

SOME REMARKS ON EQUATIVES AND RELATED PHENOMENA¹

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In this paper, we will argue that Polish equative constructions, unlike their English counterparts and unlike both English and Polish comparatives, frequently involve *wh*-movement. We will look in some detail at the grammar of equatives and related constructions and sketch an analysis. We will then ask why equatives should differ from comparatives in this way. We will suggest that the answer lies in the relation between definite descriptions, equatives and comparatives. Developing this suggestion, we will tentatively propose some general hypotheses about this relation.

We will begin by outlining the basic characteristics of Polish equatives and comparatives. Equatives involve the words *tak* and *jak* or various forms thereof. *Tak* precedes the adjective and *jak* follows it introducing a subordinate clause sometimes reduced to a single NP. (1) illustrates a predicative equative, and (2) shows an attributive.

(1) Jan jest $\left\{ \begin{array}{l} \text{tak} \\ \text{taki} \end{array} \right\}$ wysoki, $\left\{ \begin{array}{l} \text{jak} \\ \text{jaki} \end{array} \right\}$ był Jerzy.

John is so tall how was George

'John is as tall as George was'.

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- (2) Jan jest $\left\{ \begin{array}{l} \text{tak} \\ \text{takim} \end{array} \right\}$ wysokim mężczyzną, $\left\{ \begin{array}{l} \text{jak} \\ \text{jakim} \end{array} \right\}$ był Jerzy.

tall

tall

John is so man how was George
 'John is as a man as George was.'

Jak also appears in *wh*-questions like the following,* which is why we have glossed it as 'how' above.

- (3) $\left\{ \begin{array}{l} \text{Jak} \\ \text{Jaki} \end{array} \right\}$ wysoki jest Jan?

how tall is John

'How tall is John?'

- (4) $\left\{ \begin{array}{l} \text{Jak} \\ \text{Jakim} \end{array} \right\}$ wysokim mężczyzną jest Jan?

how tall man is John

'How tall a man is John?'

This immediately suggests that equatives involve *wh*-movement. We will show below that this is indeed the case. When we turn to comparatives, we find a rather different situation. The comparative form of the adjective is formed by adding the suffix *-szy* (*-ej* with adverbs), or with *bardziej* 'more'.² The following illustrate.

- (5) wyższy

taller

- (6) bardziej mokry

more wet

The comparative is followed either by the complementizer *niż* and a subordinate clause sometimes reduced to a single NP, or by the preposition *od* 'from' and a NP in the genitive case. Thus, we have sentences like the following.

- (7) Jan jest wyższy, niż był Piotr.

John is taller than was Peter

'John is taller than Peter was.'

- (8) Jan jest wyższy od Piotra.

John is taller from Peter

'John is taller than Peter.'

Like a number of languages, then, Polish has both a clausal and a phrasal comparative. (See Hankamer 1973.) These are the two main types of com-

* Whether the comparative form of an adjective is formed with *-szy* or with *bardziej* depends not on the number of syllables it contains but on other phonological properties. Thus, we have *inteligentniejszy* 'more intelligent', but *bardziej suchy* not **suchszy* 'drier'.

parative. In certain negated comparatives, however, *jak* may appear. (9) illustrates.

- (9) Twoja teoria jest nie lepsza jak moja.
 Your theory is no better how mine
 'Your theory is no better than mine.'

It looks, then, as if certain comparatives may involve *wh*-movement. We will suggest below, however, that this is probably not the case.

We can turn now to a more detailed consideration of equatives. Our main aim is to show that equatives frequently involve *wh*-movement. We will show that many equative complements are identical to *jak* questions and thus clearly involve *wh*-movement, and that when they differ this can often be attributed to the operation of a deletion rule after *wh*-movement. We will also argue, however, that some equatives do not involve *wh*-movement. We will suggest that these equatives involve just deletion.

Clearly, we must begin by looking at *jak* questions. There are a number of types of *jak* questions. Crucial here is the type that is exemplified in (3) and (4), where *jak* functions as an AP determiner. As (3) and (4) illustrate, *jak* can be inflected or uninflected when it has this function. Traditional Polish grammarians (e.g. Szober 1962) assume that the inflected *jak* and the uninflected *jak* are distinct lexical items. There seems, however, to be no clear motivation for this assumption. There may be pragmatic differences for some speakers between questions with an inflected *jak* and questions with an uninflected *jak*. Such differences, however, are quite compatible with the view that such sentences involve the same lexical item. We will assume, then, that there is just one AP determiner inflected in some circumstances and uninflected in others. *Jak* also functions as an AdvP determiner. In this use, it is never inflected — not surprisingly since adverbs are never inflected. In addition, it sometimes functions as a NP determiner meaning 'which'. In this use, it is always inflected.

Concentrating on questions in which *jak* is an AP determiner, we find data like the following.

- (10)a. Jaki przystojny jest Jan?
 how handsome is John
 b. Jaki Jan jest przystojny?
 c. Jak przystojny jest Jan?
 d. *Jak Jan jest przystojny?
 'How handsome is John?'

It seems from such data that the left branch condition of Ross (1967) can be violated if *jak* is inflected. Thus, we have some evidence for Horn and Zabrocki's (1978) claim that the condition can be violated just in case inflections permit the unambiguous association of the moved element with the element with which

it is associated.³ We have similar data with questions involving attributive adjectives. Consider, for example, the following.⁴

- (11)a. Jakim przystojnym mężczyzną jest Jan?
 how handsome man is John
 b. Jakim Jan jest przystojnym mężczyzną?
 c. Jak przystojnym mężczyzną jest Jan?
 d. *Jak Jan jest przystojnym mężczyzną?
 ‘How handsome a man is John?’

Again, it seems that the left branch condition can be violated if *jak* is inflected. One further point should be noted in connection with these questions. This is that the subject and verb are inverted in (10)a. and c. and (11)a. and c., where *wh*-movement has fronted all the material following the verb. This inversion is normal. Thus, the following have a ‘marked’ character.⁵

- (12)a. Jaki przystojny Jan jest?
 b. Jak przystojny Jan jest?
 (13)a. Jakim przystojnym mężczyzną Jan jest?
 b. Jak przystojnym mężczyzną Jan jest?

We can now consider some equatives. Firstly, we can look at some examples with contrasting adjectives and nouns.

- (14)a. Maria jest taka piękna, jaki przystojny jest Jan.
 Mary is so beautiful how handsome is John.
 b. Maria jest taka piękna, jaki Jan jest przystojny.
 c. Maria jest tak piękna, jak przystojny jest Jan.
 ‘Mary is as beautiful as John is handsome.’

³ As Horn and Zabrocki argue, such phenomena suggest that the left branch condition is a consequence of a surface filter, not of a constraint on transformations, such as Chomsky’s (1973) subjacency condition or Bresnan’s (1976) relativized A-over-A constraint. They suggest, in fact, that it is a consequence of the NP constraint of Horn (1977, 1978). In both English and Polish, however, the condition operates in the same way in AP’s as it does in NP’s. Thus, a rather different sort of filter seems to be necessary.

⁴ It should be noted that questions like the following are rather dubious.

- (i) a. ? Jakim wysokim Jan jest mężczyzną?
 b. ? Jak wysokim Jan jest mężczyzną?

