CASHIBO VERB STEMS, CAUSATIVES, AND
PROPOSITION CONSOLIDATION

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This paper is a preliminary attempt to make the generalizations that (1) in Cashibo rather than one causative construction actualized in sur-face structure through verbs suffixed by the morpheme -mi, there are sev-eral types of causative constructions including other morphemes besides -mi-, all compounded with their respective classes of verb roots accord-ing to coocurrence with particular arrays of cases following Fillmore's model; (2) these types of morphemes combine with the main verb roots through a rule similar to one proposed by Frantz (1970) for Blackfoot termed 'proposition consolidation'.

As stated by Lyons (1968:433), it must be recognized that particular languages reflect in their vocabulary the culturally important distinc-tions of the societies in which they operate, a fact which commits us to a certain degree of linguistic and cultural 'relativity'. Not only in vocabulary (or lexicon), but also in the syntax, certain items are overt morphemes and other items or categories are unmarked morphologically, or understood, though they may be included as specific morphemes in other languages. Complicated problems of translational equivalents arise when English is used to discuss the semantics of another language. We do not want an analysis to reflect more the principles of the analyst than the cultural (or linguistic) system studied (Thompson 1968:74).

In Cashibo, a Panoan language of Central Peru, South America, differ-ent types of one, two, and three place verbs are marked more specifically, both morphologically and syntactically, than in English. Examples of these verbs and their different types of representation are as found in sets I-V (Figure 1), arrived at by a taxonomic classification. These sets pose a problem for analysis to answer the question, "Why are there five different sets of intransitives, transitives, and causatives?" The sets could be explained simply by handling these as morphologically variant classes. The syntax of each type may be considered separately and described by separate rules with no attempt at cross-classification. Or the types may be cross-compared and classified for semantic and syn-tactic distinctions or similarities which may reveal generalization, and lead to reduction in number of necessary rules. It is essential to find the necessary and sufficient conditions for membership in each set, with their contrasting values.

As Lyons noted for English, so also in Cashibo transitivity is bound up with the distinction of animate and inanimate nominals, marked overtly with case forms in surface structure of this Subject-Object-Verb language. Base rules from an earlier analysis of Cashibo (Wistrand, 1968) show a great similarity to English deep structure rules. Cashibo surface case, or role, relationships, are similar to the situation found in Takelma (Fillmore 1968:54) having "one form for the pronominal NP of intransitive sentences, and two separate forms for the Agent and Object

SET I

1) shaí-ki-   'move'   3) chǐǐ-ki   'become mushy, rotten'

   shaí-ka-   'move something   chǐǐ-ka-   'mash up (something)'

2) choro-ki-   'untie by self'   4) kii-ki-   'cry out'

   choro-ka-   'untie something'   kii-ka-   'call (to someone)'

SET II

1) chaká-   'bump, stumble'   3) kǐñó-   'finish, end (self)'

   chaka-   'beat, hit (something)'   kǐño-   'finish, end (something)'

2) rató-   'fear, be afraid'   4) choká-   'wash (self)'

   rato-   'scare (someone)'   choka-   'wash (something)'

SET III

1) chikí-   'go out'   3) nanǐ-   'drown, submerge'

   chikín-   'cause to go out'   nanǐn-   'cause to submerge'

2) nǐtí-   'disappear'   4) tsɔɓ-   'sit'

   nǐtín-   'cause to disappear'   tsɔɓn-   'seat someone'

SET IV

A. 1) bama-   'die'   B. 1) hunán-   'know'

     bama-mi-   'make die, kill'   numán-mi-   'make know, teach'

  2) abá-   'run'   2) pi-   'eat'

     abá-mi-   'make run, chase away'   pi-mi-   'make eat, feed'

SET V

1) nɔɔ-ɔ-   'scare, make   3) nona-ɔ-   'smoke meat'
   'enemy' 'make'   afraid'   'animals' 'make, do'

2) ñanka-ɔ-   'err, miss the   4) mǐni-ɔ-   'straighten, clean'
   'nothing' 'make, do'   mark'   'clean' 'make, do'

Figure 1.

of transitive sentences." (For example, see Figure 2).

