A comprehensive analysis of English "as" clauses in terms of distribution and interpretation is offered. It is hypothesized that "as" clauses provide a supplementary explanation to the head noun (adnominal "as" clauses) and provide the propositional content of the main clauses (sentential "as" clauses.) "As" clauses, whether they seem to function as adnominal or sentential, should be regarded as adverbial clauses. (Contains 19 references.) (JP)
A NOTE ON ENGLISH AS-CLAUSES*

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ABSTRACT

The aim of this paper is to propose a comprehensive analysis of English as-clauses in terms both of their distribution and interpretation.

It is hypothesized that as must be a complementizer that can relativize a manner adverb or a manner noun phrase, and as-clauses have been shown to behave differently from wh-relative clauses. As-clauses can be considered as serving to add a supplementary explanation or subjective comment to the head noun (adnominal as-clauses) and the propositional content of the main clauses (sentential as-clauses).

In conclusion, as-clauses, whether they seem to function as adnominal or sentential, should be regarded as adverbial clauses.

ON ADNOMINAL AS-CLAUSES

Adnominal as-clauses refer to the following examples, where they seem to modify their head nouns and constitute complex noun phrases:

(1) All languages as we know them have both semantic and pragmatic meanings at all periods.

(2) These subject clitics as we shall call them share all the significant characteristic behavior of the object clitics.

The as-clauses seem to modify the head noun "all languages, these subject clitics." What is significant is that these as-clauses, though they seem to modify their head nouns, behave differently from ordinary wh-relative clauses and the other type of as-clauses:

(3) The accident which Mary saw appeared in the newspaper the next day.

(4) The clusters that Hockett, ibid. calls "interludes."

(5) Such girls as he knew were teachers.

In (1), the head noun phrase "all languages" and the pronoun inside the as-clause, "them" are coreferential, whereas in (3), (4), (5), no coreferential pronouns appear inside the relative clauses. As for (2) and (4), notice that the verb call can subcategorize for two NPs:

(6) call [+V] [+ NP₁ NP₂]

In (2), NP2 seems to be relativized and in (4), NP1 seems to be involved in relativization. Notice also that some adnominal as-clauses can be detached from head noun phrases. This is considered as a process that is strictly prohibited in the wh-relative construction:

(7) The problem,...which phonetic differences are significant in the language in question in that they determine nonrepetition, or as
we call it, phonemic distinctness.

This type of construction will remind readers of the so-called "free" relative clause:

(8) Is this what you call a roundabout?

In both examples, gaps are found inside the clauses. What is crucial is that there is a great difference of the nature of each gap.

ON SENTENTIAL AS-CLAUSES

Sentential as-clauses are the following types of as-clauses, where gaps inside the clauses seem to refer to the propositional content of the main clauses:

(9) Verb + that S Construction
   Fortunately, as we shall see, methods are available for assessing the degree of confidence we may have in the reliability of such estimates.
   (cf. We shall see that methods are available for assessing the degree of confidence...)
(10) It + Verb + that S Construction
   As often happens in the application of statistical methods of real problems, practical considerations frequently outweigh the concerns of the theoretical purist...
   (cf. It often happens that in the application of statistical methods to real problems that practical considerations frequently outweigh the concerns of theoretical purist...)
(11) It + be + past participle or adjective + that S Construction
   As was mentioned in section 1.3., the raw data from an investigation usually require classification before patterns can readily be observed in them.
   (cf. It was mentioned in section 1.3., that the raw data from an investigation usually require classification...)

Another sentential as-clause seems to require a pronoun it inside the clause that seems to refer to the propositional content of the main clause:

(12) Hite is not alone in observing the demise of the notions that love "tis woman's whole existence," as Byron once put it.

This type of as-clause is problematic because it does not have corresponding constructions as we have found in the examples (9) through (11):

(13) Byron put it that love is woman's whole existence.

And the other kind of sentential as-clause has a proform do, does or did or have done and so on, as the case may be):

(14) We cut the nib as we have done, from a sheet of gold.
(15) First (7) entails, as its supposed paraphrase does not, that few congressmen admire Kennedy, period.
(16) This is not to imply, as pot propagandists do, that marijuana should be legalized.