We have no idea why this should be.

⁵ When there is no subject, a violation of the left branch condition is normal. Out of context, (i) a. is more natural than (i) b.

- (i) a. Jaki jest wysoki?
 how (he) is tall
 b. Jaki wysoki jest?
 ‘How tall is he?’

It seems, then, that final verbs have a ‘marked’ character in these questions.

- (15)a. Maria jest taką piękną kobietą, jakim przystojnym mężczyzną jest Jan.
 Mary is so beautiful woman how handsome man is John
- b. Maria jest taką piękną kobietą, jakim Jan jest przystojnym mężczyzną.
- c. Maria jest tak piękną kobietą, jak przystojnym mężczyzną jest Jan.
 'Mary is as beautiful a woman as John is a handsome man.'

Notice here that *tak*, like *jak*, can be uninflected. The crucial fact about these sentences is that the complements have exactly the same form as the *jak* questions just considered. It seems, then, that *wh*-movement and subject-verb inversion operate in exactly the same way in equatives as in *jak* questions.

We can now look at some equatives with identical adjectives and nouns. Specifically, we can consider the following.

- (16)a. Jerzy jest taki przystojny, jaki przystojny jest Jan.
 George is so handsome how handsome is John
- b. *Jerzy jest taki przystojny, jaki Jan jest przystojny.
- c. Jerzy jest tak przystojny, jak przystojny jest Jan.
 'George is as handsome as John is.'
- (17)a. Jerzy jest takim przystojnym mężczyzną, jakim przystojnym
 George is so handsome man how handsome
 mężczyzną jest Jan.
 man is John
- b. *Jerzy jest takim przystojnym mężczyzną, jakim Jan jest przystojnym mężczyzną.
- c. Jerzy jest tak przystojnym mężczyzną, jak przystojnym mężczyzną jest Jan.
 'George is as handsome a man as John is.'

Here, (16)b. and (17)b. are ungrammatical unless the identical material in the complement is stressed for some contrastive purpose. They are quite like the following English examples.

- (18) *George is as handsome as John is handsome.
- (19) *George is as handsome a man as John is a handsome man.

Why, then, is this? There is, in fact, a quite simple explanation. Notice that (20) and (21) are grammatical.

- (20) Jerzy jest taki przystojny, jaki jest Jan.
- (21) Jerzy jest takim przystojnym mężczyzną, jakim jest Jan.

We can explain the ungrammaticality of (16)b. and (17)b. and the grammaticality of (20) and (21) quite naturally if we assume that there is a rule deleting identical adjectives and nouns remaining in S after *wh*-movement.

It is fairly clear, then, that many Polish equatives involve *wh*-movement. Some involve just *wh*-movement. Others involve deletion as well. We will now argue that some equatives involve just deletion. So far we have only considered equatives with complements parallel to the grammatical questions in (10) and (11). One might expect that equatives with complements parallel to the two ungrammatical questions will be ungrammatical themselves. This is not the case, however. The following are perfectly grammatical.⁶

(22) *Maria jest tak piękna, jak Jan jest przystojny.*

Mary is so beautiful how John is handsome

'Mary is as beautiful as John is handsome.'

(23) *Maria jest tak piękną kobietą, jak Jan jest przystojnym mężczyzną.*

Mary is so beautiful woman how John is handsome man

'Mary is as beautiful a woman as John is a handsome man.'

So too are similar examples involving identical adjectives and nouns.

(24) *Jerzy jest tak przystojny, jak jest Jan.*

George is so handsome how is John

'George is as handsome as John is.'

(25) *Jerzy jest tak przystojnym mężczyzną, jak jest Jan.*

George is so handsome man how is John

'George is as handsome a man as John is.'

One might conclude from these examples that an uninflected *jak* can violate the left branch condition in equatives, although it cannot in questions. This is an undesirable conclusion, however. It is clearly desirable, other things being equal, to assume that *wh*-movement operates in the same way in equatives as in questions. There is an obvious way to maintain this assumption. This is to assume that *jak* is a complementizer in these examples and that they involve just deletion.

Further evidence that some equatives involve just deletion is provided by data like the following.

(26)a. **Jan jest taki przystojny, jaki przystojny myślałem, że jest.*

John is so handsome how handsome (I) thought that (he) is

b. **Jan jest taki przystojny, jaki myślałem, że jest.*

⁶ The following sentences are also possible.

(i) *Maria jest taka wysoka, jak jest Jan.*

(ii) *Jerzy jest takim wysokim mężczyzną, jak jest Jan.*

Notice, however, that the following are ungrammatical.

(iii) **Maria jest tak wysoka, jaki jest Jan.*

(iv) **Jerzy jest tak wysokim mężczyzną, jakim jest Jan.*

It seems, then, that, if *tak* is uninflected, *jak* must be too.

- c. *Jan jest tak przystojny, jak przystojny myślałem, że jest.
 d. Jan jest tak przystojny, jak myślałem, że jest.
 'John is as handsome as I thought he was.'

The ungrammaticality of (26)a.—c. is no problem. Notice that parallel *wh*-questions are ungrammatical.

- (27)a. *Jaki przystojny myślałeś, że jest Jan?
 how handsome (you) thought that is John
 b. *Jaki myślałeś, że Jan jest przystojny?
 c. *Jak przystojny myślałeś, że jest Jan?
 'How handsome did you think John was?'

It is generally impossible in Polish to move a *wh*-word into a higher sentence. Given this, the grammaticality of (26)d. is a problem if one assumes that the *jak* is a *wh*-word. It is no problem, however, if one assumes that the *jak* is a complementizer and that the sentence involves just deletion. It looks, then, as if the view that some equatives involve just deletion is quite well motivated.

We want now to say a word about the deletion of identical verbs in equatives. In English, this is always possible. The following illustrate.

- (28)a. George is as handsome as John is.
 b. George is as handsome as John.
 (29)a. George is as handsome a man as John is.
 b. George is as handsome a man as John.

One might expect the same to be true in Polish. In fact, however, it is not. None of the following are acceptable.

- (30)a. *Jerzy jest taki przystojny, jaki przystojny Jan.
 George is so handsome how handsome John
 b. *Jerzy jest taki przystojny, jaki Jan.
 c. *Jerzy jest taki przystojny, jak przystojny Jan.
 'George is as handsome as John.'
 (31)a. *Jerzy jest takim przystojnym mężczyzną, jakim przystojnym
 George is so handsome man how handsome
 mężczyzną Jan.
 man John
 b. *Jerzy jest takim przystojnym mężczyzną, jakim Jan.
 c. *Jerzy jest tak przystojnym mężczyzną, jak przystojnym mężczyzną
 Jan.
 'George is as handsome a man as John.'

It is sometimes possible to delete an identical verb, however. The following are perfectly acceptable.

- (32)a. Jerzy jest taki przystojny jak Jan.
 b. Jerzy jest tak przystojny jak Jan.
 (33)a. Jerzy jest takim przystojnym mężczyzną jak Jan.
 b. Jerzy jest tak przystojnym mężczyzną jak Jan.

It looks as if it is only with a bare *jak* that an identical verb can be deleted. There are, however, certain counterexamples to such a constraint. One type is exemplified by the following.