Loc-Dir, cop: ¢a¢a ka-a baka-no ʔi-kï-n
                fish Prt-they river-in be-Pres-Fin

'There are fish in the river.'

Vb: noo-'ş̌   ka-nanona abat-i-n
            we-Intr. Prt-we   run-Pres-Fin

'We are running.'

Means Vb: koko-'ş̌   ka-a nonti-'n kʷan-'-i-n
            uncle-Intr Prt-he   canoe-by go-he-Pres-Fin

'Uncle (MoBro) is going by canoe.'

NP, Vb: ʔïï-'n ka-na š̌iki   pi-i-n
            I- Tr Prt-I   corn   eat-Pres-Fin

'I am eating corn.'

NP, NP, Vb: pauti   ka-na   mii   ʔinan-i-n
            adornment Prt-I   you   give-Pres-Fin

'I am giving you an adornment.'

Figure 2

Transitives and causatives have only animate subjects in surface structure. The agent is always an animate noun whereas instrument and means are always inanimate nouns. The relation between the agent and instrument is reflected by the fact that for inanimate nouns, which can never be the subject of transitive verbs, the instrumental suffix is the same morpheme as the agreement suffix -'n̲ for animate subjects of transitive verbs, with phonological variations. For example:

Anim. Subj. of V_t		Inanim. Instru.	
ti̲ta̲-'n̲	'mother...'	ba̲i̲ -'n̲	'by path $(+V_i)$'
koko-ʔn̲	'uncle...'	pi̲a̲ -'n̲	'by, with arrow $(+V_t)$'
ai̲ntsi̲-'n̲	'relatives...'	mïkïn̲ -an̲	'by hand $(+V_t)$'

The noun suffixes mark the surface subject and cross-reference the features of transitivity and intransitivity through a transformational rule. The feature [+Anim] must be present on the subject noun for T4 to go into effect, since inanimate nouns do not take the transitivity agreement suffix. The agreement suffix -'ş̌ marks the active subject of an intransitive sentence in surface structure. In the transitive sentence, the object consists of the unaffixed, simple noun or pronoun form. When the surface indirect object is included, it is also without

affix case form, but is recognized by syntactic order (that is, preceding the object unless the object is in emphasis position), or by the fact that it is always animate, whereas the object may or may not be animate. Both the instrument and agent cannot occur within the nuclear sentence preceding the verb in surface structure. One or both of two changes takes place: (1) the agent is indicated by a modal particle which has had its features copied onto it before agent deletion, or (2) an obligatory transformation moves one of the two to a peripheral position following the verb, and this is separated from the matrix sentence final verb by pause. In the sentence 'I am doing it by hand' we posit a paraphrase which assumes coreferentiality of the main and embedded actors (see Figure 3).
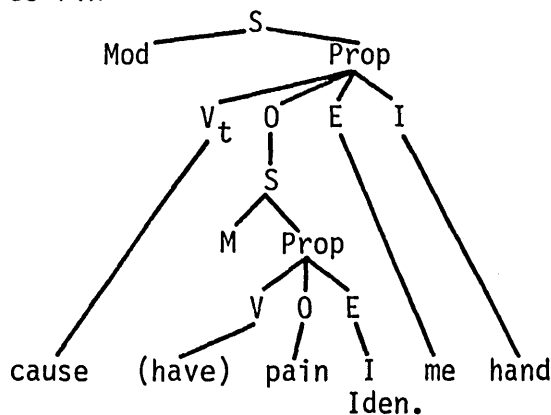
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mĩkĩn-ñan   ka-na    ʔa-i-n
hand-by     Prt-I    do-Pres-Fin

"I am doing it by hand.'
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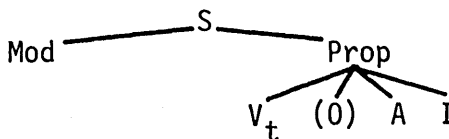
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mĩkĩn-an   ka-a     ʔĩĩ   paʔ-ɔ-i-n
hand-Tr    Prt-it   me    pain-cause-Pres-Fin

'My hand hurts (causes me pain).'
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Figure 3.

