not licit. At D-Structure “how come” occupies the lower clause COMP. At S-structure, “how come” occupies the head of the matrix COMP. This violates the Head Movement Constraint since at least two heads intervene (maybe more): INFL and V.<sup>3</sup>

Note that this explanation for the contrast between “why” and “how come” is incompatible with Catell’s suggestion (1978) that the long distance construal of “why” in sentence (1a) is not the result of syntactic movement, since the possibility of movement is what distinguishes “why” and “how come.”

### 3.2 Tenseless “why” Clauses

Consider the following contrasts.<sup>4</sup>

4.
  - a. [<sub>VP</sub> Why [<sub>VP</sub> go to the store]], when there is orange juice at home?
  - b. \*How come go to the store?
5.
  - a. Why not do your homework now?
  - b. \*How come not do your homework now?

One possible explanation for this fact is the following.<sup>5</sup> Suppose that in (4a) “go to the store” is a bare VP. Then the minimal analysis consistent with the surface structure of (4) is to say that the “why” is adjoined to the VP, as in the following structure: [<sub>VP</sub> why [<sub>VP</sub> VP]]. But note that this analysis is not available to (4b) since “how come” is a head. If “how come” were adjoined to the VP, this would violate X-Bar theory (there would be a conflicting specification for the head of the structure). A similar explanation

<sup>3</sup>An alternative account of the facts is that COMP in general seems to be frozen for head movement, e.g., COMP is never incorporated into a governing verb. Therefore movement of “how come” would be impossible, quite apart from the Head Movement Constraint.

<sup>4</sup>The semantics of this construction are investigated in Freeman (1976). In particular Freeman shows that these tenseless “why” constructions do denote questions.

<sup>5</sup>Note that this tenseless construction is not available with any other wh-words: \*Where go now, \*How fix the car, etc. I have no explanation for this fact.

holds for (5).<sup>6</sup>

An interesting puzzle that arises for the tenseless “why” construction is the lack of a long-distance construal for the following sentence:

6. Why say that John likes Mary?

Suppose that “why” moves from the embedded clause and leaves a trace in the embedded SPEC CP. We must now ask if the matrix VP adjoined “why” can antecedent govern the trace in the embedded CP. On the theory of Lasnik and Saito (forthcoming) all proper government must be head government (whether it is lexical or antecedent government). In this theory, the VP adjoined “why” in the matrix clause in (6) is not a head, and therefore could not properly govern the trace in the embedded CP.<sup>7</sup>

### 3.3 Clefted “because” Clauses

Consider the following cleft constructions:

7.
  - a. It is because of the hours that John quit his job.
  - b. Why is it [e] that John quit his job?
  - c. \*How come it is [e] that John quit his job

In sentence (a) above, there is a clefted “because” phrase and a subordinate clause. In sentence (a) the “because” phrase can only appear between the copula “is” and the subordinate clause. Given the fixed position of the “because” phrase in (a), it follows that there is a trace left in the formation of the questions in (b) and (c). In other words, in sentence (b) above there is a trace between “it” and the subordinate clause, reflecting the D-Structure

<sup>6</sup>This construction suggests another analysis of “how come”. It could be the case that “how” is adjoined to the VP [come CP]. Since this construction involves a tenseless VP, this would explain why “how came” is not possible. The problem with this is that even though this tenseless construction existed in the past for “how” analogous to “why” it no longer exists at present: \*How fix this darn car. Furthermore, it does not seem that [CP how come IP] has the same pragmatic restrictions (discussed by Freeman) as the [VP why VP] construction.

<sup>7</sup>Another possible explanation for the lack of a long distance reading in (6) is that modal elements of all kinds seem to block the long distance construal of “why”. If (6) involves a covert modal the lack of a long distance construal would follow.

position of the fronted "why". Similarly, there is a trace between "is" and the subordinate clause in (c) above.

The unacceptability of (7c) follows from the fact that "how come" being a head, cannot bind the post-copular maximal projection trace in (7c).

