

DISPLAYING THE SEMANTIC STRUCTURE OF AN EWE TEXT

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After a sketch of the structural layers of language we concentrate on the semantic layer with the help of a key diagram, which displays impersonal meaning, both descriptive and inter-unit: a central Predicate with eight participant roles and four circumstantial roles, together making one proposition; propositions can be linked on three broad dimensions, parallel, sequential, or embedded. On this basic impersonal semantic structure we superimpose various 'textual' semantic features: theme, focus, anaphora, and different grades of modality. Extratextual reference, both deictic and exophoric, is recorded in the diagram's margins, which are labelled for Sender, for Receiver, or for both, where we accommodate also the various kinds of personal meaning: interactional function, formality, politeness, and expressive attitude. This comprehensive display is then applied on two pages to an Ewe puzzle narrative, resulting in a form of discourse analysis.

Après avoir donné une ébauche des couches structurales du langage, nous nous penchons sur la couche sémantique, grâce à un schéma principal qui met en évidence la signification impersonnelle à caractère descriptif, ainsi que celle qui apparaît entre les unités structurales: un prédicat central comportant huit fonctions de participation et quatre fonctions circonstanciées, l'ensemble constituant une proposition; les propositions peuvent être liées à trois niveaux généraux à savoir aux niveaux parallèle, séquentiel et à celui de l'enchaînement. Nous ajoutons à cette structure sémantique impersonnelle de base, divers traits sémantiques "textuels": thème, focalisation, anaphores et différents types de modalité. La référence extra-textuelle à la fois déictique et exophorique apparaît dans les marges du schéma où figurent également des indications sur l'émetteur et le destinataire ou les deux; les marges comportent également les différents types de signification personnelle: fonction interactionnelle, caractère formel, politesse et attitude expressive. Ensuite, nous appliquons cette présentation globale appliquée à un récit énigmatique en éwé; le résultat se présente comme une sorte d'analyse du discours.

1. LAYERS OF LANGUAGE STRUCTURE

The basic three-fold division of language, as indicated in Leech 1981:11, is facilitated by the use of the traditional terms: *meaning*, *wording*, and *spelling*, though not *sounding* (Halliday 1978:21).

Each individual has his own background potential, including knowledge of the universe; membership of various social groups (based on period, sex, class, place, age-group) with the corresponding ability to use appropriate languages, dialects, and accents; and possibly literacy. Such potential can be actualized as a result of one's current physical and psychological needs, emotional state, and knowledge of the immediate communication situation, especially of the potential Receiver. Then various choices have to be made: whether to act oneself or speak to another, whether now or later, with what end in view, whether to maintain or change the social relations of Sender and Receiver, whether to communicate straight or obliquely, which code to use, and which channel (Fawcett 1980:1.4.3:ch.5). During communication itself, parallel to the strictly linguistic, we find paralinguistic features (gestures, facial expressions, etc.) represented on the diagram by the "non-language" band to the right of the main triangle. Paralinguistic could equally be divided into three layers, no doubt, but we concentrate on language.

The meaning (or semantic) layer of language is far from being an undifferentiated whole. We can distinguish three major subcomponents (similar to Halliday 1970:I; 1973:ch.2), here called *impersonal*, *personal*, and *mixed* or *intermediate*, together consisting of eight minor subcomponents (Fawcett 1980:1.2.5). Details are given in figure 2 and section 2.

As we move up from the meaning layer, we have to put into a basically linear sequence what is really an unordered amalgam of different kinds of meaning (Chafe 1970:28-9; Leech 1981:273). The middle layer of language comprises grammatical patterns and lexical items, all realizing meanings either more or less directly. As I envisage it, a purely grammatical (i.e., syntactic and morphological) analysis of a text would involve marking the boundaries of sentences, clauses, phrases, words, and morphemes, including embedded and interrupted units. It would also involve labelling such units as free clause, nominal phrase, pronoun, etc., and particles like ? (question), & (conjunction), 0 (negative), etc. The places in grammatical structures are all filled by items in the widest sense, purely grammatical, as well as lexical (usually nouns, adjectives, verbs, and adverbs), though some lexical items can be substituted by pronouns, pro-verbs, etc., which are grammatical items. Grammatical and lexical form is in turn symbolized by orthographic or phonological form (i.e., the alphabet or sound system of a language), which in turn is realized by graphic or phonetic substance, the marks or sounds which we actually see or hear, whether or not we know the meaning.