Besides Frantz's cases listed as Object, Agent, Patient, Experiencer, and Instrument (or Means, as mentioned above), a couple of other NP entities must be considered as within the array of cases affecting the choice of verbs within frames, or the types of sentences. As mentioned by Fillmore concerning English, in Cashibo also the "locational and directional elements do not contrast, but are superficial differences determined either by the constituent structure or by the character of the associated verb" (Fillmore 1967:33). The location-direction element in Cashibo is an obligatory noun phrase followed by optional potentially complex locative construction having an obligatory locative element and/or optional directional element, of which at least one of the two optional elements must be chosen. The noun phrase may contain a pro-form of N 'someplace' which is deleted by a transformational rule.

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baka-no              šobo-no              šobo-no-šon
river-in, at         house-in (V_i)       house-in-(V_t) agreement

misa manan           nii tanain
table on-top-of      forest under, in
```

Direction is of two types, toward and away from, e.g.:

баka-mi   baka-no-a   baka-no-aš
river-toward   river-at-away (V_t)   river-at-away (V_i)

Location and direction agree with the verb in transitivity through
redundacy feature-adding rules.

In keeping with his discussion on instrumentals, the manner
category as one of the "other adverbials" has also been questioned
by Lakoff (1967:29,38), who doubts its existence in deep structure,
feeling that it is some other category which has this special relation-
ship to the verb, a relationship which would be indicated by the posi-
tion on the structural tree or in the rules. Here the manner is posited
as NP-based and added to the array of NP's possible with the function
or verb, in the proposition. Cashibo manner words are usually either
adjectival or verbal forms modified for the manner relationship, which
accounts for the obligatory NP either as subject of the verb or as
noun modified by the adjective. The verbs become nominalized and/or
occur with nominal suffixes; the adjectives add transitivity-agreement
suffixes. Examples:

aa-'š   ka-a   bïnï-ti-iši   kʷan-i-n
he-intr.   Prt-he   quickly-nom-just   go-Pres-Fin
'He is going quickly.'   bïnïti = 'to be in a hurry'

nɔɔ-š   ka-a   opi-ta-š   ¢ɔɔt-i-n
strangers-Intr Prt-they   good-nom-intran   live-Pres-Fin
'The strangers (foreigners) live well.'

The time category is one further NP which may be added to the
array of NP's following the verb in English ordering, or preceding
the verb in Cashibo surface ordering, though the full relationship
to the previously-mentioned cases remains to be fully explored.

As seen here, surface case forms of NP's are not very elab-