Note that this construction poses a problem for the ECP as formulated by Lasnik and Saito (forthcoming). Consider the following sentences:

8. \*Why did John ask whether it is *t* that Bill left

9. ??Who did John ask whether it is that Bill likes

On the long-distance construal of (8), this sentence is impossible. Adopting the theory of Lasnik and Saito (forthcoming), this follows if the "why" in the embedded clause is neither lexically proper governed nor antecedentally governed. Sentence (9) indicates that the copula [is] in these cleft constructions is a lexical proper governor, since the trace in (9) is not antecedentally governed. Therefore, on Lasnik and Saito's theory, the status of (8) cannot be explained. I leave this to further work.<sup>8</sup>

### 3.4 Control

One diagnostic that has been used for the complementizer status of an element is the distribution of PRO (cd. Kayne 1989). Consider the following contrast:

10. I don't know whether PRO to go to the store

11. \*I don't know if PRO to go to the store

Kayne (1989) gives the following explanation for this contrast. Suppose that "whether" occupies the SPEC of CP but "if" occupies the head of CP. If INFL must raise to COMP in order for PRO to be controlled, then it follows that control will be possible in (10) but not (11).

Given this explanation for (10) and (11) consider the following contrast.

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<sup>8</sup>It might be suggested that the acceptability of (9) follows from the fact that there are pronouns corresponding to "who" (him, here, etc) but not to "why". This would have the consequence that the postcopular position could be occupied by an empty pronoun in (9) but not (8).

12. ?I don't know why PRO to leave<sup>9</sup>

13. \*\*I don't know how come PRO to leave

If it is true that "why" is in the SPEC of CP and "how come" is in the head of CP then the contrast in (12) and (13) follow in the same way as (10) and (11).<sup>10</sup>

### 3.5 Wh-in-Situ

Consider the following contrast:

14. I don't know who ate what

15. \*I don't know whether John ate what

I will adopt the explanation of these fact given in Chomsky (1973). Chomsky postulates a uniformity of interpretation condition for wh-in-situ. His condition (249) is as follows:

#### Condition On Question Interpretation

Assign a wh-phrase not in COMP to some higher structure [<sub>CP</sub> ...+WH] and interpret as in (248) where the interpretation is uniform in this COMP node.

The interpretation rule (248) referred to in the above passage is a rule that interprets wh-quantifiers that bind a trace. Since "whether" in sentence (15) does not bind a trace it cannot be interpreted uniformly with "what", after "what" has been moved to COMP at LF.

Given this explanation for the sentences (14) and (15) consider the following sentences:

<sup>9</sup>The reason (12) is marginal is not clear to me.

<sup>10</sup>A similar fact might be the contrast in the following sluicing constructions: "I don't know why not" vs. "\*\*I don't know how come not". (These facts contrast with the non-negative forms which are both acceptable: "I don't know why" and "I don't know how come.") This contrast would follow if it could be argued that the "not" in the first sentence occupies COMP. Since COMP is occupied by "how Come" in the second sentence this position is not available. The fact that "not" can occupy COMP receives some support from the contrast: "I don't know whether or not John left" vs. "\*\*I don't know if or not John left". This contrast follows if the "or not" occupies COMP.

16. Why did John eat what?

17. \*How come John ate what

Sentence (16) is acceptable only if it meets Chomsky's condition on question interpretation noted above. This would follow immediately if both "why" and "what" bind traces at LF. The unacceptability of (17) is explained exactly parallel to (15). Since "how come" binds no trace, (17) does not meet Chomsky's condition.

Note that this explanation offers an indirect counter-argument against the hypothesis that "why" is interpreted in-situ in SPEC CP. If "why" were interpreted in-situ, then it should act like "whether", "how come" or "if" with respect to wh-in-situ. That is, it should not be possible to have a multiple wh-question like (16), just as (15) is impossible.<sup>11</sup>

## 4 Quantifier Interpretation

In this section I will explain the following question-quantifier interactions.

1.
  - a. What did everybody eat?
  - b. What was eaten by everybody?
2.
  - a. Why did everybody hate John?
  - b. Why did John hate everybody?
3.
  - a. How come everybody hates John?
  - b. How come John hates everybody?
4.
  - a. Why was every candidate elected?
  - b. How come every candidate was elected?

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<sup>11</sup>Note that the grouping of "whether", "if" and "how come" cannot simply be explained by postulating that they are all heads of CP (and therefore do not, for some reason, participate in supporting wh-in-situ). The reason for this is that the control phenomena in (3.4) assume explicitly that "whether" is not the head of CP.



Sentence (1a) illustrates an ambiguity recently described by May (1985). Sentence (1b) lacks the “family of questions” reading that (1a) has. May explains the difference of interpretational possibilities of (1a) and (1b) using the PCC (Path Containment Condition).