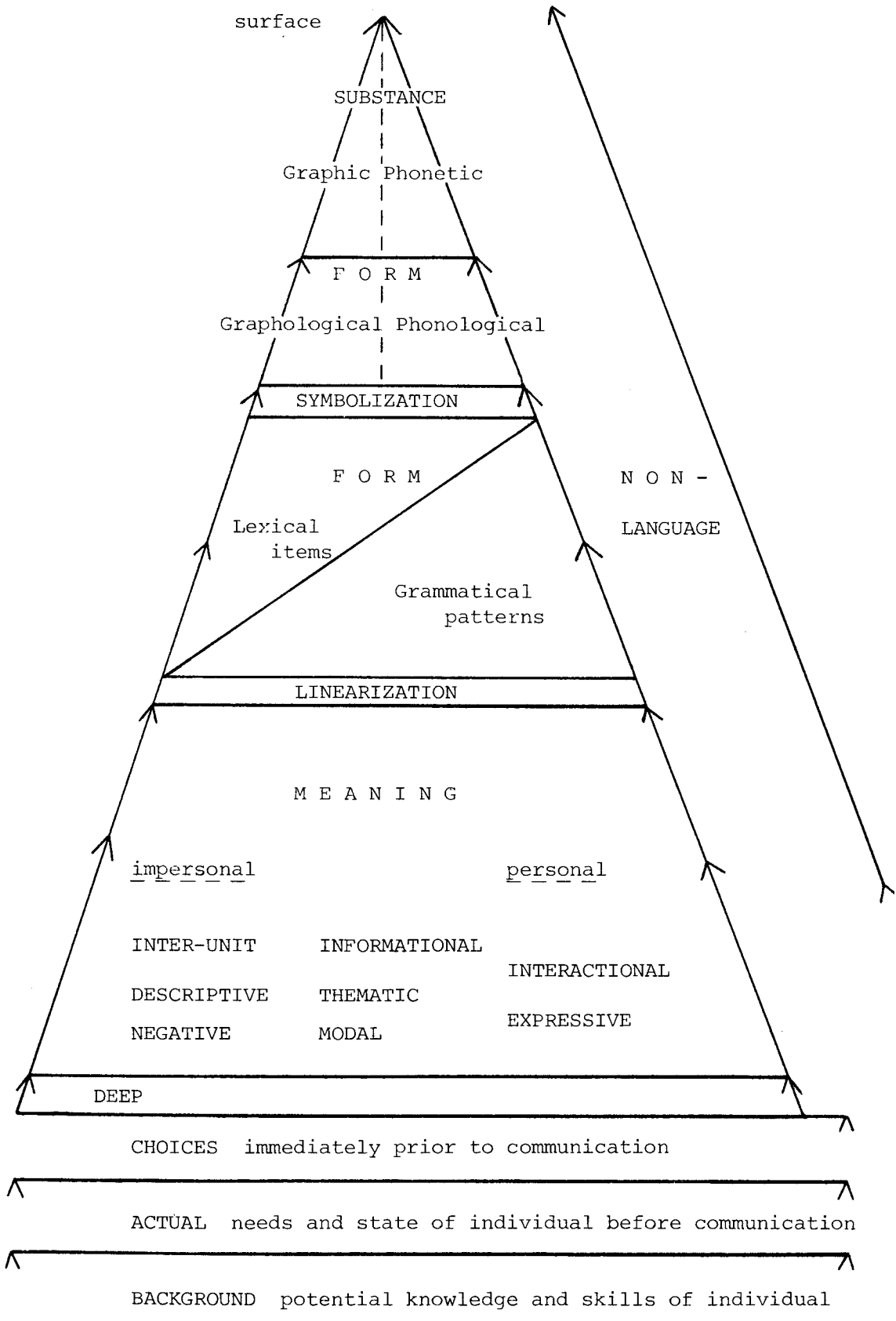


Fig. 1 Layers of Language Structure

The base section of the triangle in figure 1 represents universal semantic structure, while the apex represents the surface structure of a particular language. Though the meaning layer is not as directly accessible to an investigator as the upper layers, it is subjectively real to the individual. Every act of communication both begins and ends there, in encoding and decoding respectively, while the graphic/phonetic layer is the intermediate or transmission stage. Semantic deviation, as in the insane, is a much greater communication barrier than phonetic or grammatical deviation, as in foreign learners. Different meanings converge on the same sounds in idiomaticity, polysemy, homonymy, and ambiguity far more than different sounds converge on the same meaning in full synonymy (Chafe 1970:ch.7).

2. DISPLAYING SEMANTIC STRUCTURE

Both phonological and grammatical structures are to a large extent represented in conventional writing systems. Such representations have been refined by linguists with additional symbols and new techniques of arrangement, and also by diagrammatic representations of various kinds (Stewart 1976).

Semantic structure has been partly absorbed into syntactic structure, whether explicitly or not, by linguists of various schools. But, because meaning has traditionally been thought of as nebulous and intangible, few have attempted an autonomous representation of semantic structure, not dependent on the syntax of a particular language. Figure 2 now offers a method of displaying semantic structure₃ as such, where all facets of meaning are displayed differently.

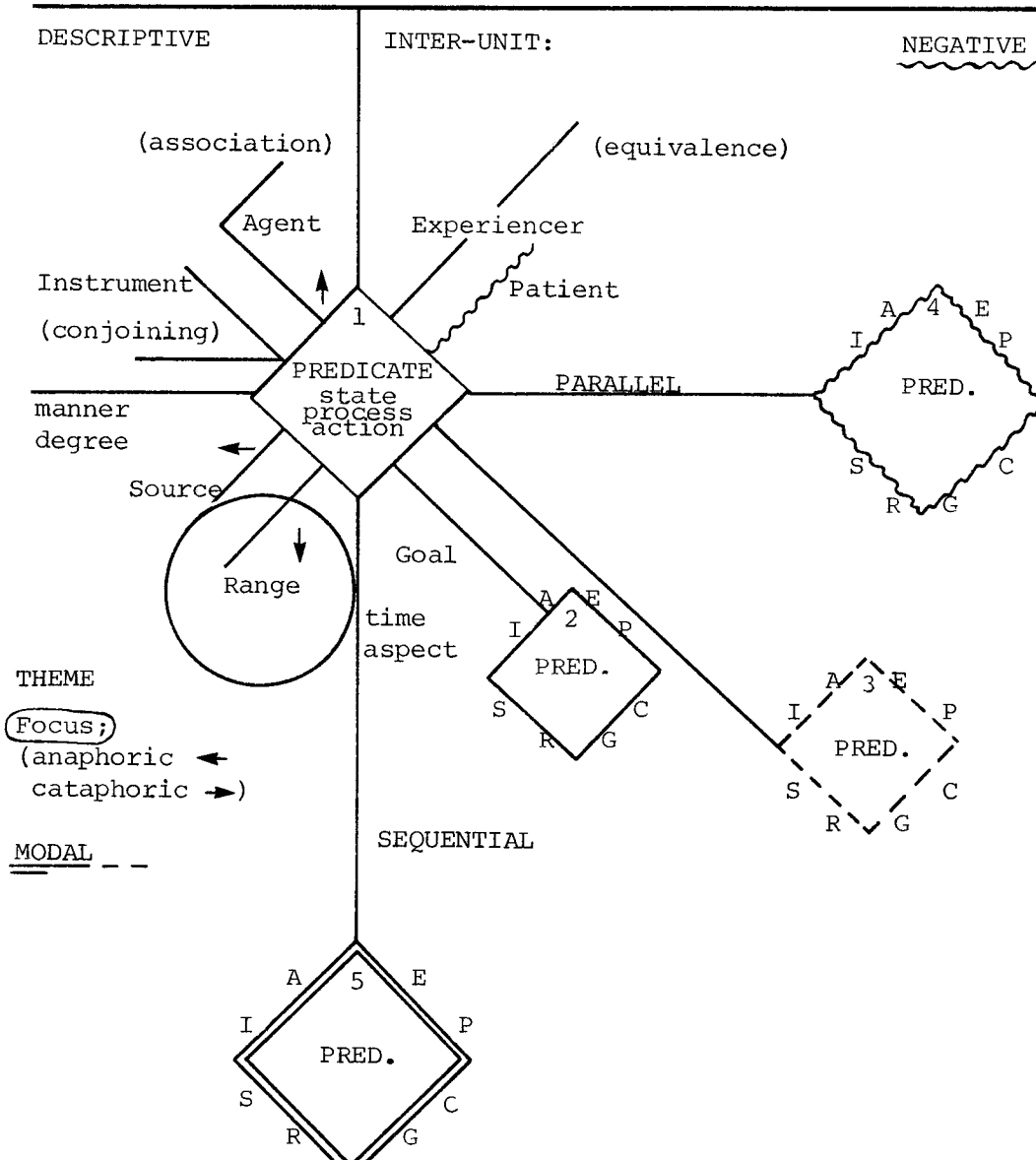
2.1 *Impersonal* meaning (also called ideational, conceptual, or representational) is covered by the central part of figure 2, while *intermediate* meaning is to some extent superimposed.

2.1.1 Impersonal meaning includes descriptive (or cognitive or experiential) meaning (Lyons 1981:33-35) which covers the individual referent situation described by one semantic *proposition* (or predication), each of which consists of a nuclear *Predigate* (or event), further specified as State or Process or Action.⁴ (Predicate is represented by a turned square in the diagram.)

