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Rhetorical Structure Theory can be used to explain other text characteristics as well, and it provides a way to address a wide range of discourse phenomena.

References


When Speakers Write

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It has been recognized for some time that written and spoken English differ in important ways. It has even been suggested that the presence of a literary tradition can influence the development of a language as a whole, and that important differences between familiar European languages and more exotic 'preliterate' languages might be the result of the historical development of general literacy (Goody and Watt 1963, Ong 1982, Pawley and Syder 1983).

What happens to an 'exotic' language when it suddenly acquires a literary medium? Does the act of transferring language to paper affect linguistic structure immediately, or does literary style develop only over a long period of time?

Mohawk, an Iroquoian language spoken in Quebec, Ontario, and New York State, differs radically in structure from Indo-European languages. Until recently, the language was not generally written by its speakers. During the past 15 years, however, several communities have introduced Mohawk language classes into their schools. Speakers have been trained as teachers, an orthography has been established, and a number of people have devoted considerable effort to learning to write their language. The materials they have produced, essays, traditional narratives, personal anecdotes, and skits, provide excellent documentation of both Mohawk and the effect of the written medium on a previously unwritten, non-Indo-European language.

Although the Mohawk have not had a literary tradition of their own, they are far from naive in matters of linguistic style. Their oratorical skill in diplomatic and religious speeches was noted by European writers as early as the seventeenth century. Anyone who works with Mohawk speakers today cannot help but be impressed by their appreciation of linguistic virtuosity. Their awareness of style permeates all types of language, from formal oratory, to anecdotes, and even one-line rejoinders. The cultivation of style was a central part of Mohawk culture long before Mohawk was written by anyone.

All of those who have begun to write recently were already literate in English, although the amount of time typically spent by each in reading and writing English varies considerably. For this reason, their written materials directly illustrate the effect of the written medium on the structure of the language, rather than the effect of literacy on cognition.

I. Spoken Mohawk

Probably the most striking characteristic of Mohawk is its polysynthesis. Mohawk speakers tend to pack considerably more information into single words than do speakers of Indo-European languages. This has a significant effect on discourse structure.
A. Word Structure
There are three morphological types of words in Mohawk: particles, nouns, and verbs. Particles, by definition, have no internal morphological structure. They serve as deictics, numbers, conjunctions, evidentials, etc.*

1) kEvento 'this'  
dhasek 'three'  
tono 'and'  
i6:ken 'it is said'

Nouns have relatively simple internal structure, usually consisting of a pronominal prefix, a noun stem, and a nominal suffix.

2) ohe:nts'e 'land'  
NEUTER-land-NOMINAL.SUFFIX

Verbs, in contrast, can exhibit a highly complex morphological structure. They contain obligatory pronominal prefixes referring to their agents and/or patients, a verb root, an aspect suffix, and a potentially large number of additional prefixes and suffixes. The verb below is typical.

3) tenhono:rate' 
ten-a-bont-erist-a-werar-e' 
DUALIC-PUT-REPEETITIVE-MPLAAG-SEMI.REFL-metal-9-go.over-PUNCTUAL  
'they will cross back over the (railroad) track'

B. The Predominance of Verbs
One of the most salient features distinguishing Mohawk from Indo-European discourse is its high proportion of verbs. The passage below was taken from an account of the adventures of some Mohawks who went away to work at a lumbercamp. One Saturday they all went into town. They stopped at a bar and enjoyed themselves until it was time to go home. On the way back, one fellow, known for his imitations of a priest, told his friends to kneel and pray. A policeman driving by noticed their strange behavior and strong breath. He arrested them and took them to jail, where they spent the night. The next morning in court, the judge asked the policeman what they were charged with. When the policeman replied that he had found them kneeling by the railroad tracks, praying, the judge, outraged, ordered the policeman to escort them back to camp immediately, with no punishment. Verbs below are marked with V.

4) Iahshakola'te:nhawe'  
there he them body took to

V  
tsi 'a'  
oanta:eh:nhoka:kwa'a  
'their one door closes with it

'He took them all to jail,

wahonwatihed:ton,  
thon  
ki'  
thon:and:weri:keve'  
where they them door closed there

V

thok  
V

V

This predominance of verbs is related to several factors.

1. Pronominal prefixes
Because of their obligatory pronominal prefixes, morphological verbs can and often do stand alone as complete clauses in themselves. No separate nominals are necessary for grammaticality.