orately developed. Differing combinations in arrays of cases, cross-
classified with features of transitivity-intransitivity and other
semantic features, yield the five verb stem classes mentioned above
which contrast in the total semantic-syntactic system. In each class,
although the overt expression of intransitivity/transitivity/causativity
is different in the surface structure, all may be handled as dependent
verb roots of the matrix proposition in the system of generative rules
following Fillmore's model. Elements of the embedded proposition
must be moved into the matrix proposition in order to combine the verbs
(e.g. CAUSE and main verb root) through a rule similar to one termed
'Proposition Consolidation' by Frantz (1970) in his description of
Blackfoot. We maintain the standard order of Modal and Proposition,
and under the Proposition the following basic underlying order in which
all the nominal elements follow the verbal element(s):

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              S
       _____|_____
      M              Prop
                  __/|\__
                 V  O  E  I
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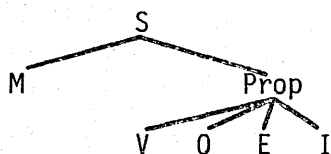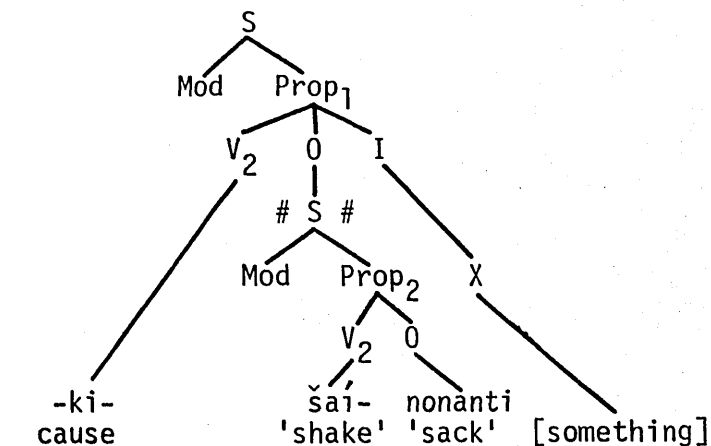
M = Modal
Prop = Proposition
I = Instrument
E = Experiencer
O = Object
P = Patient
A = Agent

Although this is a fixed order posited for English, in Cashibo surface
structure all the nominal elements precede the verbal elements in a
mirror image order relationship to the verb. All transitivizing
(-ki/-ka) or causative (-mi, -o, -'n) morphemes are treated as the
second part of compound roots, the first part being the main root.
The main verb root is embedded or dependent root, has the feature
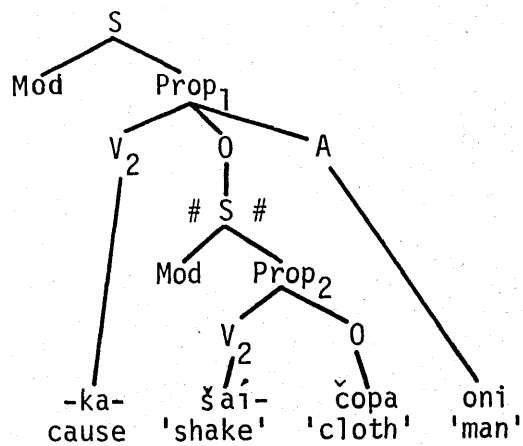[+dep]. The generalized proposition consolidation rule would be
as follows:

$$\left[_{Prop_1}\; \left[_{Prop_2}\; X - [+dep]_{V_1}\; \right]_{V_1}\; Prop_2\; [\, Y\,]_{V_2}\; \right]_{Prop_1}$$

$$\underset{1}{\qquad}\quad \underset{2}{\qquad}\qquad \underset{3}{\qquad}\qquad \Rightarrow 1\;\; 2+3$$

By a rule of this type the compound roots of varying kinds are formed.
The main verb root may be intrinsically neuter and attributive (a
state) as in Set I examples (see Figure 4) made either transitive or
intransitive through proposition consolidation. It may be basically
transitive, by which the proposition consolidation is not needed,
but made to appear reflexive in surface structure because the instru-
ment is implied as a cause, as in Set II (see Figure 5). The latter
form of Set II requires the proposition consolidation to bring the
inanimate cause root to a position immediately adjacent to the main
root. The main verb root may be basically intransitive and oblig-
atorily occuring with location/directionals, as in Set III (see Figure