In these examples, gaps do not necessarily refer to the propositional content of the main clause; rather they seem to correspond to a verb phrase of the main clause. Therefore, it may not be correct if we regard them as purely "sentential" as-clauses.
SUMMARY
Observational characteristics of the as-clauses are summarized below:

Adnominal As-Clauses
1. Pronouns or nouns coreferential to head noun phrases are present inside the clauses.
2. The nature of the gaps inside the as-clauses and wh-relative clauses seem different from each other.
3. Some adnominal as-clauses can be detached from the head nouns, unlike wh-relative clauses.

Sentential As-Clauses
1. This type of construction has a gap or pronoun it that corresponds to the propositional content of the main clause.
2. In one type, verbs, past participles, or adjectives in the as-clauses seem to take that S complements.
3. In another type, a pronoun it seems to appear obligatorily, but the verb does not usually take that S complement.
4. In the other type, a proform do can appear inside the clause and the proform seems to refer to a VP of the main clause.

TOWARD A COMPREHENSIVE ANALYSIS OF AS-CLAUSES

Differences between As-Clauses and Wh-relative Clauses
On the Nature of Gaps between the Two Clauses
Wh-relative pronouns relativize what are termed as NPs:

(17) The accident that Mary saw [NP t]
(18) the clusters that Hockett calls [NP t] "interludes"

In the case of adnominal as-clauses, however, I hypothesize that the relativized elements are not "pure" NPs, but noun or adverb phrases that denote manner:

(19) language as we know it [MANNER ADV. t]
(20) Miss Joy, as the family calls her [MANNER ADV. t]

Sentence (19) should be derived in the following way:

(21) language
(22) We know it (=language) the same way.

A manner adverb or noun phrase the same way is considered as being "relativized" by a complementizer as and we would have a derived structure (19). Sentence (20) should be derived in the same manner:

(23) Miss Joy
(24) The family calls her Miss Joy

Miss Joy is relativized and we will have (20).

In the case of a sentential as-clause, the gap inside the clause might be regarded as referring to a manner adverb, and it may be relativized by the complementizer as:

(25) John is honest.
We know (it) in the same way: John is honest.

In the same way is relativized and will have:

(27) John is honest as we know [ADV. it] John is honest.

And John is honest in the as-clause is deleted, and we will have (28):

(28) John is honest, as we know.

Sentential wh-relative clauses can be derived like the following way. Consider (29) and (30):

(29) John is honest.
(30) We know the fact that John is honest.

By following Yamanaka 1985, 1986, we may say that wh-relative clauses are assumed to refer to the propositional content in the form of a complex noun phrase (the fact that John is honest), and this complex noun phrase is relativized so that we will have (31):

(31) John is honest, which we know.

What can be drawn from this line of analysis is that as-clauses, whether they are adnominal or sentential, the complementizer as is assumed to refer to a manner adverb or noun phrase. Whereas in wh-relative clauses, the wh-complementizers are considered as relativizing "pure" noun phrases.

**Detachment of As-Clauses from Head Noun Phrases**

Adnominal as-clauses can be "detached" from their head noun phrases:

(32) The problem,...which phonetic differences are significant in the language in question in that they determine nonrepetition, or as we call it, phonemic distinctness. (=7)

This seems to indicate that adnominal as-clauses may not be strictly adnominal. The following example seems to indicate that some adnominal as-clause might be regarded as adnominal in that the pronoun it is coreferential to the head noun the new law and adverbal in the sense that this example might be paraphrased by (34):

(33) As I understand it, the new law is a reaction to an upsurge of nationwide vigorous protests against that serious accident.
(34) As far as I understand, the new law is a reaction to an upsurge of nationwide vigorous protests against that serious accident.

**Differences between As-Clausess and Wh-relatives in Terms of Interpretation**

In the wh-relative construction, the gap inside the clause functions as a bound variable. Consider the following expression and its representation at S-Structure and LF, with irrelevant details omitted from each representation.