2.1.2 Associated with each Predicate are various semantic *Things* (or arguments or objects or participants) filling various primary *roles* (or cases) appropriate to the particular Predicate. Each of the eight possible roles⁵ is represented in the diagram by one node on one side of the square, from which node a perpendicular line is drawn outwards as required for a particular Predicate. The roles are: Patient (or neutral or objective); Experiencer (or dative or recipient or beneficiary); Agent, including force, accompanying an Action; Instrument, usually subordinated to an Agent; Source (or former state); Range (or location), including path from S to G; Goal (or latter state) including destination and factive object. Depending on the Predicate, roles may be overtly unfilled (Leech 1981:137).

INTERACTIONAL Sender and Receiver: function; formality; politeness.

(and exophoric to culture ↑)



EXPRESSIVE Sender: attitude and intensity;

(and paraphoric to situation ↓)

INTERACTIONAL Receiver: attention;

(and paraphoric to situation ↓)

Fig. 2. Representing Semantic Structure

2.1.3 *Inherent semantic features* (matching State, Process, Action for Predicates) are also found in Things: viz., mass, count; animate, human, etc. *Acquired semantic features* (matching Time and Aspect for Predicates) are also found in Things: viz., quantification on a scale; specific, random, generic (Chafe 1970:ch.10,14; Weinreich 1963:2.2.4).

2.1.4 The four corners of the Predicate square in the diagram are also nodes representing secondary or *circumstantial roles*, peripheral to the others. Most circumstantial roles have the potential of expanding to further propositions. These roles are: time, either absolute (named) or relative to the present; aspect, whether momentary, perfective, frequentative, durative, generic, or beginning, manner, degree (or measure).

2.1.5 *Negative*, though actually one extreme of degree, is so important semantically that it deserves special symbolization. It is symbolized by a wavy rather than straight line around the relevant Predicate square (4 in diagram). A wavy line also symbolizes one particular Thing (Patient in 1). English examples are:

We went but found nothing and *Not one did he see.*

2.1.6 Impersonal meaning includes not only descriptive and negative, but also *inter-unit*⁶ (or logical), the units being usually propositions, but also Things sometimes.

One proposition may be embedded (downgraded or featurized--Leech 1981:164-5) to qualify a semantic Thing in another proposition. In figure 2, propositions 1-2 represent a sentence such as *We want the man who came yesterday*, where *the man* is Goal in 1 and Agent in 2. Such embedded propositions are realized in languages by relative clauses (as illustrated), adjectives, or nominalizations. If a semantic Thing is directly associated with another Thing, especially in a "possessive" relation (e.g., *my father*), it is convenient to represent this diagrammatically with an extra line at right angles to that representing the role (e.g., prop. 1, role A).

2.1.7 Although the Content (or complement) role covers 'Things' which complete the meaning of the Predicate (e.g., *he told a story*), more commonly Content must be expanded into another embedded proposition (3), realized in languages by *that*-clauses, as well as nominalizations, e.g., *He said that they had come. He announced their arrival.* Both these types of embedded proposition are represented on the diagram by smaller Predicate squares in a diagonal alignment with their matrix propositions.

2.1.8 Another set of inter-unit relations may be called *parallel*, represented on the diagram by horizontal alignment of the Predicate squares. Parallel relations are: overlapping time (e.g., *while*); conjoining (*and*); alternation (*or*); contrast (*but*); equivalence (*ie*); amplification (*eg*); comparison of manner and degree (*as*). (One English conjunction is given to exemplify each relation.) Some of

these parallel relations can also be found between Things: conjoining and alternation, represented on the diagram by two or more lines from the same node (e.g., prop. 1, Instrument: *with hammer and chisel*); equivalence (or apposition), represented by an extension of the Thing line beyond the normal (e.g., prop. 1, Experiencer: *Uncle James died*).

2.1.9 *Sequential* relations, found only between propositions, are represented on the diagram by vertical alignment of Predicate squares. Sequential relations are: succeeding time (*after, before*); cause; reason-result (*because, therefore*); means-result (*through*); means-purpose (*in order that*); grounds-conclusion (*in that*); concession-contradiction (*though, nevertheless*); condition-consequence (*if, then*).

2.2 Impersonal meaning may be "personalized" by a Sender for a Receiver in a particular communication situation. Hence our "mixed" or "intermediate" meaning (also called thematic, textual, or editorial), most of which can be represented on the impersonal diagram by superimposition.

2.2.1 The *theme* or *topic*, defined as the peg on which a message is hung, is usually realized in first place in linear sequence. On the diagram, theme is represented by capitalizing the relevant Thing, etc., enabling a reader to know where to start reading. The size of the capitals could perhaps be increased proportionately to the strength of marking of the theme.

2.2.2 The normal distribution of information is one unit per proposition. New information *focus*, that which the Sender wants the Receiver to know, often occurs last in linear sequence, whether it is a whole proposition or one semantic Thing. All kinds of focus are represented on the diagram by circling the relevant part (e.g., prop. 1, Range: *It is on the floor*, in which *floor* is a weak focus). Again, strength of marking of focus could be represented by heavier circles. Focus may be indicated in advance in linear sequence by article, dummy pronoun, etc. In a semantic diagram or in an analyzed text, it may be necessary to mark the "advance notice" by an arrow pointing to the right; e.g., *the fish that got away* (*the* points forward to the relative clause); *it is good that you came* (*it* points to the *that*-clause).

2.2.3 The opposite of new information is old or given or presupposed information to which the Sender may *refer* the Receiver. Such reference serves to tie the message together and to its communication situation. *Anaphoric* reference backwards within the message can be shown on the diagram by an arrow pointing to the left on the relevant Thing (e.g., prop. 1, Source: *They left there yesterday*, in which *there* refers back to a place just mentioned). *Paraphoric* (or Deictic) reference to the immediate communication situation can be shown on the diagram by an arrow pointing downwards from the relevant Thing (e.g., prop. 1, Range: *I live here now*, in which *here* (Range), *I*, an

now are all paraphoric). *Exophoric* reference to the cultural background of Sender and Receiver can be shown on the diagram by an arrow pointing upwards (e.g., prop. 1, Agent: *The President arrived*, in which *the* must be interpreted from background knowledge). Some texts are full of exophoric allusions; casual conversations are full of paraphora, while other texts may lack references outside altogether.

2.2.4 The last kind of "intermediate" meaning is *modal*, which covers the current attitude of the Sender to the validity or factuality of what he says. Most often modal meaning is unmarked and would be taken as "probable," although probability could also be marked. If certainty were to be marked, however, this could be represented on the diagram with double lines on the Predicate square (e.g., prop. 5: *If they had come sooner, they'd certainly have seen him*). If possibility were to be marked, dashed lines could be used on the Predicate square (e.g., prop. 3: *He said he might come*); similarly, for propositions depending on nonfactive Predicates (e.g., *suspect, want*) (Leech 1981:ch.15).