6), but with an added animate agent must go through proposition con-
solidation to bring the causative root to a position immediately
adjacent to the main root. Set IV (see Figure 7), previously considered
the only causative construction, because they include the causative
morpheme -mi-, may occur in conjunction with a transitive or intran-
sitive root having obligatory agent and patient. The agent can only
induce the patient to perform the action or assume the state by an
act of the patient's will. Persuasion, instead of force as in Sets
I and II, is the essence of the verb (see discussions of the verb
persuade by Fillmore 1968:28 and Chomsky 1965:94). The proposition
consolidation rule again in this case brings the causative -mi- to a
position following the primary root. In Set V (see Figure 8), the
inanimate cognate object construction may not require proposition
consolidation, though the object is brought into form by the agent.
Something brought into a new type or order of state through this type
of causative does require the Proposition consolidation to bring the
root together with this type of causative. Related questions of this
type of construction (such as example V,2) have been discussed for
English, such as 'He hit the target with the arrow', 'He missed the
target', etc.

(Involves continuing movement.)

S
Mod   Prop₁
V₂   O   I
S
Mod   Prop₂   X
V₂   O

-ki-
cause

šai-   nonanti
'shake'   'sack'   [something]

'The sack shakes.'
(something causes the sack to shake)

S
Mod   Prop₁
V₂   O   A
S
Mod   Prop₂
V₂   O

-ka-   šai-   čopa   oni
cause   'shake'   'cloth'   'man'

'The man shakes the cloth.'

Figure 4.

S
Mod   Prop₂
V₂   O   I
S
Mod   Prop₂
V₂   O   E

-v-
cause

čaka-   x   oni
'hit, bump'   [something]
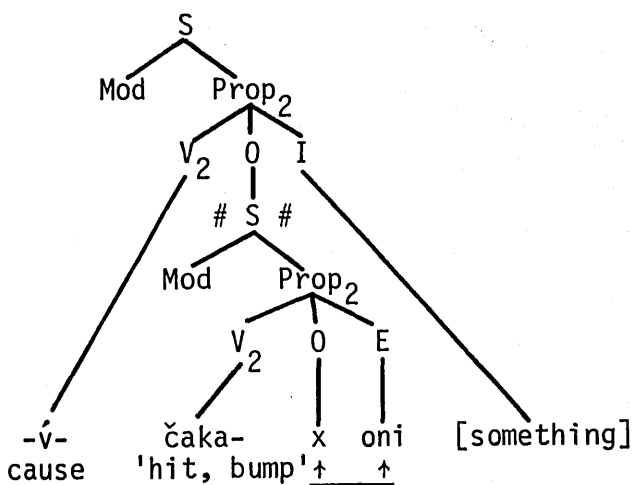
x = some body part of E

'The man bumped himself.'
(or tripped)

S
Mod   Prop₂
V₂   O   A   (D)
(for x)
čaka-   čopa   šand   šano
'hit'   'clothes'   'woman'
(wash)
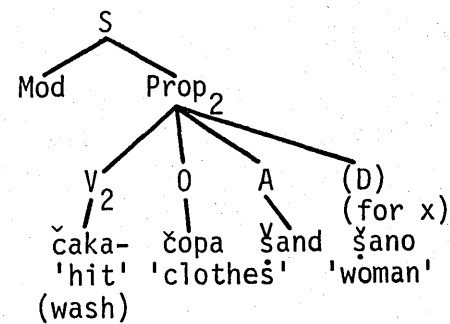
'The woman washes clothes
(for something)'

(possible benefactive)

Figure 5.

DIRECTION OBLIGATORY IN DEEP STRUCTURE


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                S                                    S
         Mod        Prop₁                     Mod        Prop
        V₂      O        A                    V      A      L-D
              # S #
         Mod       Prop₂                   čiki-   oni   šobo-noaš
        V₁    E      L-D                  'go out' 'man' 'house-from'
   -n   čiki  ʔočíti šobo-noaš  oni-(ń)
 cause 'go out' 'dog' 'house' 'out of' 'man'    'The man went out of the house.'
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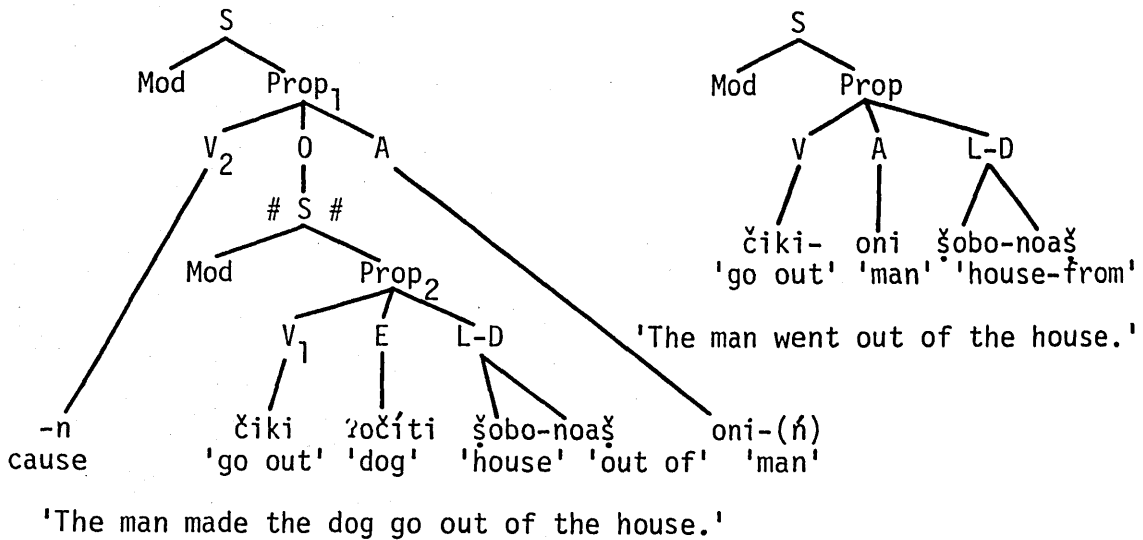
'The man made the dog go out of the house.'

Figure 6.

A. INTR   OBLIG. ANIM. AGENT   B. TRAN.