- (34) Maria jest taka inteligentna jaka piękna.
 Mary is so intelligent how beautiful
 'Mary is as intelligent as beautiful.'
 (35) Jan jest takim dobrym szefem jakim dobrym ojcem.
 John is so good boss how good father
 'John is as good a boss as a father.'

Notice that there are two possible structures for these sentences. They could have *jaka piękna* and *jakim dobrym ojcem* in COMP or they could have just *jaka* and *jakim* there. In either case, however, they will violate the suggested constraint. Why, then, are they grammatical? One possibility is that the constraint can be violated if the verb is all that remains in S. This will allow (34) and (35) with the first of the possible structures. Shortly, we will note some further counterexamples which seem more problematic.

We want now to consider the behaviour of prepositions in equatives. We will show that they provide further evidence that many equatives involve *wh*-movement and that some do not. First, obviously, we must consider the behaviour of prepositions in *jak* questions. Here, there are two points to be noted. Firstly, there is the fact that pied piping of prepositions is obligatory, as in many other languages. The following illustrate.

- (36)a. Z jakim przystojnym mężczyzną rozmawiała Anna?
 with how handsome man talked Anne
 b. *Jakim przystojnym mężczyzną Anna rozmawiała z?
 'With how handsome a man did Anne talk?'

Secondly, there is the fact that certain prepositional questions appear to involve the movement of a non-constituent. Consider the following.

- (37) Z jakim Anna rozmawiała przystojnym mężczyzną?

Here, the preposition *z* and the determiner *jakim* have been fronted leaving behind *przystojnym mężczyzną*. It is fairly clear that they will not be a constituent in underlying structure. Perhaps the preposition is cliticized to the determiner before *wh*-movement. In any event, it should be noted that the movement of a preposition and a determiner is possible only if the determiner is inflected. The following illustrate.

- (38)a. Z jak przystojnym mężczyzną rozmawiała Anna?
 b. *Z jak Anna rozmawiała przystojnym mężczyzną?

We can return now to equatives. Firstly, we can consider examples with contrasting adjectives and nouns. Parallel to the questions in (36), we have the following.

- (39)a. Jan rozmawiał z taką piękną kobietą, z jakim przystojnym mężczyzną
 John talked with so beautiful woman with how handsome man
 rozmawiała Anna.
 talked Anne
 b. *Jan rozmawiał z taką piękną kobietą, jakim przystojnym mężczyzną
 Anna rozmawiała z.
 'John talked with as beautiful a woman as Anne talked with a
 handsome man.'

It seems, then, that pied piping of prepositions is obligatory in equatives just as it is in questions. Parallel to (37), we have (40).

- (40) Jan rozmawiał z taką piękną kobietą, z jakim Anna rozmawiała
 przystojnym mężczyzną.

Thus, we have the same apparent movement of a non-constituent in equatives as in questions. The following show that this phenomenon is restricted in just the same way.

- (41)a. Jan rozmawiał z tak piękną kobietą, z jak przystojnym mężczyzną
 rozmawiała Anna.
 b. *Jan rozmawiał z tak piękną kobietą, z jak Anna rozmawiała przy-
 stojnym mężczyzną.

Again, then, it seems that *wh*-movement operates in just the same way in equatives as in questions. When we turn to examples involving identical adjectives and nouns, we find the same kinds of data, except that parallel to (37) we have not (42) but (43).

- (42) *Maria rozmawiała z takim przystojnym mężczyzną, z jakim Anna
 Mary talked with so handsome man with how Anne
 rozmawiała przystojnym mężczyzną.
 talked handsome man
 (43) Maria rozmawiała z takim przystojnym mężczyzną, z jakim rozmawia-
 ła Anna.
 'Mary talked with as handsome a man as Anne talked with.'

Again, we can explain this quite naturally if we assume that there is a rule deleting identical adjectives and nouns remaining in S after *wh*-movement.

At this point, we can note a further class of counterexamples to the constraint on verb deletion that we suggested earlier. The constraint suggests that it should be impossible to delete a verb in these equatives. It is possible, however, in examples like (43). (44) is perfectly acceptable.

(44) Maria rozmawiała z takim przystojnym mężczyzną, z jakim Anna.

We have no idea why this should be.

We can now present some further evidence for the view that some equatives involve just deletion. Consider the following example, which can mean the same as (43).⁷

(45) Maria rozmawiała z tak przystojnym mężczyzną jak Anna.

Mary talked with so handsome man how Anne.

'Mary talked with as handsome a man as Anne'.

On this reading, an embedded preposition has apparently disappeared. If one assumes that the *jak* is a *wh*-word, one will have to invoke a rule deleting prepositions in COMP. There is, however, no independent evidence for such a rule. Notice that the preposition must appear when one clearly has a *wh*-word.

(46) illustrates.

(46) *Maria rozmawiała z takim przystojnym mężczyzną, jakim rozmawiała Anna.

Moreover, the input to this rule will be the ungrammatical (47).

(47) *Maria rozmawiała z tak przystojnym mężczyzną, z jak rozmawiała Anna.

There are good reasons, then, for thinking that *jak* is not a *wh*-word in (45). It is natural, then, to assume that it is a complementizer and that such examples involve just deletion.

There is another type of equative that we must consider briefly. It involves the quantifiers *tylę* 'so many/much' and *ile* 'how many/much'. (48) illustrates.

(48) Jan zna tylę językownawców, ilu zna Jerzy.

John knows so many linguists how many knows George

'John knows as many linguists as George knows.'

⁷ Like its English gloss, this also has the rather odd reading that is expressed unambiguously by (i).

(i) Mary talked with as handsome a man as Anne is.

It should be noted that (ii) is ungrammatical.

(ii) *Maria rozmawiała z tak przystojnym mężczyzną, jak rozmawiała Anna.

It seems, then, that deletion of the verb is obligatory here.

These equatives appear to always involve *wh*-movement.

There are two points to note about *wh*-questions containing *ile*. Firstly, the left branch condition can generally be violated. The following illustrate.

- (49)a. Ilu filozofów zna Maria?
how many philosophers knows Mary
b. Ilu Maria zna filozofów?
'How many philosophers does Mary know?'

Secondly, we again have examples which appear to involve the movement of a nonconstituent.

- (50)a. Na ile pytań odpowiedziała Maria?
on how many questions answered Mary
b. Na ile Maria odpowiedziała pytań?
'How many questions did Mary answer?'

When we turn to equatives, we find the same kinds of data. Parallel to the questions in (49), we have the following.

- (51)a. Anna zna tylu filozofów, ilu filozofów zna Maria.
Anne knows so many philosophers how many philosophers knows Mary.
b. Anna zna tylu filozofów, ilu zna Maria.
'Anne knows as many philosophers as Mary knows.'

Parallel to the examples in (50), we have the following.

- (52)a. Anna odpowiedziała na tyle pytań, na ile pytań odpowiedziała Maria.
Anne answered on so many questions on how many questions answered Mary
b. Anna odpowiedziała na tyle pytań, na ile odpowiedziała Maria.
'Anne answered as many questions as Mary answered.'

Again, then, *wh*-movement operates in the same way in equatives as in questions. In the b. examples, of course, we have deletion as well.

