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*Part II: Studies in Native American Languages*

## TRANSITIVITY INDICATORS *-YU* AND *-WI* IN HUALAPAI

Kumiko Ichihashi

**Abstract:** The distribution of Hualapai auxiliary verbs *-yu* and *-wi* cannot be explained only by the presence or absence of an object, or by the active or stative feature of the matrix verb. This paper proposes that it can be explained in terms of Transitivity, in that *-wi* corresponds to 'high' Transitivity and *-yu* to 'low' Transitivity of the clause. Several grammatical processes, e.g., the Causative, Applicative and Passive, are examined and it is shown how they interact with the Transitivity of the clause, which correlates with the auxiliary alternation. The speaker's attitude with regard to the nature of the event also affects the evaluation of Transitivity in Hualapai. This suggests that the degree of Transitivity is determined subjectively by the speaker.<sup>1</sup>

### 1. *-yu, -wi* Auxiliary Verbs in Hualapai

Among the auxiliary verbs in Hualapai, a member of Yuman language family (Upland branch) spoken in the northwest part of Arizona, there are *-yu* and *-wi*, which, along with other auxiliaries like *-i* (< *i*: 'to say') or *-yi* (< *yi*: 'to feel'), developed from lexical verbs *yu*: 'to be' and *wi*: 'to do', respectively. The choice between them has been said to be determined by a lexical property of the matrix verb to which they are attached. However, it is not clear what is meant by 'lexical property' of the verb. Some verbs which take *-yu* (hereafter called '*-yu* verbs') and *-wi* ('*-wi* verbs') are listed below:

#### (1) *-yu* verbs

e:vk 'hear', gige vk 'stand', gweda:vk 'be sick', hanbachk 'snow', hank 'be good', hwakk 'to be two', jiba'kk 'come out', jibamk 'go out', jiqodk 'jump', jo:vk 'fight', mank 'fall off', nya:k 'be black', nyimsavk 'be white', qalye:vk 'be big', qid'u:dkk 'be short', skwi:k 'stand', sma:k 'sleep', u:k 'see', viso:k 'take care of', viya:dk 'fly', viyamk 'run', vo:k 'walk', wa:k 'sit', wamiye:k 'be angry', wanya:k 'forget', wasi:vk 'think', wayo:k 'live, sit', ya:mk 'go', yakk 'lie', yu:k 'be', yuwk 'come'

#### (2) *-wi* verbs

a:vk 'hit', dagwi:vk 'chase', e:k 'give', gaðohk 'kick', gaga:vk 'buy', gobgobk 'knock', gowa mk 'drive', hwalk 'dig', ja:vk 'eat up', jigaeðk 'chop', jiyalk 'paint', le:lk 'tear', ma:k 'eat', nuwi:dk 'cook', sa'adk 'sell', sa'amk 'close', thamk 'borrow', thik 'drink', yo:k 'get', yo:vk 'make'

From the short list of verbs given above, it might appear that intransitive verbs take *-yu* while transitive verbs take *-wi*. However, even verbs with an overt grammatical object may appear with the *-yu* auxiliary.<sup>2</sup>

- (3) Nya-ch o'o ' -ha:m-yu-ny. [WBY]<sup>3</sup>  
I-Sub fire 3/1-see=at=distance-Aux-Past  
'I saw a fire.'
- (4) Ma-ch nya mi-spo' mi-da'op-ng<sup>4</sup>-yu. [WBY]  
you-Sub I 1/2-know 1/2-not-2-Aux  
'You don't know me.'
- (5) Ga yu:mo e:v-yu [WBY]  
someone unknown hear-Aux  
'I hear someone.'
- (6) Hma:nya ba viso:-k-yu. [D]  
children Pl take=care=of-3-Aux  
'She is taking care of the children.'
- (7) Wami:-k-yu. [D]  
dislike-3-Aux  
'She dislikes him.'
- (8) Ma-ch haygu-gwa:w-j wa-m-nya:-ng-yu. [WBY]  
you-Sub whiteman-word-Pl heart-3/2-forget-2-Aux  
'You forgot English.'
- (9) Nya-ch ma wa-nya-si:v-yu. [WBY]  
I-Sub you heart-2/1-think-Aux  
'I think of you.'