```
              S                                        S
       Mod        Prop₁                         Mod        Prop₁
      V₂     O      A      I                    V₂     O      A
           # S #                x                    # S #
       Mod       Prop₂                          Mod       Prop₂
            V₁      E                                V₁    O    A
  mi-    bama-   oni   aa(-ń)          -mi-    kuči  ʔaʎa pi-  oni(-ń)
 cause   'die'  'man'  'he'           cause  'hog' 'cassava' 'eat' 'man'
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'He caused a man to die.'   'The man fed the hog
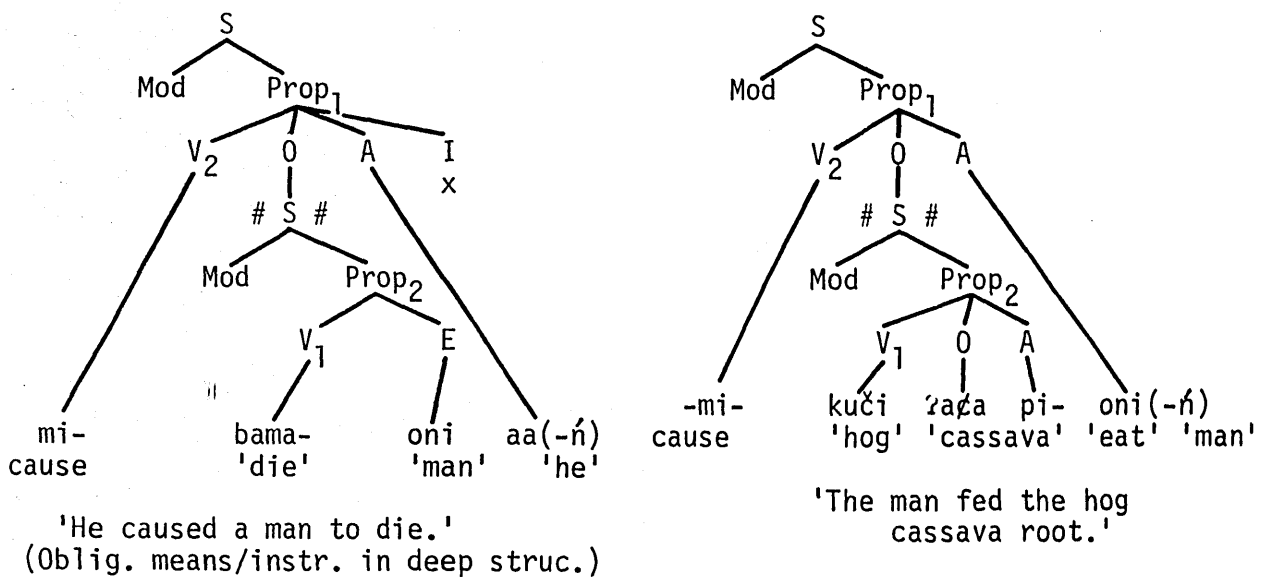(Oblig. means/instr. in deep struc.)   cassava root.'
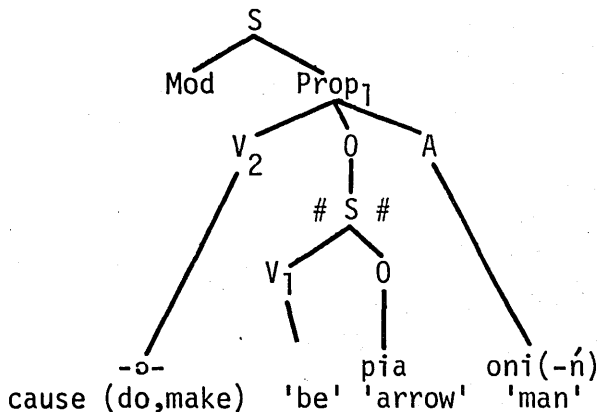
Figure 7.