2.3 *Personal* meaning (or pragmatic, or behavioral) has to do with the people involved in the communication situation. Since personal meaning inevitably goes outside the linguistic message, it must be shown outside the basic impersonal diagram of figure 2. So we introduce, as appropriate, additional margins above and below, perhaps also to left and right, for Sender, for Receiver, for Sender and Receiver together. The SR margin can also receive exophoric references, while the others receive paraphoric references (as noted in the previous section).

2.3.1 Personal meaning⁸ includes *interactional* (or social) meaning bringing together Sender and Receiver. This covers: Illocutionary function (or force), i.e., giving (STating) or seeking (QUEstioning) information, or PROposing; Formality, from intimate (F-) to frozen (F++); Politeness, from familiar (P-) to tactful (P++). Attention-getting is more appropriately noted in the R margin (Leech 1981: ch.16).

2.3.2 The rest of personal meaning can be called *expressive* (or evaluative, or affective), which can vary in intensity (from X to XXX, etc.), as well as in polarity (X+ or X-). Since expressive meaning has to do only with the Sender, it is noted in the S margin.

3. SEMANTIC STRUCTURE OF AN EWE TEXT

Since the semantic layer of language structure is general to all languages, we could apply the analytic framework outlined in section 2 to any language. However, the language chosen here is the standard Ewe dialect of the "Gbe" language.

Ewe text

1
Mi--se alobálo loo!
you hear " ADD!
Listen to this puzzle!

2
Alobálo né--vá!
" IMP come
Let's hear it!

3 4
Gbe deká hõ vá fo fiavínyõnu
day one eagle come seize king-daughter
One day Eagle seized a beautiful

5 6 7 8 9 10
dzetugbe ade yi ða-da ðé kó áðé dzí le to dome. Fia dí amewó bé
beautiful a go to put onto isle a top in lake midst king seek persons that
princess, taking her to an island in a lake. The king wanted people

11 12
wó--a--xõ ye ví lá le hõ sí v-----ê ná ye. Énumáké fiafitó,
theySUBget his child the in eagle possession bring her to him. at-once thief
to get his child from Eagle and bring her to him. At once Thief,

13 14
adelá kplé núhélá wó--vá. Fiafitó bé, ye-a-té nú a--fi nyõnuví lá le hõ
hunter and joiner they come thief say heSUB can SUBsteal girl the in eagle
Hunter and Joiner came. Thief said he could steal the girl from Eagle's

15 16 17
fe fegó me. Adelé bé, né hõ lá kpó yewó bé ye-a-ga----xõ nyõnuví lá,
's clutch in Hunter say if eagle the see them that itSUBagain-get girl the
clutches. Hunter said, if the eagle sees them so as to get the girl again,

18 19 20 21
ye-a-fo tú--i, wò-a-kú énumáké. Núhélá bé, né hõ gé dze wu---a me
heSUBhit gun-it itSUBdie at-once joiner say if eagle fall land boat-the in
he'd shoot it dead at once. Joiner said, if Eagle fell into the boat and

22 23 24 25
wò-fé lá, ye-a--ga---hé---e kénkén. Wó---dze mó dzí ko lá, éye fiafitó
it-split, heSUBagain-join it fully they-are road on just, and thief
it split, he'd repair it fully. They set off, and soon Thief

26 27
da-fi nyõnuví lá. Ési wó---vá ðó to tífina lá, hõ lá vá bé,
to-steal girl the. when they-come reach lake middle, eagle the come that
stole the girl. When they reached the middle of the lake, the eagle came

28 29 30 31
ye-a-fo nyõnuví lá. Tete adelá fo tú--i wò-kú hé-gé dze wu---a me,
heSUBseize girl the then hunter hit gun-it it-die to-fall land boat-the in
to seize the girl. Then Hunter shot it dead, and it fell into the boat,

32 33 34
wò-fli tsayatsaya. Núhélá hé wu---a énumáké, éye wó---vá afé dédíé.
it-smash smithereens joiner join boat-the at-once, and they-come home safely
which was smashed. Joiner repaired the boat at once; and they got home safe.

35 36
Ame etõ siawó dome-tó ka wo wú, né fia lá ná-káfú--'?
person 3 these amongNOM which do surpass, that king the SUBpraiseQUE
Which of these three people did most, so that the king should praise him?