We can now look briefly at the deletion of identical verbs in these equatives. The basic facts are illustrated in the following.

- (53)a. *Anna zna tylu językoznawców, ilu językoznawców Maria.
Anne knows so many linguists how many linguists Mary
b. Anna zna tylu językoznawców, ilu Maria.
'Anne knows as many linguists as Mary.'
- (54) Anna zna tylu językoznawców, ilu filozofów Maria.
Anne knows so many linguists how many philosophers Mary
'Anne knows as many linguists as Mary knows philosophers.'

- (55)a. *Anna rozmawiała z tyloma językoznawcami, z iloma językoznawcami Maria.
 Anne talked with so many linguists with how many linguists Mary
- b. Anna rozmawiała z tyloma językoznawcami, z iloma Maria.
 'Anne talked with as many linguists as Mary.'
- (56) Anna rozmawiała z tyloma językoznawcami, z iloma filozofami Maria.
 Anne talked with so many linguists with how many philosophers Mary
 'Anne talked with as many linguists as Mary talked with philosophers.'

It appears from such data that an identical verb can be deleted unless there is an identical pied piped noun in COMP.

Unlike ordinary equatives, these equatives seem to always involve *wh*-movement. There are no examples with complements which are not parallel to *ile* questions. It seems, then, that we always have *wh*-movement here, sometimes alone and sometimes in conjunction with deletion.

In our introductory remarks, we noted that *jak* can appear in certain negated comparatives. We will now take a look at this phenomenon. It should be noted firstly that *jak* is never obligatory. *Niż* is always possible as well. *Jak* is most common in examples with contrasting structures such as (57).

- (57) Nie bywał tam częściej jak raz w tygodniu.
 not (he) was there more often how once in week
 'He wasn't there more often than once a week.'

It is less common in examples with parallel structures such as (58) and (59).

- (58) Ta rzeka nie jest bardziej głęboka jak szeroka.
 this river not is more deep how wide
 'This river isn't more deep than wide.'
- (59) Maria nie jest lepszą sportsmenką jak studentką
 Mary not is better sportswoman how student
 'Mary isn't a better sportswoman than a student.'

In standard Polish, *jak* normally occurs in negated comparatives. In non-standard Polish, however, it also occurs in non-negated comparatives. The following is an example from the Poznań dialect.

- (60) Teraz Dębiec jest lepiej oświetlony jak miasto.
 now Dębiec is better lighted how town
 'Dębiec is now better lighted than the town.'

We will return to this phenomenon later.

The question that we must consider now is whether these comparatives ever involve *wh*-movement. Various things suggest that they do not. Firstly, it seems that *jak* cannot be inflected. The following illustrate.

(61) Maria jest nie mniej inteligentna, $\left\{ \begin{array}{l} \text{jak} \\ *jaka \end{array} \right\}$ była Anna.

Mary is not less intelligent how was Anne
'Mary isn't less intelligent than Anne was.'

(62) Jan nie jest gorszym studentem, $\left\{ \begin{array}{l} \text{jak} \\ *jakim \end{array} \right\}$ był Jerzy.

John not is worse student how was George
'John isn't a worse student than George was.'

Secondly, there seem to be examples with pied piped prepositions. The following are unacceptable.

(63) *Jan odpowiedział na nie trudniejsze pytania, na jak odpowiedział Piotr.

John answered on not more difficult questions on how answered Peter
'John answered no more difficult questions than Peter.'

(64) *Jan nie marzył o dłuższej podróży, o jak marzyła Maria.

John not dreamed about longer trip about how dreamed Mary
'John didn't dream about a longer trip than Mary.'

These facts suggest fairly strongly, then, that there is no *wh*-movement here. Some data that might be regarded as evidence that these comparatives sometimes involve *wh*-movement is the following.

(65)a. *Maria jest nie mniej inteligentna, jak Anna była inteligentna.
Mary is not less intelligent how Anne was intelligent

b. ?Maria jest nie mniej inteligentna, jak inteligentna była Anna.
'Mary isn't less intelligent than Anne was.'

(66)a. *Jan nie jest gorszym studentem, jak Jerzy był złym studentem.
John not is worse student how George was bad student

b. ?Jan nie jest gorszym studentem, jak złym studentem był Jerzy.
'John isn't a worse student than George was'.

One might suggest that the b. examples are better than the a. examples because *inteligentna* and *złym studentem* are in COMP as a result of *wh*-movement. One would have to explain, of course, why the b. examples are not fully acceptable, but the suggestion is not obviously implausible. Notice, however, that we have similar data with *niż*. The following illustrate.

(67)a. *Maria jest nie mniej inteligentna, niż Anna była inteligentna.

b. ? Maria jest nie mniej inteligentna, niż inteligentna była Anna.

(68)a. *Jan nie jest gorszym studentem, niż Jerzy był złym studentem.

b. ? Jan nie jest gorszym studentem, niż złym studentem był Jerzy.

There is no reason to think that *niż* is a *wh*-word. Thus, the explanation just suggested for the contrasts in (65) and (66) cannot be employed here. This

suggests, then, that it is not the correct explanation. It is doubtful, therefore, whether (65) and (66) provide any evidence for *wh*-movement.

It seems probable, then, that there is no *wh*-movement in these comparatives. It should be noted, however, that even if there were sometimes *wh*-movement here, comparatives would still be quite different from equatives. In equatives, *wh*-movement is normal. In comparatives, it is certainly not normal, even if it does sometimes occur. Thus, whatever the situation with *jak* comparatives, there is a clear contrast between equatives and comparatives.

We want now to look at some constructions that are closely related to equatives. The most important is a construction just like the equatives except that it contains no adjective. It is natural to assume that it involves empty adjective nodes. It is illustrated by the following.

- (69) Jan jest taki, jaki był Jerzy.
 John is so how was George
 'John is as George was'.
 (70) Jan jest takim mężczyzną, jakim był Jerzy.
 John is so man how was George
 'John is the kind of man that George was.'

Like the equative, this construction, sometimes but not always, involves *wh*-movement. Consider firstly some parallel questions.

- (71)a. Jaki jest Piotr?
 how is Peter
 b. *Jak jest Piotr?
 'How is Peter?'
 (72)a. Jakim mężczyzną jest Piotr?
 how man is Peter
 b. Jakim Piotr jest mężczyzną?
 c. *Jak mężczyzną jest Piotr?
 d. *Jak Piotr jest mężczyzną?
 'What kind of man is Peter?'

It is clear from these examples that *jak* must be inflected. If we assume that they involve empty adjectives, we can say that *jak* is obligatorily inflected before an empty adjective. We can return now to sentences like (69) and (70). Consider firstly the following.

- (73) Jan jest taki, jaki jest Piotr.
 John is so how is Peter
 'John is as Peter is'.
 (74)a. Jan jest takim mężczyzną, jakim mężczyzną jest Piotr.
 John is so man how man is Peter

- b. Jan jest takim mężczyzną, jakim jest Piotr.
'John is the kind of man that Peter is.'

It is fairly clear that these examples involve *wh*-movement. Notice now that (75) and (76) are grammatical also.