2. Morphological structure versus syntactic function
With only three types of words, particles, nouns, and verbs, Mohawk has fewer lexical categories than many other languages. Concepts expressed in Indo-European languages by adjectives and adverbs are usually expressed in Mohawk by verbs. Instead of building up complex noun phrases with adjectival phrases, or verb phrases with adverbial phrases, speakers tend to modify nominals and predicates with separate clauses. The English modifier 'many' in the translation below, for example, corresponds to the Mohawk verb -owana 'be large'.

5) Shonke:taro:ro:ke'  
ki'  
kenta:ko  
ronakohkwa:n'en.  
will they people gather this there they group large are

'They would recruit many people.'

(ron-akiokhauowana = MPLAAG-group-large-STATIVE.) The adverb in the English translation below also corresponds to a Mohawk verb.

V

6) Ioshrina:sahtehntit.'  
V

it is fast back they went

'They went home early.'

In addition to their functions as predicates and modifiers, verbs often serve as nominals. Note the term for 'jail' in 4).

The discrepancy between morphological type and syntactic function suggests that a more valid comparison of word types in English and Mohawk might be predicates:arguments, instead of verbs:nouns. The distinction between verbs functioning as nominals and those functioning as predicates or clauses is not always a clear one, since lexicalization can be a gradual process. The phrase below could be translated several ways.

7) nö:non  
oru:kwase'  
at that time when it moon now is

'when the moon is new' or 'during the new moon'

Even when conventionalized verbal nominals are counted as nominals,
however, the predicate:argument ratio in spoken Mohawk discourse is often as high as 5:1. Comparable figures in English are quite different, generally around 1:2 or 1:3, so that predicates are outnumbered by arguments several times over.

3. Noun incorporation

A third factor contributing to the difference in predicate:argument ratio is a mechanism known as noun incorporation. Many of the verbs cited above contain noun roots: -inˈt- 'body', -nhaˈ- 'door', -onkweˈ- 'person', -akihonˈ- 'group', etc.

Incorporation is a powerful stylistic option that speakers can exploit in a number of ways. It is used to form a single word for a single conceptual unit. Incorporated nouns lose their suffixed as separate arguments, serving instead to narrow the sense of the verb. In the first verb in 4) for example, iahshakioiˈnˈtˈahnweˈ 'he took them', the meaning of the verb root -enˈtˈahnwe- 'take' is semantically narrowed by the noun stem -onkweˈ- 'person' to denote a type of taking involving human beings, more like 'accompany'.

Incorporation can also serve as a stylistic device for backgrounding less newsworthy nominal terms in discourse. The excerpt below is from a conversation. A just asked what B had for lunch.

8) B. Sakatshoːри 'nìːjì
again I slurped myself
'I had soup again, myself.'

A. ˈke kiˈ nàː'a tsì ˈnihaˈmanˈtɔɾàkɔn.
oh just guess that so it soup delicious is
'Oh, I bet it must have been delicious.'

B did not mention soup (-manˈtɔr-) overtly, but it was inerrable from her use of the verb -stɔˈhɔri, 'eat', used only with soup. This was sufficient for A to consider the soup an established entity and incorporate it into the verb -akum 'be delicious'.

4. The lexicon

Perhaps due to the large amount of information borne by verbs, Mohawk speakers use verbs to communicate many of the ideas conveyed by English speakers with nouns or with noun plus verb combinations. Consider the last line of the lumbercamp segment in 4). The speaker rendered this statement in Mohawk with two verbs, but in English with a single verb and two full noun phrases.

5. One piece of news at a time

A final factor in the the preponderance of verbs is related to a feature typical of spoken language. Clauses, or intonation units, do not typically consist of a verb plus a large set of arguments. Speakers tend to introduce only one piece of important new information at a time into an intonation unit. (See Chafo to appear.) The lines below constitute the opening of the lumbercamp narrative. Each line represents a separate intonation unit.

10) Ne kəˈtʰəri kiː ˈʃaiˈːta, ˈiˈonkweˈˈtʰahnəˈ ˈrəiˈːtəro
the then again this one body silly person he body in
'Among these people was one funny guy.'

The particles permit the speaker to link this new information with
the way in which clauses are combined. The most frequent device is simple juxtaposition. Note the relations between the clauses below. In most cases, one simply follows another, sometimes with an intonation break, sometimes without. Although a coordinating conjunction tâhôon’ and’ exists, it appears relatively rarely.