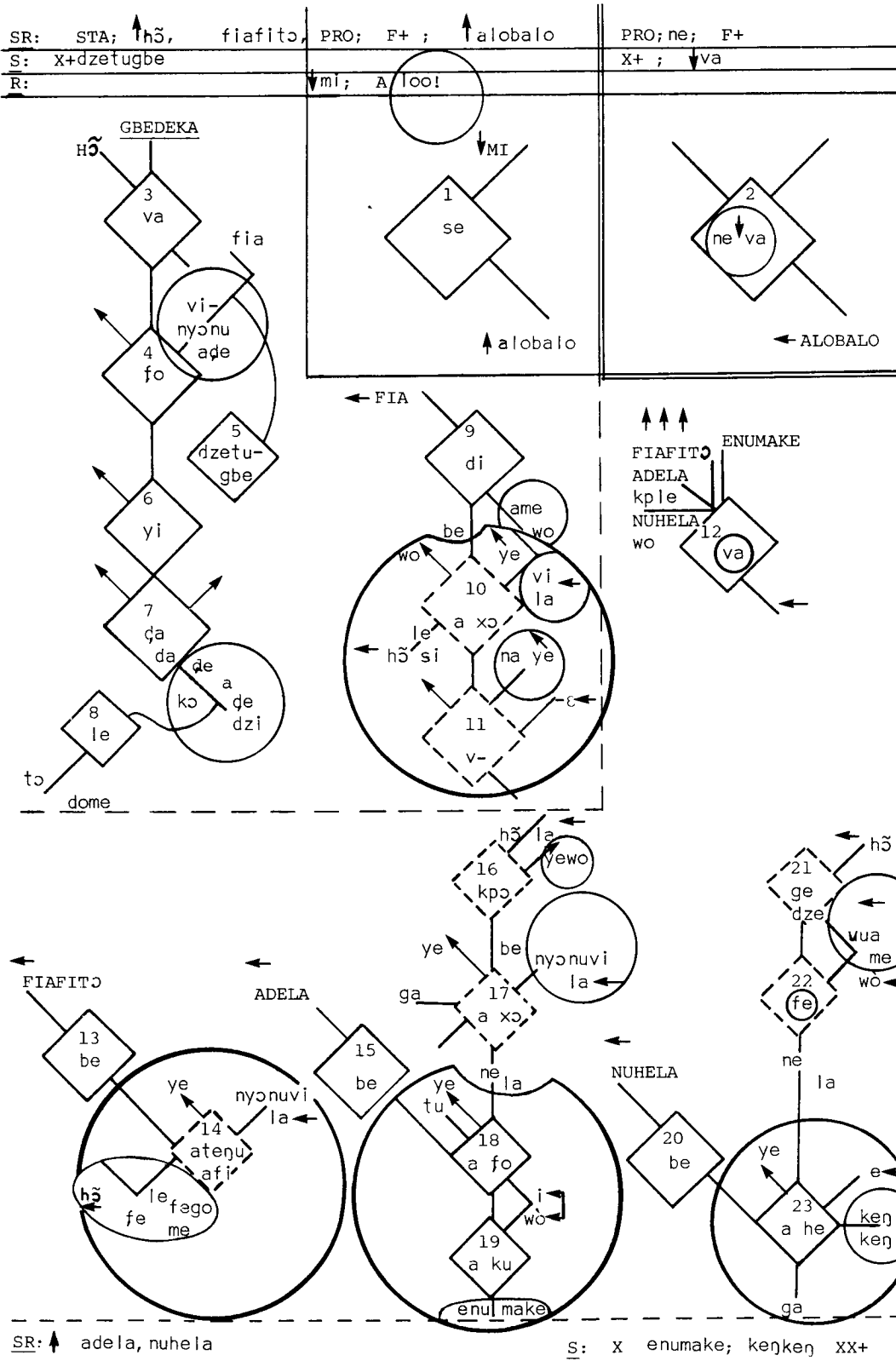


Fig. 3a

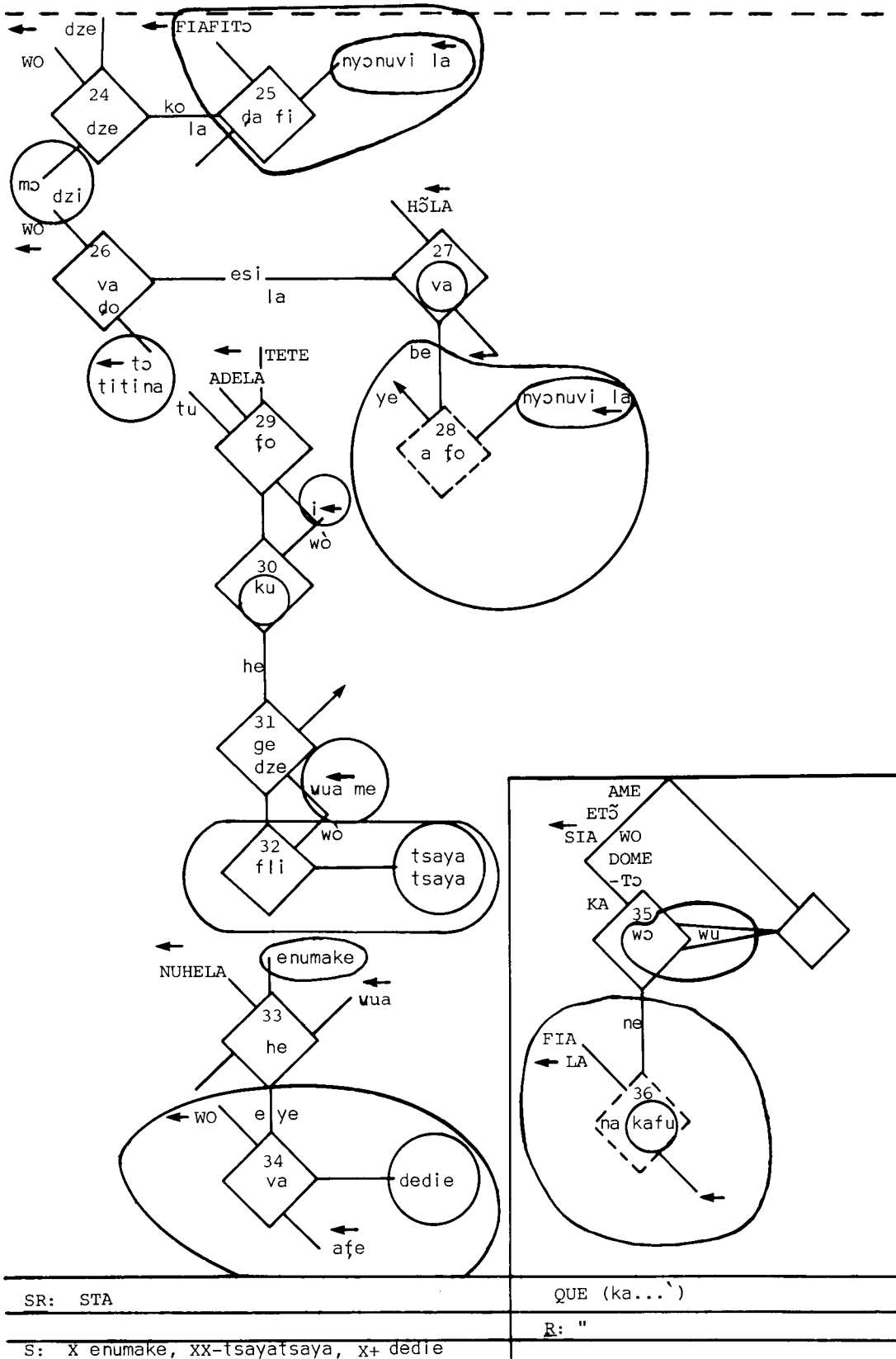


Fig. 3b

The text is given (q.v.) in the top line, with the addition of hyphens between morphemes which need longer English words for their morphemic translation. The literal translation is given in the second line. (Grammatical abbreviations used are: ADDRESSIVE particle, IMPERATIVE, NOMINALIZER, QUESTION, SUBJUNCTIVE.) The third line gives a free English translation. The numbering and the dividing lines match those on the semantic analysis following (figure 3a-b). The text is a traditional puzzle narrative, relatively simple so that the mechanics of the semantic analysis remain clear to the uninitiated.

3.1.1 *Predicates* (squares on diagram). Most of the Predicates are in fact Actions, though there are a few Processes: se 'hear' (1), kpo 'see' (16), ku 'die' (19, 30), ge dze 'fall and land' (21, 31), fe, fli 'break' (22, 32). There are only two States: dzetugbe 'beautiful' (5), le 'in' (8). All the Actions and Processes are realized by one verb each, except in one case (21, 31) where two verbs are used. The States however are realized by an adjective (5) and by a preposition (8). Already we have a measure of the simplicity of the text: a very strong matching of semantic Predicate with grammatical verb. In other texts, in contrast, we might find Predicates realized as V N: wɔ dɔ 'work', dɔ ŋko "cast eye" 'remember'; N: nyonyo 'goodness', kpepkedɛnu 'assistance' (both nominalizations).