Cognate Object-Factitive

Figure 8.

These hypotheses must be checked out with many more verbs, and
the mechanics worked out to fit in with the rest of the grammar. In
summary, the hypothesis has been made here that various taxonomic
morpheme classes, specifically compound verb stems involving intran-
sitivity/transitivity, causative and reflexive, are not randomly occur-
ring in the language system simply for phonological or morphological
variety. The separate sets, or classes, reflect different possible
arrays of cases, or roles, with which that particular set of verbs
may occur, according to the basic set of features within the nature
of the verb itself. The noun and verb semantic feature cross-class-
ification and verb frame occurrence possibilities are more clearly
seen through the tree or generative rules of the proposition-case
array approach. It has been suggested here that a rule termed prop-
osition consolidation by Frantz may apply to make the further different
semantic features and different cooccurrence restrictions hold, there
are at least two propositions involved, of which one including the
second morpheme of a compound stem is a causative of one type or another.
Universal semantic primitives for verb and noun cross-classification
and cooccurrence apply to a great extent in deep structure (e.g.
Cashibo and English identical rule N → [+anim]/A,D [X__Y]; Cashibo
and English identical frame features 'see' (+__O D) is- 'see' versus
'show' (+ __O D A) ismi- 'show (cause to see)'). In the latter
example the surface structure frame features are identical whereas
deep structure must show that in Cashibo the Agent 'Causes' (-mi-)
whereas the D 'sees', such that the proposition consolidation must
take place.

In spite of the universals or similarities, there is bifurcation
at certain points of the grammar due to difference in Cashibo logic
and 'understood' features versus those features which are overtly
distinguished in surface structure through morpheme class realization
or suprasegmentals such as stress, tone, intonation, etc. In English
we assume 'bump oneself, stumble' or 'wash' are intransitive and

reflexive; in Cashibo the body parts are looked on as separate objects, and one does not 'just end', simply 'bump' or one's heart simply 'become afraid', but some outside instrument or force (agent) must cause these apparently reflexive actions to take place. Even in grammar the influence of the spirit world as causation, or the identification of humans as animals in the past, and such changes in semantic features and syntactic cooccurrence of roles must be recognized.

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