13) Thó ki’ tehonenhtshô:ton
    there just they all self knee standing were
    ‘As they were kneeling
    ronnteroh:naion karîhion e’ rohoni:ser’. they self song laying were it is cooked there he driving was and praying, a cop came driving by.

Wâ’thâ:ta’ne’, wahonwati:na’,
he stopped he them grabbed
He stopped and arrested them.’

Speakers rarely embed clauses formally, so that complex nominals are unusual. Instead, additional information is often supplied by appositive clauses in succession. Compare the Mohawk below with the free English translation provided by the speaker.

14) Shni:ta isonkhwa’tahawa’ raiis’tarûkio’,
    one body one person silly he body along is
    ‘That one guy, the funny person who
    Rawesî:te isontahona’kë:ren ratsihôn’sstatsi.
    he know how would he imitate he dark INTENSIVE is knew how to do perfect imitations of a priest, was along.’

Spoken Mohawk is thus characterized by a high proportion of verbs, incorporation, frequent use of particles, pragmatically based constituent ordering, and clause combining by juxtaposition.

II. Written Mohawk

The style found in texts written by Mohawk speakers differs in interesting ways from their usual oral style. Furthermore, it shows an intriguing evolution, from the first attempts produced by beginning writers, still devoting considerable attention to spelling, to later texts produced by more skilled writers.

A. Initial efforts

All of the people who first began to write Mohawk were excellent Mohawk speakers, bilingual, and literate in English. Although all of their written texts were grammatical, many of their first essays seemed surprisingly 'unMohawk' in style. The text below, produced in a classroom setting, illustrates some of the radical stylistic differences induced by the literary mode. The free English translation was provided by the Mohawk writer.
15) Karhá:kon nia'áwe' thetén:re ia'akwatshé:n:ri' woods in there we went yesterday there we found 'Yesterday we went into the bush and found

Tiokwi:rote' è:so onekwahtara sawhia:wane', there it tree stands many red one it fruit large is a tree with lots of red apples.

Tsi:chíen:ton rakhts:i'a tânón' khe'ken:'a later my older brother and my younger sibling
My big brother and younger sister

Wa'akwá:iako' sok istá teów'ia wa'onten'atón:ní'. we fruit got then Mother it fruit in is she baked goods made and I picked. Then Mother baked an apple pie.'

The unusual preponderance of separate nominals in written style is not limited to narrative. Written dialogue shows the same characteristic. The exchange below is taken from a play.

16) A. Oh nontié:ren tsi sha'tewahsiri:hen seshá:wi' why that blanket half back you carry 'Why have you brought half the blanket back?'

B. Ki:ken sha'tewahsiri:hen sekhá:wi', enkatatí:chabse'. this blanket half back I carry will I self lay for 'I will save this half of the blanket which I have brought back'

The effect of the repetition of the nominal 'half a blanket' in Mohawk is similar to its effect in English, only stronger. A speaker would not normally repeat the noun phrase. The embedding of the verb 'which I have brought back' is also somewhat unusual.

The conjoined nominals found in early written narrative also appear in written dialogue. The passage below is from a teacher's written rendition of typical classroom conversation.

17) Hái' ki wá:s sênió:ten sanód:warore' tânón' OR go you hang your hat and

'Won't you go and hang your hat and sáti:twi tânón' sérísni sá:wén tei:norahá:kwá:nát's. your coat and you take off your rubbers coat and take off your rubbers.'

Few speakers would spontaneously produce such language. A speaker would combine the constituents 'you hang your hat and your coat' into a single word, perhaps sáti:shásion:ko, 'take off your things'. The use of the word sá:wén 'your, it belongs to you' as a prenominal possessive is also unusual. Separate possessive verbs are normally used only for explicit statements and questions (Sá:wén ken? 'Is it yours?') or emphasis. In spoken conversation, the request 'you take off your rubbers' would be a single word, tesaratghá:kontétahko 'you-yourself-wear-layer-un'.

The use of incorporation in the early written texts is interesting. The applepicking text does contain some incorporation.

18) 'it-tree-stands' → '(standing) tree'
'one-it-fruit-large' → 'apple'
'it-fruit-contains' → 'pie',
'she-baked.goods-made' → 'she baked'.

These are all lexicalized compounds, however. The normal way to say 'tree' or 'apple' or 'pie' or 'bake' is with a verb containing an incorporated noun. The writer has not incorporated for the purpose of backgrounding in discourse here. She has, rather, made an appropriate lexical choice. Stylistic incorporation is noticeably absent from much of the early written material.