3.1.2 *Roles* (eight nodes on squares)

The large number of Action Predicates are inevitably accompanied by *Agents*. These may be expressed overtly by preverbal NP: hɔ̃ 'eagle' before va 'come' (3, 27); fia 'king' before di 'seek' and kafu 'praise' (9, 36); fiafitɔ 'thief', adela 'hunter', nuhela 'joiner' before va 'come', fi 'steal', fo 'shoot', he 'join', and be 'say' (12, 13, 15, 20, 25, 29, 33); wɔ 'they' before xɔ 'get' (10), va 'come' (12, 26, 34); ye 'he' (logophoric) before fi 'steal' (14), xɔ 'get' (17), fo 'shoot, seize' (18, 28), he 'join' (23); -tɔ nominalizer before wɔ 'do' (35). (In each of these cases only the nucleus of the NP has been cited.)

In the serial clause construction, however, no Agent is overt after the first in linear sequence: before fo 'seize' (4), yi 'go' (6), da 'put' (7), the Agent is realized only in 3. Similarly, before v- 'bring' (11), the Agent is realized in 10. So, actually or potentially, the Agent is always realized by a preverbal NP in this story (and indeed throughout Ewe).

Instrument is explicit in only one context (repeated) by means of a postverbal NP: tu 'gun' after fo 'shoot' (18, 29). But Instrument is important though unrealized with va 'come' (26, 34), presumably wu 'boat'. All other Instruments are unrealized too; but could be realized by a postverbal NP or AP, or by an additional serial clause preceding (with a verb like tɔ 'take'), e.g., with he 'join' (23, 33), fi 'steal' (14, 25), fo 'seize' (4, 28). Verbs like se 'hear' (1), kpo 'see', be 'say' (13, 15, 20) include Instrument (ears, eyes, mouth) within them.

Range is explicit only in to dome 'middle of lake' after le 'in', an AP (8), and in mo dzi 'on road' after dze 'set off' (24). Elsewhere, *Range* is trivially implied. In all cases, it would be realized by a postverbal or postprepositional NP.

Goal is required with verbs of motion, but may or may not be expressed. When it is expressed, it is either a postverbal NP: amewo 'persons' after di 'seek' (9); -i 'it' after fo 'shoot' (18, 29); wua me 'into boat' after ge dze 'fall land' (21, 31); to titina 'middle of the lake' after va do 'reach' (26); afe 'home' after va 'come' (34); or a postverbal AP: de kɔa de 'to an island' after da 'put' (7). When *Goal* is not expressed, it may be very strongly implied: after va 'come' (3, 11, 12); presumably -to nominalizer (from 35) after kafu 'praise' (36); in each case, if expressed, *Goal* would follow the verb. In 23 and 33, after he 'join' one could argue that wu 'boat' realizes *Goal* if it means a re-creation more or less *ex nihilo*.

Source also is required with verbs in motion, but may or may not be expressed. When it is expressed, it is a postverbal AP: le hɔ̃ si 'in eagle's possession' after xɔ 'get' (10); le hɔ̃ fe fego me 'in eagle's clutches' after fi 'steal' (14). *Source* may be strongly implied though not expressed: after fi 'steal' (25); and after xɔ 'get' (17). In all cases, *Source* would be realized in an AP after the verb. In 23 and 33 with he 'join', one could argue for a "former state" *Source*, i.e., various pieces of wood, before remaking into wu 'boat'.

Content is often realized by embedded propositions after verbs of saying (as we shall see). But, in (1), we find *Content* realized by alobalo 'puzzle', a NP after se 'hear'; the alobalo itself is then realized by the embedded propositions 3-36. In the traditional response (2) alobalo is personified and made a pseudo-Agent to a verb va 'come', 'Let alobalo come!', though this is literalized on the diagram as, 'You (Agent) let me (Experiencer) hear alobalo (Content).'

Experiencer and *Patient* seem to be the only roles which have more than one normal realization each, sometimes before, sometimes after the verb. *Experiencer* must occur with various Processes and States. Here, it is realized in a NP before the verb: mi 'you' before se 'hear' (1); hɔ̃ 'eagle' before kɔc 'see' (16); wò 'it' before ku 'die' (19, 30). But *Experiencer* can also be realized in an AP after the verb: na ye 'for him' after v- 'bring' (11). There could be similar realizations of *Experiencer* after be 'say' (13, 15, 20). In the case of fi 'steal' (14, 25), normally we would expect nae 'for him' (i.e., Agent), but this is just what is peculiar about this story--the *Experiencer* is fia la 'the king', not the thief.

Patient may sometimes be realized by a NP after the verb: vinɔnu 'daughter' and nyɔnuvi 'girl' after fo 'seize' (4, 28); vi 'child' and nyɔnuvi after xɔ 'get' (10, 17); nyɔnuvi after fi 'steal' (14, 25); -ε 'her' after v- 'bring' (11); yewo 'them' after kɔc 'see' (16)

-e 'it' and vu 'boat' after he 'repair' (23, 33); implied vinyɔnu 'daughter' from 4 after da 'put' (7). In other cases Patient may be realized by a NP before the verb, etc: vinyɔnu before dzetugbe 'beautiful' (5); ko 'island' before le 'in' (8); hɔ̃ 'eagle' before ge dze 'land' (21, implied in 31); wò 'it' before fe 'break' (22) and fli 'break' (32).

It is interesting to note that vi 'child' and its derivatives realize only Patient on each of their few occurrences, whereas one or more of fiafitɔ, adela, nuhela 'thief, hunter, joiner' on all but two of many occurrences realize Agent. Fia 'king' varies between Experiencer and Agent in its few occurrences; similarly, wu 'boat' between Patient and Goal. In many occurrences, hɔ̃ 'eagle' varies between Agent, Source, Goal, Experiencer, Patient. It would be possible, and more economical of space, to analyze a text onto lined paper, one proposition per line, with columns headed for the Predicate and each of the eight roles (see sect. 4).

3.1.3 Semantic Things have *inherent semantic features*, such as animate, enabling them to fill the Experiencer role (e.g., hɔ̃ 'eagle' and fia 'king') or the Agent role (e.g., the preceding and amewo 'persons' and substitutes). The feature *inanimate* enables tu 'gun' to fill the Instrument role.

Semantic Things may also *acquire semantic features* in particular contexts. The most obvious is *quantification*: plural is marked overtly by -wo after ame 'person' (9, 35) and ye 'they' (logophoric) (16), but is covert in mi 'you' (1) and even in wò 'they'. Singular is covert in -i and wò 'it'; elsewhere it is unmarked. All semantic Things in the text seem to be *specific* though many are quite unmarked; possibly alobalo 'puzzle' (1, 2) is *random*, also unmarked. None is generic.