- (75) Jan jest taki, jak jest Piotr.
(76) Jan jest takim mężczyzną, jak jest Piotr.

Here, we have an uninflected *jak*. If one assumes that it is a *wh*-word, one will have to assume that the rule that *jak* is obligatorily inflected before an empty adjective is sometimes violated. Obviously, this is an undesirable assumption. Again, then, it is natural to assume that the *jak* is a complementizer and that such sentences involve just deletion.

A second related construction involves *tak* and an adjective but no complement. It is illustrated by the following.

- (77)a. Jan jest taki wysoki.
John is so tall
b. Jan jest tak wysoki.
'John is so/that tall.'
(78)a. Jan jest takim wysokim chłopcem.
John is so tall boy
b. Jan jest tak wysokim chłopcem.
'John is such a tall boy.'

Such sentences can be used in various ways. They can be used deictically with a gesture indicating John's height. In this use, *tak* will be strongly stressed. They can also be used anaphorically after a sentence like (79).

- (79) Piotr ma dwa metry wzrostu.
Peter has two meters height
'Peter is two meters tall.'

In this use, the word *też* 'also' may appear before or after the verb. They also have what Bolinger (1972) calls an 'intensifying' use, i.e., they can be used not to specify John's height but to indicate that his height is remarkable. In this use, they can be followed by a result clause introduced by *że*. The following illustrate.

- (80) Jan jest taki wysoki, że łatwo dosięga najwyższej półki.
John is so tall that easily (he) reaches highest shelf
'John is so tall that he easily reaches the top shelf'.
(81) Jan jest takim wysokim chłopcem, że wszyscy się go boją.
John is so tall boy that everyone him fear
'John is such a tall boy that everyone fears him.'

A final related construction involves just *tak* with no adjective or complement. It is illustrated by the following.

- (82) Piotr jest taki.
Peter is so
'Peter is so.'
- (83) Piotr jest takim mężczyzną.
Peter is so man
'Peter is such a man'.

In suitable contexts, these can be used deictically. They can also be used anaphorically after sentences like the following:

- (84) Paweł jest oszczędny.
Paul is careful with money
'Paul is careful with money.'
- (85) Anna szuka wysokiego, przystojnego mężczyzny.
Anne looks for tall handsome man
'Anne is looking for a tall handsome man.'

It is difficult to imagine either example having an intensifying use. Such a use is quite natural, however, with a sentence like (86).

- (86) Piotr jest takim głupcem.
Peter is so fool
'Peter is such a fool.'

Having looked in some detail at the grammar of Polish equatives and related constructions, we want now to sketch an analysis of these constructions. Our analysis will be based on that proposed by Bresnan (1973) for parallel constructions in English. We will suggest that a slightly revised version of this analysis fits the constructions we have been looking at quite well.

There are two aspects of Bresnan's analysis of equatives and related constructions that are rather questionable. Firstly, there is the assumption that *as*, *so* and *such*, the English equivalents of *tak*, are always QP determiners. This assumption means that sentences like the following have to involve an empty Q.

- (87) John is as his father was.
(88) John isn't such a man as George was.

In the same way, the assumption that *tak* is always a QP determiner would mean that sentences like the following have to have an empty Q.

- (89) Maria jest taka, jaka była jej matka.
Mary is so how was her mother
'Mary is as her mother was.'
- (90) Maria nie jest taką kobietą, jaką była Anna.
Mary not is so woman how was Anne
'Mary isn't such a woman as Anne was'.

There is, however, no independent evidence for these analyses. We think, then, that they should be rejected, and that *as*, *so* and *such* and *tak* should be treated as AP determiners when they are not followed by a quantifier.⁸ This implies, of course, that *as* and *so* and *tak* are both QP and AP determiners. (*such* will always be an AP determiner since it is never followed by a quantifier.) This might be regarded as a dubious conclusion. Notice, however, that *that* is both an NP and an AP determiner. The following illustrate.

(91) That man is a fool.

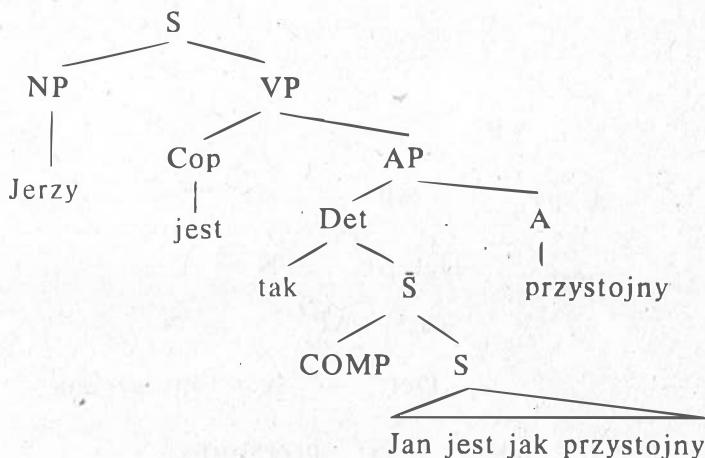
(92) The fish was that long.

We think, then, that there is nothing unreasonable in the assumption that *as* and *so* are both QP and AP determiners.

The other dubious aspect of Bresnan's analysis is the assumption that AP's are generated as left sisters of NP's. English AP's do, of course, appear in this position. Equatives are the obvious example. They are the exception, however, not the rule. The normal position of AP's in both English and Polish is between the determiner and the noun. We will assume, therefore, that AP's are generated as left sisters of N's, and that they reach other positions through transformations.

Revised along these lines, Bresnan's analysis fits the constructions that we have been looking at quite well. For simple predicative equatives, we can propose structures like the following.⁹

(93)



⁸ Jackendoff (1977) argues for the same position, although on rather different grounds.

⁹ Since verbal morphology is of no importance in the present context, we are including verbs in their surface form.

A number of surface structures can be derived from this structure. The first rule of importance is an agreement rule, which marks the embedded adjective as [+masculine], [+singular] and [+nominative]. After it has applied, a second agreement rule may assign the same marking to *jak*. *Wh*-movement will then apply, moving either *jak(i) przystojny* or *jaki* into COMP. Then, in the main clause, the complement will be extraposed, the adjective will be marked as [+masculine], [+singular] and [+nominative], and the same marking may be assigned to *tak*. Finally, if the embedded adjective has not been moved into COMP, it will be deleted. From (93), then, we can derive the following surface structures.

- (94)a. Jerzy jest taki przystojny, jaki przystojny jest Jan.
 George is so handsome how handsome is John
 b. Jerzy jest tak przystojny, jak przystojny jest Jan.
 c. Jerzy jest taki przystojny, jaki jest Jan.
 'George is as handsome as John is.'