A third difference between spoken Mohawk and these early written texts is the use of particles. Grammatical particles, such as tânón' 'and', sák 'and then', and tsi 'that, as', are common, but evidential and stylistic particles are rare. Apart from the conjunctions, the applepicking text contains only one particle, and this one, è:so, functions as a modifier.

When deictic particles appear, they are not generally used as they are in spoken Mohawk, as anaphoric or cataphoric elements. Instead, they function more like their English counterparts, as determiners before nouns, like thi:ken ek:sh:n 'a that girl'.

A fourth major difference, apparent in most of the early written texts, is in the order of constituents. As noted above, in spontaneous spoken Mohawk, constituents are ordered according to their importance to the discourse, not their syntactic role. In the early written materials, there is a tendency toward SV order, even when this order conflicts with the pragmatic considerations. Finally, clauses are combined somewhat differently in these early texts than in spoken discourse. While clauses are most commonly
simply juxtaposed in spoken discourse, with falling intonation and pauses indicating major sentence-like breaks, clauses in this written material are more frequently combined with overt conjunctions, as in 15), 16), and 17) above.

The style of these early written texts thus differs in a number of ways from that of spoken Mohawk. The morphological structure is essentially the same, but the syntactic structure is often similar to that of written English. Separate nominal arguments outnumber predicates several times over. Nominal arguments are not only frequent, they are often compound, containing overt conjunctions, or complex, containing adjective-like modifiers. The absence of stylistic incorporation increases the resemblance to English. The elimination of evidential and other stylistic particles without equivalents in English is suggestive, as is the English-like use of the deictics and of emphatics like sa:wen 'you have'. The tendency toward SVO word order where pragmatically inappropriate shows the same influence. Finally, the prevalence of overt conjunction and embedding, grammatical but less frequent in spoken Mohawk, is reminiscent of English written style.

B. Later Written Mohawk

As some skilled writers continued their work, the time, concentration, and experience they ultimately brought to the task resulted in the emergence of a different style, one which took advantage of the luxury of time available to writers, but which was less tied to the specific influence of English.

The passage below illustrates a number of the features characteristic of this richer, polished style. Some Mohawk surveyors were surprised by a blizzard, and were stranded without food. Near starvation, they managed to shoot a bear, but when they went back to pick it up, they discovered that the snow had covered it up.

19) Tewenhsier:ke ronon'was ó:nen shiho:n'nikonbros:ktha' two days number they dig then as their minds run out 'After two days of digging and no sight of the bear they

ó:nen ni: sakowaji'tatske:ri' ne okwà:ri.
then again they body found the bear were about to give when they finally found the bear.

Wu'kowawenshé' sok wahati'wa:raibête'. Tewenhsier:ke
they her skinned then as they meat cooked two days number
They skinned him and cooked the meat. The first two days

ohnkikderi khok wahanne:nk:r'á: thó ne ó:nen
broth only they drank there the then
they only drank the broth, then

wahati'wa:rake', akwá: wahotinawá:ken sot'isí' io'wahra:re'sen
they meat ate all they got sick too it meat fat is
they ate the meat. They eventually all became sick as the meat
tanó' sót'sí' karl:wes tsi náhe' tethonatshá:konhkwe'.
and too it matter long that since they eating had
was too rich for them after not having eaten for so long.'

Even in this short segment, it is clear that the predominance of verbs is back. There are 13 verbs, of which 9 are predicates. (2 are objects and 2 indicate time.) There is only one noun.

The full use of incorporation has also been restored. Idiomatic incorporation is evident, as usual, in complex stems such as 'their minds ran out' → 'they gave up'. The treatment of the 'meat' is stylistic, however. Once the bear is under discussion, the meat, an identifiable entity, is incorporated into the verbs 'cook', 'eat', and 'be fat'. If the noun for meat represented now, salient, information, it would appear outside of the verb.

The use of particles is interesting. This passage contains 13. There are numerous grammatical particles (ó:nen, sók, sót'sí') as in the early written texts. There are relatively few evidential particles and deictics, again as in the early texts. Unlike the early writing, however, this more polished style contains a large number of stylistic particles functioning to foreground and background information, (ni:; etc.), as in spontaneous speech.

Finally, the use of word order for pragmatic purposes has been restored. Note that in the first sentence the verb 'find' precedes the direct object, the bear, since the finding is the most noteworthy, while the bear has already been introduced and is now old information. Later, however, another direct object, the broth, precedes its predicate 'drink', because the broth is new and important, while their eating habits have already been under discussion.