Alternatively, it might be assumed that 'active' verbs take *-wi* and 'stative' verbs take *-yu*. However, this assumption is contradicted by the fact that so-called 'locomotion verbs', which express physical action, take *-yu* instead of *-wi*.

- (10) Misi:qacha-ch jikmi:-m vo:-ji-k-yu-ny. [WBY]  
girl little=Pl-Sub wash-Loc walk-Pl-3-Aux-Past  
'The little girls walked by a wash.'
- (11) John-ch viya:m-'i-k-yu-ny. [WBY]  
John-Sub run-suddenly-3-Aux-Past  
'John suddenly ran.'
- (12) Burt-ch jiqodg-i-k-yu. [WBY]  
Burt-Sub jump-suddenly-3-Aux  
'Burt is jumping.'
- (13) Jibay-ch viya:d-'i-k-yu. [WBY]  
bird-Sub fly-suddenly-3-Aux  
'The bird flew away.'

In the examples above, verbs indicate locomotion of the subject; that is, they do not denote the state of the subject but the action controlled by the subject. These phenomena demonstrate that the choice between *-yu* and *-wi* cannot be explained only by the presence/absence of an object of the verb, or by the active/stative feature of the verb.

In this paper, I will suggest that the distribution of *-yu* and *-wi* in Hualapai may be explained in terms of 'Transitivity' in the sense introduced by Hopper and Thompson (1980), to the extent that when the overall clause shows relatively high Transitivity, it takes *-wi* marking, and when it shows low Transitivity, it takes *-yu* marking. The degree of Transitivity can be determined based upon several parameters relating to the effectiveness or intensity with which the action is transferred from one participant to another (Hopper and Thompson 1980:252). These parameters include the number of participants, the activity indicated by the verb, the telicity and punctuality of the verb, the volitionality of the agent, the agency of participants, and the referentiality and degree of affectedness of the object.

In examples (3) through (9), even though there is a second participant in each clause, it is an object of a cognitive verb and not a 'true' patient; that is, the object is not really affected by the action of the subject. These verbs denote an internal process, not an out-going action, and the volitionality of the subject might be low.<sup>5</sup> Therefore, these clauses can be said to have a low degree of Transitivity, thus coded as 'intransitive' with *-yu*. As for (10) through (13), though the clauses have some high-Transitivity features (e.g., action, volitional), they lack the patient participant which is a crucial component of Transitivity. Alternatively, it can be said that the only participant in each of the sentences has the semantic role of patient or theme, in the sense that it itself undergoes the movement, as well as that of agent, in the sense that it is the instigator of the movement.<sup>6</sup> In any case, there is no transfer of action from one participant to another (different) participant and this reduces the degree of Transitivity of these clauses so that they are low-Transitivity marked by *-yu* in Hualapai.

If the auxiliaries *-wi* and *-yu* really correlate with high and low Transitivity of the clause, a change in the degree of Transitivity should be accompanied by an alternation in the auxiliary. In the following sections, I examine several grammatical processes in Hualapai which manipulate Transitivity features, and show how they motivate the selection of auxiliary *-yu* or *-wi*.

## 2. Causative Construction

Hualapai has several causative verbal prefixes. According to the classification of Watahomigie, Bender and Yamamoto (1982), they are: *ʃ-* (general causative), *j-* (expressing some quality change), *v-* (expressing some movement change), *s-* (indicating some action by hand), and *g-* (expressing duality with partner(s)). The causative prefix changes the meaning of the stem verb into 'make someone/something do' or 'cause someone/something to do'. In this process, an agentive argument is added which takes over the subject marking *-ch*, while the original subject is demoted to object position and takes the object marking (null). The schematic representation of this process is:

- (14) Causative Process  
 Y-ch Verb --> X-ch Y (causative prefix)-Verb  
 (X, Y, Z ... indicating arguments)

For example:

- (15) a) Nya nyigway-va-ch duv-k-yu. [D]  
 my shirt-Dem-Sub dry-3-Aux  
 'My shirt is dry.'
- b) Ba'-ch nyigway nyi-wi:-h da-du:v-k-wi. [D]  
 man-Sub shirt Rel-own-Dem Caus-dry-3-Aux  
 'The man is drying his shirt.'