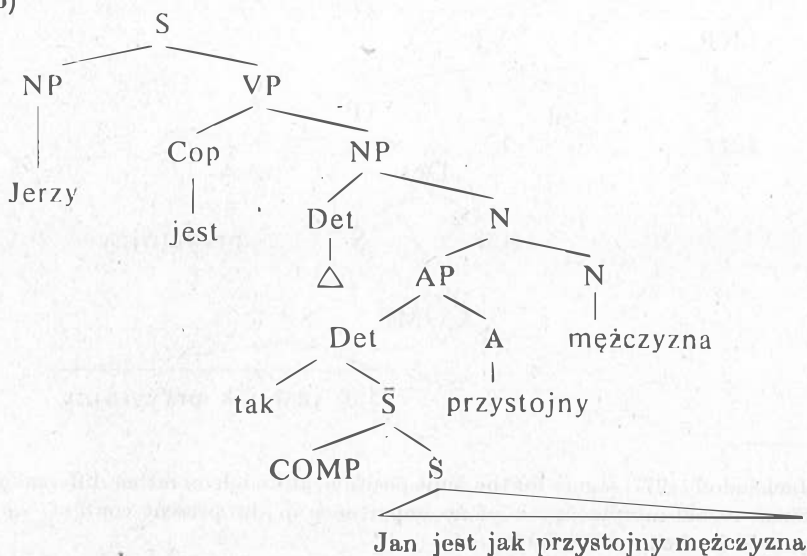
We argued earlier that *jak* is a complementizer in sentences like the following and that they do not involve *wh*-movement.

- (95)a. Jerzy jest tak przystojny, jak jest Jan.
 b. Jerzy jest tak przystojny jak Jan.

These sentences, then, will not derive from (93). They can be derived, however, from a structure just like (93) except that it has *jak* as a complementizer and *tak* as the embedded determiner.

Turning now to attributive equatives, we can suggest structures like the following.

(96)



Again a number of surface structures can be derived. Two new rules are necessary: a rule marking predicate nominals as [+instrumental], and a rule assigning attributive adjectives the same number, gender and case as the nouns they modify. With these rules and others just invoked, we can derive the following surface structures.

- (97)a. Jerzy jest takim przystojnym mężczyzną, jakim przystojnym mężczyzną jest Jan.
George is so handsome man how handsome man is John
- b. Jerzy jest tak przystojnym mężczyzną, jak przystojnym mężczyzną jest Jan.
'George is as handsome a man as John is'

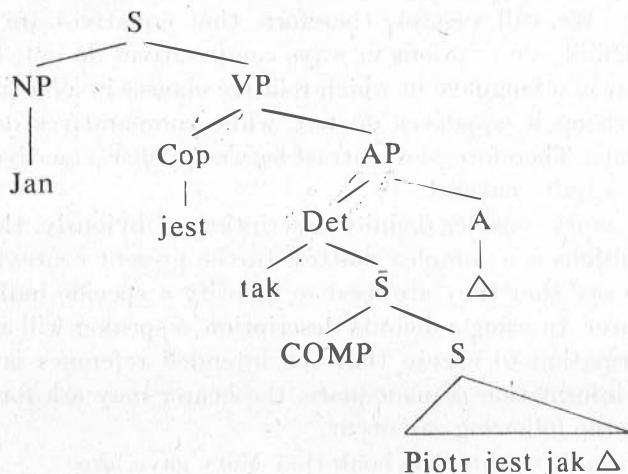
In the following examples, *jak* is a complementizer.

- (98)a. Jerzy jest tak przystojnym mężczyzną, jak jest Jan.
b. Jerzy jest tak przystojnym mężczyzną jak Jan.

They can be derived from a structure just like (96) but with *jak* as a complementizer and *tak* as the embedded determiner.

We have seen that there is a construction just like the equative but with no adjective. For the predicative form of this construction, we can suggest structures like (93), but with empty adjectives, i.e., structures like (99).

(99)



The same transformations will apply as with (93). We assume that empty adjectives can be marked for number, gender and case in just the same way as ordinary adjectives. Obviously, however, such markings have no surface realization. As we have seen, *jak* and *tak* must be assigned the same markings in this situation. From (99), then, we can derive just (100).

- (100) Jan jest taki, jaki jest Piotr.
 John is so how is Peter
 'John is as Peter is.'

In (101), *jak* is a complementizer.

- (101) Jan jest taki, jak jest Piotr.

This, then, will derive from a structure like (99), but with *jak* as a complementizer and *tak* as the embedded determiner. For the attributive form of this construction, we can assume structures like (96) but with empty adjectives. They will involve the same transformations as (96).

We have also seen that there are sentences involving *tak* and an adjective but no *jak* clause or phrase, and sentences involving just *tak*. These can be accommodated quite simply. For the former, we will assume structures like (93) and (96) but with no complements, and, for the latter, we will have structures like (93) and (96) but with empty adjectives and no complements.

We have now looked in some detail at the grammar of Polish equatives and related constructions. The central claim we have made is that Polish equatives frequently involve *wh*-movement, whereas Polish comparatives probably never do. We now want to ask why this should be so. We will suggest that the answer lies in the relation between definite descriptions, equatives and comparatives. We will argue that equatives are semantically similar to definite descriptions containing relative clauses, whereas comparatives are quite different. We will suggest, therefore, that equatives are likely to resemble such definite descriptions in ways comparatives do not. In particular, we will suggest, in a language in which relative clauses involve *wh*-movement, it is not surprising if equatives do too, while comparatives do not. Polish is such a language. Therefore, the contrast between Polish equatives and Polish comparatives is quite natural.

Firstly, we must consider definite descriptions. Obviously, the function of definite descriptions is a complex matter. In the present context, however, it is sufficient to say that they are used to identify a specific individual, thing or set for a hearer. In using a definite description, a speaker will aim to include adequate information to ensure that the intended reference is clear to the hearer. If the information is inadequate, the hearer may ask for more. Thus, exchanges like the following can occur.

- (102) A: John is reading the book that Mary gave him.
 B: But which book is that?

Frequently, relative clauses and other modifiers are necessary to make the intended reference clear. Clearly, however, this is not always the case. In many cases, a simple noun is quite adequate. Thus, a relative clause is an optional component of a definite description, used when the intended reference would not be clear with a simple noun.

When we turn to equatives, we find a similar situation. While a definite description is used to identify an individual, thing or set, an equative identifies a point on a scale. Not surprisingly, an equative can sometimes be paraphrased by a definite description. The following illustrate.

(103) John is as tall as his father was.

(104) John is the height that his father was.

As with definite descriptions, the information included in an equative may be inadequate. Thus, we have exchanges like the following.

(105) A: John is as tall as his father was.

B: But how tall is that?

Often, the complement is necessary to ensure that the intended reference is clear. Sometimes, however, the adjective alone may be sufficient. Thus, the complement is optional just like a relative clause in a definite description. The point is clear enough in Polish. As we have seen, (106) is just as grammatical as (107).

(106) Jan jest tak wysoki.

John is so tall

'John is so/that tall.'

(107) Jan jest tak wysoki jak Jerzy.

John is so tall how George

'John is as tall as George.'

In English, however, it is less clear. (108) is just as grammatical as (109).

(108) John is not so tall.

(109) John is not so tall as George.

Notice, however, that (110) is grammatical only if an *as* clause or phrase is recoverable from the context.

(110) John is as tall.

Here, then, the complement appears to be obligatory. It is not necessary to say this, however. We can suggest instead that *so* and *as* are realizations of a single determiner which is realized as *as* only if it is associated with a complement. This will explain the properties of (110) quite naturally. The determiner will be realized as *so* in various circumstances, and may also be realized as *that* if it is not associated with a complement. In both Polish and English, then, equative complements are optional elements, used when the intended reference would not be clear with a simple adjective.