3.1.4 *Circumstances* (four nodes on corners of squares)

In marked contrast to any similar English text, there is barely a hint of *Time*, only AP gbe deka 'one day' (3) which doubtless applies till 34. Presumably 1, 2, and 35-6 are present time. Repetitive *Aspect* is marked only by auxiliary ga 'again' (17, 23) with he 'join', while momentary *Aspect* may be marked by AP enumake 'at once' (12, 19, 33) with va 'come', ku 'die', and he 'repair'. Beginning *Aspect* may be marked by the verb dze before mɔ dzi to give 'set off on the road' (24).

Manner is realized occasionally in adverbs: tsayatsaya 'smithereens' with fli 'break' (32); dedie 'safe and sound' with va afe 'come home' (34). *Manner* may also be included in verbs: fli 'break' (32), fi 'steal' (14, 25), fo 'seize, shoot' (4, 28; 18, 29). As far as *Degree* can be distinguished from *Manner*, we find it marked by adverb: kenken 'altogether' with he 'repair' (23).

3.2 No *Negative* occurs in the text.

3.3 *Inter-Unit Relations*

3.3.1 Between semantic Things, we find one example of *conjoining*: fiafito, adela, kple nuhela 'thief, hunter, and joiner', the link being once marked by kple (12). In 4, one could interpret vinyonu 'child female' as appositional or equivalent.

3.3.2 Several *embedded propositions* qualify various semantic Things, though none is realized by a relative clause. One State proposition is realized by an adjective: dzetugbe 'beautiful' (5) with vinyonu 'daughter' (P in 4). Another is realized by a prepositional phrase: le to dome 'in the middle of a lake' (8) with ko 'island' (G in 7). Three more embedded State propositions are realized by possessives preceding NP nuclei: ho fe 'eagle's' with fego 'clutches' (R in 14); fia 'king' with vinyonu 'daughter' (P in 4); and ye 'his' with vi 'child' (P in 10). At A in 35, we find -to which nominalizes ame eto siawo dome 'among these three people'. Beyond these examples which have been appropriately diagrammed in figure 3, we can find others which are full lexical nominalizations: fiafito 'thief', which could readily be derived from amesi fia fi 'one who commits (generic) theft (P and S implied); nuhela 'joiner', from amesi hea nu 'one who joins (generic) things'; and adela 'hunter', from amesi daa ade 'one who hunts (generic) game'.

3.3.3 As far as *embedded Content* propositions are concerned, propositions 3-36 are in fact the Content of alobalo (1, 2). More explicitly we find 14 forms the Content of be 'say' (13); 16-19 of 15; and 21-23 of 20. Each of these sets is drawn with smaller squares on the diagram and is diagonal to the relevant Content node.

3.3.4 *Parallel propositions* (horizontal alignment)

During the expedition (24) the theft took place (25); linkage is shown by ko 'just' at the end of 24 (eye in the text is a mistake). Both 'they' (26) and 'the eagle' (27) 'came' simultaneously to a certain point; linkage is shown by esi 'when' at the beginning of 26. In 35, comparative Degree is marked by wu 'surpass', which implies another parallel proposition covering a lesser degree of activity; hence, the two squares on the diagram with a "diminuendo" linkage. The potential Agent of the second proposition is evidently drawn from the same group as that of 35; hence the linking of Agents as well.

Although the relation is unmarked, 13, 15 and 20, the three statements, are also parallel.

If proposition 2 had been still a live metaphor, we would have diagrammed two parallel propositions: 'you (Agent) let me (Experiencer) hear alobalo (Content)' and 'let Alobalo (personified Agent) come from you (Source) to my (Experiencer) place (Goal)', linked by comparison of manner, implying, 'I am ready to listen to alobalo, in the same way as Alobalo would be welcome to my place.'

3.3.5 *Sequential relations* (vertical alignment)

The *condition* (16, 21) with *consequence* (18, 23) relation is marked by ne 'if' at the beginning of 16 and 21. The *means* (9, 16, 27, 35) with *purpose* (10, 17, 28, 36) relation is marked by be 'that' (10, 17, 28) or ne 'that' (36) at the beginning of the purpose propositions. eye 'and' links 33 and 34, but only the overall meaning tells us that the propositions are successive. Tete 'then' comes at the beginning of 29, making clear the successive relation between 26-27 and 29, and possibly all the subsequent propositions as well. Though there is no overt marking, the serial constructions of 3-7, 10-11, 30-31 (31 has he auxiliary reinforcing the relation) all realize successive propositions. Similarly, the compound clause constructions, where the postverbal NP of the earlier clause becomes the preverbal NP of the later clause, found in 18-19, 29-30, and 21-22, 31-32, all realize successive propositions.

3.4 *Information units*

The smallest information unit is the proposition, represented on the diagram by a Predicate square together with role nodes and lines. An exception in our text is proposition 5, which is realized as just an adjective within a NP; i.e., it is less than one information unit. A serial clause realizing several propositions (e.g., 3-7, especially 10-11) may also form only one information unit. The ending of an information unit may be marked by sentence particle loo addressive (1); by ` (low tone) interrogative (36); by clause-terminal particle la (17 (fused with la 'the'), 22, 24, 26); even by the presence of adverb enumake 'at once' (19, 33); kenken 'altogether' (23); tsayatsaya 'smithereens' (32); dedie 'safe' (34). In reading, a pause would occur after be 'say' (13, 15, 20). The boundary between two information units is marked by eye 'and' (33-34). The beginning of an information unit may also be marked by conjunctions like ne 'if' (16, 21), be 'that' (17), ne 'that' (36), tete 'then' (29); and by an AP like gbe deka 'one day' (3), enumake 'at once' (12).

A few propositions, not linked to any other on the diagram, form independent units (1, 2, 12). But most propositions group into clusters, bounded by space on the diagram, whether of two propositions (13-14, 24-25, 33-34, 35-36), or of three (9-11, 26-28), or of four (3-7, 20-23, 29-32), or of five (15-19). Boundaries between clusters are mostly reinforced by change of Agent, becoming theme (3, 9, 12, 13, 15, 20, 24, 29, 33, 35).

Apart from propositions 1 and 2, which also form separate paragraphs on their own, the next two clusters (3-11) form one paragraph, laying out the problem. The next four clusters (12-23) form another paragraph, introduced by enumake 'at once' and three new characters, projecting a solution. The next four clusters (24-34) form another paragraph, carrying out the solution. The last cluster (35-36) forms a separate paragraph, matching proposition 1. But the body of the discourse is composed of three paragraphs (3-34).

3.4.1 *Theme/topic* (capitals on the diagram)

Theme is usually unmarked, occurring on the first item in linear realization, whether a mere pronoun (1, 24, 26, 34); or an unsupported noun (2, 3, 9, 13, 15, 20, 25, 29); or a noun with article (27, 36) or three nouns (12), or full NP ame etɔ siawo dome 'person three this-PLU among' (35), even though the NP is embedded in a nominalization with -tɔ. None of these is fully marked though the longer NPs are stronger than the others. However, in 12, the three nouns linked by kp|e 'and' form a relatively independent theme which is immediately taken up by wo 'they'. In 3, 12, 29, before the theme NP in linear sequence, we have AP gbe deka 'one day', enumake 'at once', and tefe 'then' respectively, which seem to provide a Time setting for more than one proposition, either a cluster or even the discourse (in the case of gbe deka).