(35) an accident which Mary saw
(36) an accident [COMP which] Mary saw it (S-Structure)
(37) x = accident, and Mary saw x. (Logical Form)

The value of x is dependent on which element the operator which might take from possible candidates in a set that satisfies a condition such that "Mary saw x." A wh-relative clause seems to serve to restrict an extension or referent of a head noun which might be able to have several candidates according to a situation in which a speaker utters that expression. On the other hand, a proper noun does not seem to have as many extensions as a common noun, because it is considered as a name used for a single particular thing or person. The proper noun could have a different referent according to a situation, but in that case, it is changed into a common noun and is restricted by a wh-relative clause:
(38) the Paris that Hemingway loved

What is crucial is that the as-clause does seem to behave differently:

(39) Paris as Hemingway loved it

Here, Paris remains to be a proper noun and it is not necessary to change it into a common noun by adding a definite article to it. The as-clause only serves to add a supplementary or subjective comment or attitude to a head noun, and does not seem to restrict the referent of the head noun, as the wh-relative clause does. This argument could be strengthened by the following observation. Head nouns of adnominal as-clauses, if they are common nouns, tend to take definite articles. Except for a "generic" use as in (40), indefinite articles seem less compatible with the adnominal as-clauses:

(40) I finally took a deferred pass, as they called it, and waited a year and tried again.

This tendency seems quite natural, given that we could hardly give any subjective comment or explanation to the head noun, unless we had definite knowledge on what that head noun should denote.

A Derivation of As-Clauses

A Derivation of Adnominal As-Clauses

In adnominal as-clauses, verbs inside the clauses are considered as being able to take the following subcategorization frameworks:

(41) [+V] [+ NP, MANNER ADV.] or [+ NP, (as)NP2]

MANNER ADVERBS may refer to adverbs such as so, likely, or NP forms like this way, the same way, or an indirect question introduced by how. Verbs used in the adnominal as-clauses may include, but are not limited to the following:

- know, see, use, have, speak, tell, understand, call, dub,
- refer to, define, put

These verbs seem to take the subcategorization (41), like the following way:

(42) I know it as a fact.
(43) I see things differently now.
(44) Don't use your friends III.
(45) In several chapters we have used traces as an expository device.
(46) He will have everything his own way.
(47) The actor speaks his part badly.
(48) I don't know how to tell this story to you.
(49) She understood my silence as refusal.
(50) We must understand the sentence figuratively.
(51) We would call it differently in the United States.
(52) We call him Bill.
(53) They dubbed him Fatty because he was so fat.
(54) We refer to this type of a car as a vintage car.
(55) What defines us as human?
(56) I don't know how to put it.

These examples seem to show that the verbs used in the as-clauses may take either [+ NP, MANNER ADV.] or [+ NP, (as)NP2], or both. As for the [+ NP, MANNER ADV.] verb, a derivation would look like the following:
(57) the problem
(58) The Japanese see it \([\text{MANNER ADV.}, \text{the same way}]\)

The manner adverb is relativized, and we may have:

(59) the problem as the Japanese see it \([\text{ti}]\)

And in the case of the \([+ \text{NP}_1, (\text{as})\text{NP}_2]\) construction, a derivation may look like the following:

(60) Miss Joy
(61) The family calls her Miss Joy
(62) Miss Joy, as the family calls her \([\text{ti}]\)

This concludes a derivation of adnominal clauses.

A Derivation of Sentential As-Clauses

Verbs used in sentential as-clauses include, but are not limited to the following:

- put, tell, happen, mention, make clear, bear out, say,
- argue, suggest, see, call for

I hypothesize that verbs used in sentential as-clauses may take both \([+ \text{NP}, \text{MANNER ADV.}]\) and \([+ (\text{NP})\) that S \text{ subcategorization frameworks.} \ Examples are shown below:

(63) I don't know how to put it.
(64) Some years ago General Omar Bradley put it this way: "We are speeding inexorably toward a day when even the ingenuity of our scientists may be unable to save us from the consequences of a single rash act or a lone reckless hand upon the switch of un-interceptorable missile."
(65) I don't know how to tell this story to you.
(66) He told it to me that new CD of Carlos Kleiber was released.
(67) This is how it happened.
(68) It happened that I was out then.
(69) He didn't mention that in detail.
(70) I mentioned it in the last section that R. Strauss' orchestral works are classified as program music.
(71) Why can't you make everything clear in an easier way?
(72) We must make it clear at first that we have not yet collected enough evidence to prove him guilty.
(73) His observations bear out the argument explicitly.
(74) He will bear me out that I stayed home.
(75) I don't like the way you say a thing like that.
(76) People say that he is going to resign.
(77) They only argued their positions desperately.
(78) The scientist argued that his discovery had changed the course of history.
(79) He hardly suggests his idea formally.
(80) Do you suggest that he is lying?
(81) I see things differently now.
(82) We have seen that statistics has a descriptive and an inferential function.
(83) They called for an increase of wage loudly.
(84) It was called for that enduring peace would settle over the region.

A derivation of a sentential as-clause would be like the following:

(85) Love is woman's whole existence.
(86) Byron put it this way: Love is woman's whole existence.
This way is relativized and we may have:

(87) Love is woman's whole existence as Byron put it: Love is woman's whole existence.

"Love is woman's whole existence" inside the as-clause is deleted, and we will have the following sentence:

(88) Love is woman's whole existence, as Byron put it.

This concludes a derivation of sentential clauses.

A Derivation of As-Clauses with a Proform Do

Consider the following:

(89) We cut the nib as we have done, from a sheet of gold.
(90) This is not to imply, as pot propagandists do, that marijuana should be legalized.

Verbs used in these examples seem to take the following subcategorization frameworks:

(91) He cut the cake half.
[+ NP, MANNER ADV.]
(92) He implied refusal by his look.
[+ NP, MANNER ADV.]
(93) Do you imply that he is dishonest?
[+ (NP) that S]

A derivation of (89) is assumed to be like the following:

(94) He cut the nib.
(95) We have cut the nib the same way.

The manner adverb is relativized and we would have (96):

(96) He cut the nib as we have cut the nib.

Cut the nib has been replaced by a proform of do, and we would have the sentence (97):

(97) He cut the nib as we have done.

A derivation of (90) would look like the following:

(98) This is not to imply that marijuana should be legalized.
(99) Pop propagandists imply (it) this way: Marijuana should be legalized.

Again, a manner adverb this way is relativized:

(100) This is not to imply, as pot propagandists imply: marijuana should be legalized.

The verb phrase imply (that): marijuana should be legalized is assumed to be replaced by a proform do and we could yield (101):

(101) This is not to imply, as pot propagandists do, that marijuana should be legalized.

This concludes a derivation of as-clauses with a proform do inside them.

Problems

Subcategorization Frameworks

It has been argued that both adnominal and sentential as-clauses may take particular subcategorization frameworks. It should be noted, however, that some of the verbs used in the as-clauses do not take
manner adverbs at all times, except for a few verbs (e.g. put as in "You put it. and tell as in "She told.").

**Negation and As-Clauses**

As-clauses seem to function as supplying affirmative comment or supplementary explanation to the head noun or main clause. Therefore, negation seems to be incompatible with as-clauses. However, there are examples where negation seems to be involved inside the as-clauses:

(102)-Ah, the pain! Pain as I had never known it.
(103)First, (7) entails, as its supposed paraphrase does not, that few congressmen admire Kennedy, period.

This remains to be explained under this analysis.

**Further Problematic Examples**

The following examples are also unsolved:

(104)Franny had grabbed the tin cup in his jock strap and twisted its edges into his private parts, which we called them in those days.
(105)"What does she think is going to happen to her over there?"
"Over there" was what we called it.

These examples seem to be counterexamples to an assumption that the relativized elements are different between as-clauses and wh-relative clauses:

(106)\(\text{call } [+V][+ \text{NP}_1 \text{NP}_2]\)
(107)\(\text{the clusters that }_t \text{ Hockett calls } [\text{NP}_1 t]\)
"interludes"
(108)\(\text{Miss Joy, as }_t \text{ the family calls her } [\text{NP}_2 t]\)

**REFERENCES**


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