Consider the following condition that governs the distribution of the “family of questions” reading (based on a more comprehensive condition given in Lasnik and Saito (forthcoming)).

4.

Suppose that Q1 denotes a question quantifier and that Q2 denotes a non-question quantifier (e.g., everyone). Then a necessary condition for the “family of questions” interpretation is that Q2 c-command a trace of Q1 at S-Structure.

Given this condition, we will examine (1) above. In sentence (1a) “everybody” c-commands the trace of “what” therefore the condition is met. On the other hand, in (1b) “everybody” does not c-command the trace of “what”.

Now in light of this consider the data in (2a) and (2b). We note that there is a similar contrast here as there was in (1a) and (1b). In particular (2a) has the readings in (5) and (2b) has the reading in (6).

5.

- a. For each person x, why does x hate John?
- b. Why does the whole group of people hate John?

6. Why does John hate the whole group of people?

If condition (4) above is correct, this means that in sentence (2a) it must be the case that the trace of “why” is lower than “everybody”. This will of course be true if “why” is adjoined to VP at D-S.

Sentence (2b) will not allow the family of questions reading, since “everybody” is lower than the VP adjoined trace of “why”.

The data in (2a,b) is also amenable to a PCC explanation along the lines of May. We will see that the PCC will not be able to explain the data in (3).

In sentence (3a), it is not possible for the “everybody” to give a family of questions reading (this difference between “how come” and “why” was pointed out to me by D. Pesetsky). This follows immediately from my anal-

ysis of “how come” and the above condition on the “family of questions” reading. If “how come” is base generated in COMP position, it leaves no trace lower than the “everybody”, and so the “family of questions” reading is not possible. Similar reasoning holds for (3b). Sentences (4a-b) are another, perhaps stronger, example of this contrast between “how come” and “why”.

Note that there is no PCC account for this data. Consider the sentence (3a). Here “how come” has not moved from anywhere, therefore there is no path between it and any trace, therefore the PCC is irrelevant.

## 5 The Reduced Clause Analysis

Zwicky (1971) argues for a reduced clause analysis of “how come.” He claims that the sentence in (1a) is derived from an underlying structure that approximates (1b):

1.
  - a. How come Herman said that Gwen ate the goldfish?
  - b. How did it come about that Herman said that Gwen ate the goldfish?

He uses this derivational history to account for the lack of Subject-Aux inversion (INFL to COMP) and for the lack of the “long distance construal” with “how come” discussed in (3.1) above. Furthermore, Zwicky cites the fact that some speakers (not me) find the sentence (2) acceptable as support for an underlying bisentential analysis:

2. How come that she has read the book?

In the following section I will offer syntactic and semantic arguments against Zwicky’s position. The strength of some of the following arguments is weakened by the fact that Zwicky does not make explicit the derived structure of “how come” or the rules that derive (1a) from (1b).

### 5.1 Syntactic Arguments

First, consider Zwicky’s argument base on (2) above. He notes that some speakers use “how come that” instead of simply “how come.” For Zwicky, the added “that” indicates the presence of a clause in addition to the clause

headed by "come." This argument can be turned on its head. If "how come" is biclausal, why is it not possible to have "how come that" freely, for all speakers. If "come" takes an embedded tensed clause, yet does not allow "that" it would be the only complement taking verb with this property. On my analysis, "how come" is COMP. For the speakers that use "that," "how come that" is COMP.

Second, note that "how" in "how come" cannot be extracted. Consider the following sentences:

3.
  - a. How did you say that it came about that John left?
  - b. \*\*How did you say come (that) John left?

Sentence (3a) is acceptable, where "how" has been extracted from the embedded clause. Note that even though "how come" is derived from a structure approximating "how did it come about that", sentence (3b) is unacceptable. It is not clear how Zwicky would explain this. On my analysis, "how come" is a word, and lack of extraction follows.

A third argument can be given against Zwicky's proposal that rests on the distribution of "else." Consider the following paradigm:

4. How else could it come about that John left?
5. \*\*How else come did John leave?

In sentence (4) else modifies "how", whereas this is not possible with "how" in sentence (5). Again, it is not clear how Zwicky would explain this, since "how" has a similar syntactic and semantic function in each sentence. To explain this fact, we can minimally assume that "else" needs to modify a phrase that denotes a quantifier, as with "how" in (4) (also, "somebody else", "nobody else"). In sentence (5), "how" does not denote a quantifier, rather it is part of the COMP "how come." Therefore, the unacceptability of (5) is expected.