As a result of this process, the number of participants is increased (mostly from one to two) and the clause comes to have an explicit agent (causer) and patient (causee). The original clause typically expresses the state of the subject, while the suffixed clause describes the action of the subject causing such a state. Thus, the causative process increases the degree of Transitivity of the clause. In fact, through this process, -yu verbs (the majority of the verbs which undergo this process<sup>7</sup>) change into -wi verbs as shown in (15) and the following examples:

- (16) a) Nya qwaw-va-ch bul-k-yu. [D]  
 my hair-Dem-Sub be=wet-Aux  
 'My hair is wet.'
- b) Baqi:-h-ch qwaw-a da-bul-k-wi. [D]  
 lady-Dem-Sub hair-Def Caus-be=wet-3-Aux  
 'The lady is wetting her hair.'
- c) Baqi-h-ch midi:k s-bul-k-wi-ny. [D]  
 lady-Dem-Sub bean Caus-be=wet-3-Aux-Past  
 'The lady soaked the beans.'
- (17) a) Gwevoyi-'a-ch lap-k-yu. [D]  
 tire-Def-Sub be=flat-3-Aux  
 'The tire is flat.'
- b) Gwevoyi da-lap-ji-k-wi. [D]  
 tire Caus-be=flat-Pl-3-Aux  
 'They flattened the tire.'
- (18) a) Nyihak man-j-ay-k-yu. [WBY]  
 right=there fall-Pl-Irreal-3-Aux  
 'They are going to fall right there.'
- b) Misi'-h-ch hme' qecha ji-man-k-wi-ny. [D]  
 girl-Dem-Sub boy be=little Caus-fall-3-Aux-Past  
 'The girl let the little boy fall.'

The auxiliary alternation here reflects the change in the degree of Transitivity. By contrast, *-wi* verbs, which already show high Transitivity, retain *-wi* (see (19f) below). More examples of non-causative/causative pairs:

- (19) a) *boq'-k (yu)* '(something) to spill'  
       *da-boq'-k (wi)* 'to spill something'
- b) *viyam-k (yu)* 'to run'  
       *ji-viyam-k (wi)* 'to make someone/something run'
- c) *ya:d-k (yu)* 'to fly'  
       *ji-ya:d-k (wi)* 'to make something fly'
- d) *ya:m-k (yu)* 'to go away'  
       *ji-ya:m-k (wi)* 'to let something/someone go'
- e) *hwak'-k (yu)* 'to be two'  
       *ga-hwak'-k (wi)* 'to put two together'
- cf. f) *gowa:m-k (wi)* 'to drive'  
       *vo-gwa:m-k (wi)* 'to make someone drive'

### 3. Applicative Suffix

The valency of the predicate can also be increased by attaching the Applicative verbal suffixes *-o* (after a consonant) / *-yo* (after *y*) / *-wo* (elsewhere). In this case, however, the added argument is non-agentive and is put into the object position while the subject remains in its original position.<sup>8</sup>

- (20) Applicative Process  
       X-ch (Z) Verb --> X-ch Y (Z) Verb-(Applicative suffix)

For example:

- (21) a) *Malinda-ch swa:d-k-i.* [WBY]  
       Malinda-Sub sing-3-Aux  
       'Malinda is singing.'
- b) *Malinda-ch nyi-swa:d-o-k-i.* [WBY]  
       Malinda-Sub 1/3-sing-Appl-3-Aux  
       'Malinda is singing for me.'
- (22) a) *John-ch kwasadsa:d-m gwe ma:-k-wi.* [WBY]  
       John-Sub fork-Inst something eat-3-Aux  
       'John eats with a fork.'



- b) Makanya:m John-ch olo' gwe ma:-wo da'op-k-wi-ny. [WBY]  
 yesterday John-Sub horse something eat-Appl not-3-Aux-Past  
 'Yesterday John did not feed the horse (make the horse eat).'

The interesting point here is that if there already exists a [-human] object in the clause, the added [+human] object takes over control of the person prefix<sup>9</sup> on the verb, i.e., the added [+human] argument, instead of the [-human] object, is indicated as the object by the person prefix.<sup>10</sup> Further examination would be necessary to decide whether 1) it is always the case that the added object ('indirect object') is indicated in the person prefix despite its semantic features, or 2) the [+human] object has some kind of priority due to, e.g., i) an 'animacy hierarchy' between objects, or ii) speaker's 'empathy' (cf. Mithun 1990:13). The added argument can be either overt or covert (indicated only by a person prefix on the verb).