While most aspects of this more skillful writing reflect a return to the stylistic devices employed by good speakers, several characteristics do distinguish it from spoken Mohawk. Often more words are packed into clauses, and more clauses into sentences, than in the spoken language. This denser style can be seen in the passage below, the beginning of the surveying story.

20) 1893 shichërs:ten wahonwe:tiñha'ne' ne Hudson
as it winter kind they them hired the
'The story I am about to tell happened in the year 1893.

Bay Company rakhsótha tanó' ásen niho:ta:ke'në:shen
my grandfather and three they were siblings
My grandfather and his brothers were hired by the Hudson Bay

naha:ne' tehniá:se nihi:tsi:sere's
there should they all go two men they two steel drag
Company as Indian guides for the two surveyors

nahahakotihá:nnien tanó' aha:ha:ko:tsi:shá:ne'non
would they them road make for and would they them help
who were to chart the land
mahatirihati:sore'  kl:ken  onhwe:ntasase'.
there would they all steel drag this it lend new
in the Northwest Territory.'

Written Mohawk clearly differs considerably from the spoken language. Since all of the Mohawk writers were already literate in English, an obvious question is whether these differences are due to the influence of the written style they already knew, or the result of the process of writing itself.

III. Spoken and Written Language

The differences between written and spoken English stem from several factors. One is the historical emergence of prescriptive norms for written style, many based on Latin models. When we learn to write, for example, we learn not to split infinitives or end sentences with prepositions.

Others stem from the nature of the medium itself. (See, for example, Chafe 1982, 1985, Ong 1982, Tannen 1982.) Spoken language is typically characterized by greater personal involvement of the speaker, showing more emphatic particles, personal reference and reports of the speaker's mental processes.

Spoken and written language are also produced under different temporal conditions. As Chafe 1985 notes, speakers must produce language 'on the fly', in nearly uninterrupted linear sequence. Writers, by contrast, may spend as long as they wish choosing just the right word or construction, pause anywhere, and revise and rearrange at will. Accordingly, spoken language typically contains more hesitations and hedges ('kind of'). Chafe suggests that writing frees idea units from the limitations of short-term memory, resulting not only in longer sentences, but also in different grammatical structure and discourse style. In English, he found 'a strong tendency for casual speakers to produce simple sequences of coordinated clauses, avoiding the more elaborate interclausal relations found in writing. Elaborate syntax evidently requires more processing effort than speakers can ordinarily devote to it.'

Beginning Mohawk writers, struggling with a new orthography, show both the influence of the English literary tradition and an adjustment to the medium. The increased use of nouns is primarily a result of English influence, as are the loss of discourse based noun incorporation, the demonstrative use of deictics, the unusual use of certain emphatics with English pseudo-equivalents, the frequent use of overtly marked coordination, and the replacement of pragmatically based constituent order with English SVO. It is as if speakers have learned to alter certain features of linguistic structure when moving from spoken to written English, and have unconsciously transferred the shifts to writing in general.

Certain other characteristics of the early written material appear to be the result of the nature of the medium itself. Written Mohawk resembles written English in its absence of evidential particles, but this lack probably reflects the decreased personal involvement of the writer in the communication. Written Mohawk also resembles written English in its absence of cataphoric particles, but this lack is probably due to the fact that writers need not fill the time they take to think.

Once writers have become more experienced with the medium, however, they take advantage of the luxury of time afforded writers to create a unique Mohawk style. Their texts show less English influence and a return to many of the stylistic devices employed by skilful speakers, such as elaborate morphology, incantations, the abundant use of foregrounding and backgrounding particles, and pragmatic word order. Yet several other characteristics still distinguish their writing from spoken Mohawk. Evidential particles are still rare, presumably because of the separation of the writer from the audience. The cataphoric particles which provide speakers with time to collect their thoughts are unnecessary. Overt grammatical markers like conjunctions are abundant however, perhaps because writers have the time to construct more intricate prose but cannot rely on intonation to signal its structure. The extra production time also permits denser packing of information. Verbs are associated with more arguments in each clause, and more clauses are overtly combined into sentences.