When we turn to comparatives, we find that things are rather different. Unlike equatives, they do not specify a point on a scale. (111), for example,

does not tell us John's height. It just indicates that his height is greater than George's.

(111) John is taller than George.

Not surprisingly, comparatives can never be paraphrased by definite descriptions. (111) for example, can be paraphrased by (112).

(112) John is a greater height than George.

Notice, however, that this still contains a comparative construction. The contrast between comparatives and equatives is brought out by certain question-answer pairs. Consider (114) and (115) as answers to (113).

(113) How tall is John?

(114) As tall as George.

(115) Taller than George.

Intuitively, we would suggest, there is a clear difference here. As long as the hearer knows how tall George is, (114) will be an adequate answer. (115), however, may not be wholly adequate even if the hearer knows how tall George is. Notice that it would be quite natural to preface (115) with *well*, which, as Lakoff (1973) notes, is used to indicate that the answer to a question is less than adequate. This would be adequate with (114) only if the hearer did not know how tall George is. Semantically, then, comparatives and equatives are rather different. Notice now that comparative complements, unlike equative complements, are obligatory. (116) is only grammatical if a *than* clause or phrase is recoverable from the context.

(116) John is taller.

Similarly, (117) is only grammatical if a *niż* clause or phrase or an *od* phrase is recoverable from the context.

(117) Jan jest wyższy.

John is taller

'John is taller.'

Here, then, we have an important syntactic difference between comparatives and equatives, reflecting the semantic difference we have just discussed. In a number of ways, then, comparatives are rather different from equatives.

If these observations are sound, it is quite natural that equatives should resemble definite descriptions containing relative clauses in ways in which comparatives do not. In particular, in a language in which relative clauses involve *wh*-movement, it is quite natural that equatives should too, while comparatives do not. As we have noted, Polish relative clauses involve *wh*-movement. The following illustrate.

- (118) a. mężczyzna, który wszedł do pokoju
 man who came into room
 'the man who came into the room'
 b. mężczyzna, którego Maria kocha
 man whom Mary loves
 'the man who Mary loves'
 c. mężczyzna, z którym Maria rozmawiała
 man with whom Mary talked
 'the man with whom Mary talked'

It is not at all surprising, then, that Polish equatives often involve *wh*-movement too, while Polish comparatives probably never do.

We are suggesting, then, that it is natural that equatives should resemble definite descriptions containing relative clauses in ways in which comparatives do not. Polish provides one example of this. It is natural to look for other examples. We want, therefore, to look briefly at some other languages.

One language that appears to be quite similar to Polish in this area is Bulgarian. Here, equatives involve the words *tolkova* and *kolkoto*. *Tolkova* precedes the adjective and *kolkoto* follows, introducing a subordinate clause sometimes reduced to a single NP. (119) illustrates.

- (119) Ivan e tolkova visok kolkoto Georgi.
 John is so much tall how much George
 'John is as tall as George.'

Kolkoto consists of *kolko* 'how much' — and *-to* the definite article. Such examples of *wh*-words are characteristic of relative clauses. This suggests quite strongly, then, that we have *wh*-movement here. We will present some supporting evidence in a moment. Again, comparatives are rather different. The comparative form of the adjective is formed with the prefix *po-*. It is followed by *ot* 'from' and a NP or by *otkolkoto* and a subordinate clause. The following illustrate.

- (120) Ivan e po-visok ot Georgi.
 John is taller from George
 'John is taller than George'.
 (121) Ivan e po-visok otkolkoto beše bašta mu.
 John is taller than was father his
 'John is taller than his father was.'

Like Polish, then, Bulgarian has both clausal and phrasal comparatives.

The evidence that Bulgarian equatives involve *wh*-movement is quite strong. Since Bulgarian has no case marking, one type of evidence cannot occur. There is good evidence, however, from pied piping. The contrast between (122) and (123) provides evidence for pied piping of adjectives.

- (122) Ivan e tolkova visok kolkoto visok beše bašta mu.
John is so much tall how much tall was father his
'John is as tall as his father was.'
- (123) ?Ivan e tolkova visok kolkoto beše visok bašta mu.

We can explain this contrast in the same way as we explained similar contrasts in Polish. We can assume that the second *visok* is in COMP in (122) as a result of pied piping, while in (123) it has remained in S. In this situation, deletion is favoured in Bulgarian, just as it is in English and Polish. Thus, (124) is preferred to (123).

- (124) Ivan e tolkova visok kolkoto beše bašta mu.
John is so much tall how much was father his

It should be noted that the assumption that the second adjective can remain in S is unproblematic since AP's are not subject to the left branch condition in Bulgarian.¹⁰ The following illustrate.

- (125) Kolko visok e Ivan?
how tall is John
'How tall is John?'
- (126) Kolko e visok Ivan?
how is tall John

It is also worth noting that sentences like (127), in which pied piping has been followed by deletion of the embedded verb, are ungrammatical.

- (127) *Ivan e tolkova visok kolkoto visok Georgi.
John is so much tall how much tall George

Evidence for pied piping of prepositions is provided by sentences like (128).

- (128) Ivan prenebregna tolkova hora s kolkoto razgovarja.
John ignored so many people with how many talked
'John ignored as many people as he talked to.'

Notice that (129) is ungrammatical.

- (129) *Ivan razgovarja s tolkova hora s kolkoto Georgi.
John talked with so many people with how many George
'John talked to as many people as George.'

¹⁰ It should be noted, however, that NP's are subject to the left branch condition. The following illustrate.

- (i) a. Cija kola e otkradnal Ivan?
whose car is stolen John
b. *Cija e otkradnal Ivan kola?
'Whose car has John stolen?'

The grammatical equivalent of (129) has no preposition in the complement. (130) illustrates.

- (130) Ivan razgovarja s tolkova hora kolkoto Georgi.
John talked with so many people how many George

This may suggest that *kolkoto*, like *jak*, is a complementizer as well as a *wh*-word. As far as we can see, however, it is just as plausible to assume that we have deletion of a preposition in COMP in these cases.

We must now consider Bulgarian comparatives. Here, the situation is less clear than in Polish. There seems to be no evidence for pied piping of adjectives. Sentences like (131) are quite dubious.

- (131) ?Ivan e po-visok otkolkoto visok beše bašta mu.
John is taller than tall was father his
'John is taller than his father was.'

There does, however, seem to be some evidence for pied piping of prepositions. Although somewhat unnatural, sentences like (132) are possible.

- (132) Marija flirtuva s poveče maže s otkolkoto spi.
Mary flirts with more men with than (she) sleeps
'Mary flirts with more men than she sleeps with.'

It looks, then, as if Bulgarian comparatives may sometimes involve *wh*-movement.

Thus, Bulgarian seems to be a little more complex than Polish in this area. As in Polish, there is quite clear evidence for *wh*-movement in equatives. There also, however, seems to be some evidence for *wh*-movement in comparatives. There is still, however, a fairly clear contrast between equatives and comparatives, since with equatives evidence for *wh*-movement is clear and unequivocal, whereas with comparatives it is limited and uncertain.