## 5.2 Semantic Arguments

Consider the following paradigm: <sup>12</sup>

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<sup>12</sup>This section owes alot to discussions with Sylvain Bromberger, who pointed out the examples in (6) and (9) to me.

6.
  - a. Why is two plus two equal to four?
  - b. How come two plus two is equal to four?
  - c. ??How does it come about that two plus two is equal to four?

Sentences (6a) and (6b) can be construed as asking for a proof that two plus two is equal to four. Whereas (6c), if acceptable, cannot be asking for a proof. Rather it is paraphrased as in (7):

7. How did the event come about that two plus two is equal to four?

If this a correct paraphrase, then (6c) is acceptable only to the extent that two plus two equalling four can be seen as an event. I conclude that "how come" is not synonymous with "how does it come about that", therefore weakening the claim that "how come" derives from a structure approximating "how does it come about that."

In fact for me, "how come" and "why" are largely synonymous. Consider the following paradigm:

8.
  - a. Why did John go into the kitchen?
  - b. How come John went into the kitchen?
  - c. How did it come about that John went into the kitchen?

Question (8a) can either be construed as asking for John's purpose, or the chain of events that caused John to go into the kitchen. Sentence (8c) can not be asking for John's purpose, only for the chain of events. For me sentence (8b) can ask for either the purpose or the chain of events, just like "why."

There is at least one difference between "why" and "how come." Consider the following paradigm:

9.
 

Q: Will John leave?

A: No, Why should he leave?
10.
 

Q: Will John leave?

A: ??No. How come he should leave?

The answer in (9) can be construed as a request for the reasons why John would leave, according to person Q. This does not seem possible with (10). It is not entirely clear how to explain this difference. One possibility is that the response in (9) is synonymous with the following question on the long distance construal:

11. Why do you think John will leave?

If this is the case, we might want to relate the impossibility of the response in (10) to the lack of long distance construal with "how come" (see 3.1).

An alternative is to stipulate that "how come" presupposes the truth of its complement. This would have implications (as pointed out to me by Noam Chomsky) for the analyses in (3.2) (tenseless "why" clauses) and (3.4) (control). I will not pursue this difference between "why" and "how come" here.

### 5.3 Other Reduced Clause Analyses

I have given a number of syntactic and semantic arguments against Zwicky's analysis of "how come." There are a number of alternatives to Zwicky's analysis which retain the insight that there is some sort of relation between "how come" and "how did it come about" or "how comes it" which I will discuss here.

First, it is very plausible that diachronically "how come" is related to "how did it come about that" or "how comes it." This fact alone could account for the common perception that there is a relation between them.

Second, it could be maintained that "how come" has internal clausal structure, but that it is an idiom of some sort. In other words, "how come" would have idiomatic syntax and semantics. On this analysis, there would be no reason why "how come" should be synonymous with "how did it come about." Also, we would not expect "how" to be modifiable by "else," since "how" would not denote a quantifier, if it is a subpart of an idiom. This analysis would still not be able to explain why "that" cannot appear freely after "come" for some speakers, since on this analysis "come" takes a tensed embedded clause complement. On the other hand, this analysis is similar to the one I proposed in the following way. On my analysis, "how come" is a lexical item of category COMP. On this idiom analysis "how come" is still

a lexical item (since idioms are stored in the lexicon), but it is no longer of category COMP.

## 6 Conclusion

In this paper I have characterized a wide range of differences between “why” and “how come”, in terms of a minimal syntactic difference between them.

I have also given a number of arguments for the COMP analysis of “how come” over Zwicky’s reduced clause analysis.

A number of conclusions are particularly relevant to current syntactic characterizations of “why” (e.g., Lasnik and Saito, forthcoming). For example this paper has given some evidence for an analysis of the long distance construal of “why” questions as being mediated by movement (cf. section (3.1) on “Long Distance Construal”).

Secondly, this paper has offered a number of pieces of evidence that there should be some level of representation where “why” binds a syntactic trace adjoined to the VP. In particular, the evidence for this includes the position of the “because” clause (section 2.1), the possibility of wh-in-situ in “why” questions (section 3.5), and finally the possibility the “family of questions” reading in “why” questions (section 4).

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