There is good evidence that the reduction in particles and the tighter packing of information are indeed a function of increased production time, rather than the influence of written English. One excellent Mohawk speaker, who does not read or write Mohawk at all, and speaks only English, prefers to dictate texts to me sentence by sentence, rather than recounting them all at once into a tape recorder. She then records them, line by line, on tape. The result is an oral text created under the same circumstances of time as written texts. She takes as much time as she pleases in assembling each line, revising until she is satisfied, then I write down the final result. She is not involved in the writing process itself, however, so she is, in a sense, still producing language in an oral mode, rather than a written one. She never looks at my transcription, preferring to hear each line read back and dictate changes. Her spontaneous texts, recorded in a single sweep, are essentially like those of other skilful speakers in style. Her dictated texts, however, closely resemble the later polished written style of the other speakers.

The dictated texts are characterized by the use of elaborate morphological complexity as a stylistic device. The predominance of verbs is clear, and the speaker takes advantage of the extra time to produce intricate derived forms. She uses incorporation pervasively and skillfully for stylistic purposes. The use of pausing particles is significantly reduced in her dictated texts, just as it is in the polished texts of the experienced writers. Stylistic particles are abundant, however. Not surprisingly, word order is used for pragmatic rather than syntactic purposes, as in spontaneous spoken language and the polished writing. The tendency toward counter-pragmatic SVO order is completely absent.
In these dictated narratives, however, the primary method of combining clauses is by juxtaposition, as in other spoken language, rather than overt conjunction or embedding. Much of the work done by embedding in languages like English is already accomplished by other means in Mohawk, in particular, the verbal morphology, the stylistic particles, and the pragmatically determined word order. Furthermore, the dictated texts were designed to be spoken, so they were always accompanied by intonation that could provide cues to nuances of syntactic relationships unavailable from written texts.

IV. Conclusion

The act of writing can significantly affect language structure. When Mohawk speakers write their language is morphologically correct, but unusual in style, resembling in many ways the only other written tradition they know. As they master the medium, however, more skillful writers can take advantage of the added production time afforded by the writing process to develop a distinctly Mohawk literary style, in which a rich variety of the special techniques used by good speakers are fully exploited.

NOTE

I am grateful to the following Mohawk speakers and writers who contributed texts and discussion: Lentrice Beavvais, Jimmy Curto, Pauline Delaronde, Josephine Horne, Annette Jacobs, Margaret Lazo and Joyce Sharro. The orthography used here is that employed by the Mohawks. Obstruents are automatically voiced before sonorants. i is pronounced [y] before vowels. Nasalized vowels [ɔ] and [u̯] are spelled en and on respectively.

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The directionality of agreement

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1. Introduction. Our understanding of the mechanism of agreement has increased markedly in the last few years, but one question remains which seems not to have been explicitly addressed so far. That question is whether there is any universal, inherent directionality to agreement rules. By 'directionality' I mean not left-to-right or right-to-left progression through surface strings, but rather what can be described as higher-to-lower or lower-to-higher movement in relational hierarchies and syntactic trees.

Higher-to-lower agreement in a relational hierarchy occurs when the controller of agreement is a higher-ranked relation than the target. An example of such agreement is (1).1

(1) Ho-NOM was driving drunk-NOM

Here agreement in case is controlled by the subject, and the target is the lower-ranked predicate adjective.

Lower-to-higher agreement in a syntactic tree occurs when the head of a constituent agrees with a non-head member of the constituent; higher-to-lower agreement occurs when a non-head agrees with a head. (2) is a typical example of higher-to-lower agreement, where the modifying adjective agrees with the head noun in gender, number, and case.

(2) green-NOMsgFEM house(FEM)-NOMsg

Describing the head as 'higher' than the non-head is consistent with the connotations of the word head; it has a more graphic basis in the dependency representation of grammatical relations, where heads are placed above their dependents (for examples see Tesnière 1966, Mel'čuk 1978).2 Henceforth I will speak of higher-to-lower agreement as downwards agreement and lower-to-higher agreement as upwards agreement. This usage is fairly metaphorical, relying as it does on graphic traditions in the representation of trees and hierarchies and on the image of agreement as copying a category from one word onto another. It is also generalizing, as it equates (paradigmatic) relational hierarchies with (syntagmatic) tree structures. Against these faults, it has the advantage of emphasizing that the abstract question of directionality is one and the same issue, wherever it may arise.

The literature gives the impression that agreement ideally, even necessarily, goes in a single direction: from higher in a tree or hierarchy to lower, i.e. downwards. Explicit statements about the directionality of agreement are hard to find, primarily because the literature on agreement has been most concerned with