A second language which is of interest in the present context is German. Here, equatives involve *so* and *wie*, the former preceding the adjective and the latter following. (133) illustrates.

- (133) Johan ist so gross wie Georg war.
John is so tall how George was
'John is as tall as George was.'

Wie also appears in *wh*-questions like (134).

- (134) Wie gross ist Johan?
how tall is John
'How tall is John?'

Comparatives involve the comparative form of the adjective followed by *als*.

- (135) Johan ist grosser als Georg.
 John is taller than George
 'John is taller than George.'

Als is cognate with English *as*, a point to which we will return shortly. The fact that equatives involve *wie* immediately suggests that they involve *wh*-movement. As far as we can see, however, there is no real evidence for this. There seems to be no evidence for pied piping of adjectives or prepositions. Since both are obligatorily pied piped in German, this suggests fairly strongly that there is no *wh*-movement in equatives. It looks, then, as if *wie* is a complementizer here. It is homophonous with a *wh*-word, however, and *wh*-words can appear in relative clauses in German. We can still say, then, that equatives resemble definite descriptions containing relative clauses in ways in which comparatives do not.

A third language which can be considered briefly is Spanish. Here, equatives involve *tan* and *como*. (136) illustrates.

- (136) Juan es tan alto como Jorge.
 John is so tall how George
 'John is as tall as George.'

Como also appears in *wh*-questions like (137).

- (137) ¿Cómo está Juan?
 how is John
 'How is John?'

Comparatives involve *más* 'more' and *que*.

- (138) Juan es más alto que Jorge.
 John is more tall than George
 'John is taller than George.'

The fact that equatives involve *como* suggests that they involve *wh*-movement. As in German, however, there is no real evidence for this. Notice also that, in *wh*-questions which are related to equatives, one has not *como* but *cuán*. (139) illustrates.

- (139) ¿Cuán alto es Juan?
 how tall is John
 'How tall is John?'

It seems fairly clear, then, that there is no *wh*-movement here. Presumably, then, *como* is a complementizer in equatives. It is homophonous with a *wh*-word, however. Thus, as in German, we can still say that equatives resemble definite descriptions containing relative clauses in ways in which comparatives do not.

It seems, then, that a number of languages provide some support for the hypothesis that equatives are likely to resemble definite descriptions containing relative clauses in ways in which comparatives do not. Obviously, these observations do not constitute a thorough investigation of the hypothesis. We think, however, that a more thorough investigation is likely to provide further support. One point that should be noted is that languages in which equatives are no more like definite descriptions containing relative clauses than comparatives do not provide any evidence against this hypothesis. Only languages in which comparatives resemble such definite descriptions more than equatives will provide evidence against it. We suspect that there are no such languages.

We want now to advance two diachronic hypotheses. The first is simply a diachronic version of the synchronic hypothesis that we have been discussing. We want to suggest that equatives are more likely than comparatives to change in ways that lead them to resemble definite descriptions containing relative clauses. The one piece of evidence that we have for this hypothesis comes from German. Here, it appears that *als* was once normal in equatives. Now, however, it has generally given way to *wie*, and only remains in certain idiomatic equatives such as the following.

- (140) so bald/gut/long/schnell als möglich
 so soon/good/long/fast as possible
 'as soon/good/long/fast as possible'

Wie currently shows signs of spreading to comparatives. In equatives, however, it has been normal for some time. Here, then, we seem to have some support for the hypothesis.

The second hypothesis concerns the diachronic relation between equatives and comparatives. In general, it seems more likely that features of less complex constructions will spread to more complex constructions than vice versa. We have argued that comparatives are more complex than equatives. We want to suggest, then, that features of equatives are likely to spread to comparatives but that the reverse is unlikely. There is evidence for this hypothesis from a number of sources.

Firstly, we can consider German. Here, as we have just noted, *als* was once normal in equatives. In comparatives, however, *danne* or *denne*, cognate with English *than*, was once normal. It now remains only in certain idiomatic comparatives such as (141).

- (141) Sie war schöner denn je.
 she was more beautiful than ever
 'She was more beautiful than ever.'

It seems, then, that, just as *als* has given way to *wie* in equatives, so *danne* and *denne* have given way to *als* in comparatives. Here, then, we seem to have some quite good evidence for the hypothesis. As we have noted, *wie* is now showing signs of spreading to comparatives. Sentences like (142) are apparently quite common in colloquial speech.

(142) Johan ist grosser wie Georg.

John is taller how George

'John is taller than George.'

Here, then, we have some further support for the hypothesis.

English also provides some evidence for the hypothesis. The Oxford English Dictionary cites a number of examples of comparatives with *as*, the earliest being the following from the Paston Letters (1466).

(143) I hadde never more neede...as I have at this time.

There are no examples, however, of equatives with *than*. *As* is no longer possible in comparatives. It seems, however, that it once spread from equatives to comparatives in various dialects of English.

Finally, there is evidence from Polish. Here, it appears from the investigations of Ostrowska (1966) and Nitsch (1966) that *jak* has become increasingly common in comparatives since the 17th century. In early Polish, *jak*, or rather *jako*, was normal in negated comparatives with a 'superlative' meaning such as the following from the 15th century.

(144) Niczs nie oślepi rychlej jako nieczystota.

nothing not blind sooner how unchastity

'Nothing will blind one, sooner than unchastity.'

Elsewhere, however, it was only possible after *nie mniej* 'not less', in sentences like the following.

(145) I nie mniej to potrzebna... rzecz jest posłuszeństwo jako i rozkazowanie.

and not less it necessary thing is obedience how and giving orders

'Obedience is not a less necessary thing than the ability to give orders.'

In other negated comparatives such as the following only *niż* was possible.

(146) Tak też mężczyzna nie jest bardziej człowiekiem niż białogłowa.

so also man not is more human being than fair sex

'And so a man is not more of a human being than a woman.'

In the 17th century, however, *jak* began to occur in all negated comparatives. Now either *niż* or *jak* is generally possible. In the 18th century *jak* began to

appear in non-negated comparatives. Sentences like the following were quite common.

- (147) Cięższy żal ponosić krzywdę od przyjaciół, jak od nieprzyjaciół.
greater sorrow suffer harm from friends how from enemies
'It is a greater sorrow to suffer harm from friends than from enemies.'

Since the end of the 19th century, this tendency has been suppressed by prescriptive grammarians. Consequently, in standard Polish, *jak* is now only possible in negated comparatives. As we have noted, however, *jak* is common in non-negated comparatives in non-standard Polish. There has, then, been a tendency for *jak* to play an increasing role in comparatives since the 17th century. Thus, we have some further support for the hypothesis.

This paper has been concerned in various ways with the relation between equatives and comparatives. We argued firstly that Polish equatives frequently, though not always, involve *wh*-movement, whereas Polish comparatives probably never do. We then suggested that this difference is a natural consequence of the semantic contrast between equatives and comparatives, in particular of the fact that equatives but not comparatives are semantically similar to definite descriptions containing relative clauses. Then we presented data from some other languages which seems to support our position. Finally, we have advanced two diachronic hypotheses and presented some evidence for them. Clearly, these issues merit further investigation. We think, however, that any such investigation is likely to support the main ideas advanced here.

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