3.4.2 *Focus* (circled on diagram)

In some texts we would find a great deal of marked focus, where new information appears in unusual places in linear sequence. But in our text there is no displacement, so that every focus occurs at the end of its information unit. At the end of propositions, we sometimes find the focus element reinforced in a non-minimal NP, in particular with ade 'a': fiavinyɔnu dzetugbe ade 'a beautiful princess' (4); de kɔ ade dzi 'onto an island' (7) (both of these are in the first cluster); le hɔ fe fego me 'from Eagle's clutches' (14). Otherwise, focus at the end of a proposition is maintained by an addressive particle loo (1) or by an adverb, such as enumake 'at once' (19, 33), kenken 'altogether' (23), tsayatsaya 'smithereens' (32), dedie 'safe' (34). But many propositions end with just a verb or a NP whether noun plus article or mere pronoun).

Focus, however, applies to domains larger than the proposition as well. Where propositions come in clusters, later propositions are more focused than earlier ones: e.g., 10-11, 28, introduced by be 'that' compared with 9, 27; 14, 16-19, 21-3, each after be 'say' (13, 15, 20); 18-19 and 23, both consequence propositions, following 16 and 21-22, both conditions; 25, reinforced by auxiliary da, after 24; 36, introduced by ne 'that', after 35; also, 32 after 29-31, and 34 after 33, though the focusing is less obvious.

Furthermore, the final paragraph (35-36) seems to have focus itself, as it forms the whole point of the story, the puzzling question:

3.4.3 *Anaphoric reference* (arrows pointing left)

This can be shown by simple lexical repetition: alobalo (2); fia 'king' (9); hɔ 'eagle' (10, 14, 21); fiafitɔ 'thief' (25); tɔ 'lake' (26); adela 'hunter' (29); nuhela 'joiner' (33). Anaphora can be shown more clearly by a demonstrative: sia 'this' (35) with ame 'person'; or la/a 'the' with (nyɔnu)vi 'girl', (10, 14, 17, 25, 28); hɔ 'eagle' (16, 27); wu 'boat' (31, 33); fia 'king' (36). Equally

clear are 3rd person pronouns: wo 'they' (10, 12, 24, 26, 34); wò, -j (and variants) 'he, she, it' referring back to vi 'child' (11); hõ 'eagle' (18, 19, 29, 30); mu 'boat' (22, 23, 32); and ye logophoric, referring back past be 'say, that', verb or conjunction, to the preceding Agent: fja 'king' (10, 11); fjafitõ, adela, nuhela 'thief, hunter, joiner' (14, 16, 18, 23); hõ 'eagle' (17, 28). In serial clauses there is implicit anaphora: hõ 'eagle' as Agent (4, 6, 7); wo 'they' as Agent (11); wò 'it' as Patient (31). As kafu 'praise' (36) is obligatorily followed by a NP realizing Goal, another implicit anaphora leads us back to (ame)ka 'which person' (35). Similarly, da 'put' (7) requires a Patient, supplied from 4, vinyõnu 'daughter'; va (3, 12, 27) requires Goal. A more subtle anaphora, which puts some strain on the reader, is found in mu 'the boat' (21). One is immediately tempted to ask, "What boat?" since none has been mentioned. The vital clue comes in the casual mention of tõ 'lake' (8), which itself is anaphoric to ko 'island'. The afe 'home' (34) must be understood anaphorically as belonging to fja 'king' (9, 11). Similarly, mo 'road' (24) refers to the implied journey to the island.

3.4.4 *Exophoric reference* (arrows pointing upwards)

Alobalo is introduced in isolation without indefinite article (1). The Sender presupposes that the Receiver understands from his cultural background; and this is confirmed by the positive response citing alobalo (2), indicating also that he expects a final puzzling question. Then, hõ 'eagle' (3), fjafitõ 'thief', adela 'hunter', nuhela 'joiner' (12) each appear suddenly without explanation, implying that the reader is supposed to recall known characters in traditional stories.

3.4.5 *Paraphoric reference* (arrows pointing downwards)

The only explicit paraphoric reference is mi 'you' (1) with implied present time.

3.4.6 *Modality* (dashed lines around squares)

Most propositions are unmarked for modality. Once, however, possibility is marked: te nu 'can' (14). Possibility is also implied with ne 'if' (16, 21-22). One could also argue that all the be (purpose) clauses with subjunctives (10-11, 17, 28, 36) imply future possibility.

3.5 *Illocutionary function* (in SR margin)

Propositions 1 and 2 each function as PROposals, realized by the imperative, covert in 1, ne- 'let' in 2. Propositions 3-34 form a series of STatements, unmarked. Propositions 35-36 function as a real QUEstion, realized by ka 'wh-' (35) and ` (low tone) at the very end of 36.

3.6 *Formality* (F+ in SR margin)

Both 1 and especially 2 have a formulaic quality, indicating

This arrangement is more economical of space and easier to set up; but it loses the larger scale interrelations among propositions, clusters, and paragraphs (cf. Gleason 1968; Grimes 1975:ch.6).

Another arrangement where the text can be entered in its ordinary unprocessed form requires only lined paper. Again, however, it fails to capture the larger units above the proposition:

SR :	↑									
R :										
S :	X+									
Mod :										
← :	(←)									
Foc :							<u>F</u>		<u>F</u>	(F)
The :	T	(T)								

3: Gbe ɖeká hǒ vá ʒo fiavínyǒnu dzetugbe aɖe yi ɖada ɖé kǒ áɖé dzí le to dome.

PRED:		Ac	Ac		St		Ac	Ac		St		
role:	t	A	(A)	(E)	P		(A)	(A)	(P)	G	(P)	R
& :					/					/		
		(seq.)			(emb.)							

This graphically illustrates the multiple semantic nature of every item interwoven to form a text of any kind. It is like unweaving a fabric into its component threads. One can concentrate on any line as one wishes: how much expressive intensity there is (in the S line); how much exophora (in the SR line), which may make understanding difficult; whether Focus is often displaced and so marked; etc.

According to the full diagrams of figure 3a-b, a highly metaphorical text might have to be diagrammed double: the actual metaphorical series of propositions parallel to a reconstructed literal series. Such an arrangement would facilitate translation when, in order to make sense, various unexpressed parts of an original metaphor may need to be expressed in the receptor language.

Semantic analysis can also provide hints of how to simplify a text for beginning learners; e.g., by realizing every Predicate as a verb (rather than as a noun); by supplying implicit participant roles; by letting Focus always come at the end with adequate grammatical support; by explicitly marking with available morphemes these and other details; etc.