- (23) a) Nya-ch miyal ø-gaga:v-wi. [WBY]  
 I-Sub bread 3/1-buy-Aux  
 'I am buying bread.'
- b) Nya-ch miyal nyi-gaga:v-o-wi. [WBY]  
 I-Sub bread 2/1-buy-Appl-Aux  
 'I am buying you bread (bread for you)'
- (24) a) Gwe ø-gana:v-ay-i. [WBY]  
 something 3/1-tell-Irreal-Aux  
 'I am going to tell a story.'
- b) Gwe ba nyi-gana:v-o-y-i. [WBY]  
 something PI 2/1-tell-Appl-Irreal-Aux  
 'I am going to tell a story for you all.'

Through this process, the number of participants is increased. The clause which did not have an object before comes to have an affected object. As a result, this process may cause the degree of Transitivity to be increased. Accordingly, the clause which formerly took *-yu* alternates its auxiliary with *-wi* as follows:

- (25) a) 'Hađ nya nyi-hađa-ch wa-savlay-k-yu. [WBY]  
 dog I Rel-pet-Sub heart-be=mean-3-Aux  
 'My dog is mean.'
- b) 'Hađ nya nyi-hađa-ch wa-nyi-savlay-yo-k-wi. [WBY]  
 dog I Rel-pet-Sub heart-1/3-be=mean-Appl-3-Aux  
 'My dog makes me mean.'
- (26) a) Nya-ch diye:-yu-ny. [WBY]  
 I-Sub be=happy-Aux-Past  
 'I was happy.'

b) Nya-ch Mary diyē: -wo-wi-ny. [WBY]  
 I-Sub Mary be=happy-Appl-Aux-Past  
 'I made Mary happy.'

(27) a) Nya-ch wayala:y-yu-ny. [WBY]  
 I-Sub be=angry-Aux-Past  
 'I was angry.'

b) Nya-ch John wayala:y-yo-wi-ny. [WBY]  
 I-Sub John be=angry-Appl-Aux-Past  
 'I made John angry.'

#### 4. Passive/Stative and Reflexive/Reciprocal Suffix

The verbal suffix *-v* has two main functions. One of them is to detopicalize the agent argument (by deleting it from subject position) and promote the patient argument (object) to subject position with subject marking *-ch*. Functionally, this is the (agent-less) 'passive' (cf. Yamada 1979). When the suffixed clause describes the state resulting from the action or event, it may also be called the 'stative'. It is difficult to distinguish between the 'passive' and 'stative' based on only the English translation. (28) is the schematic representation of this process, which shows the mirror image of the causative process.<sup>11</sup>

(28) Passive/Stative Process  
 X-ch Y Verb --> Y-ch Verb-v

For example:

(29) a) Misi'-ch qwaw-a siji-k-wi. [D]  
 girl-Sub hair-Def brush-3-Aux  
 'The girl is brushing her hair.'

b) Nya qwaw-ch siji-vi-k-yu. [WBY]  
 I hair-Sub brush-Pass-3-Aux  
 'My hair is combed.'

(30) a) Nya qwa:w-ji-v-a jithul-j-y-ay-wi. [WBY]  
 I hair-Pl-Dem-Def wash-Pl-again-Ireal-Aux  
 'We will wash our hair again.'

b) Jithul-vi-yu-ny. [WBY]  
 wash-Pass-Aux-Past  
 'I took a bath / I am bathed / I am clean.'

Another function of the suffix *-v* is to indicate that the referent(s) of the object are identical with those of the subject. The suffixed clause has reflexive or reciprocal meaning.

- (31) Bosa-ch *ḍaḍamo:-v-k-yu.* [WBY]  
 cat-Sub repeat=scratch-Refl-3-Aux  
 'The cat is scratching itself.'
- (32) John-ch Josie-m *ḍaḍnyu:d-vi-ji-k-yu.*<sup>12</sup> [WBY]  
 John-Sub Josie-Com take=picture-Recip-Pl-3-Aux  
 'John and Josie are taking pictures of each other.'

When the subject refers to a single entity, the reading must be reflexive since the reciprocal interpretation needs at least two entities. However, when the subject refers to more than one entity, if semantically plausible, it is presumed that the interpretation is ambiguous between the reflexive and reciprocal.

- (33) Bosa-ch *ḍaḍamo:-vi-ji-k-yu.*  
 'The cats are scratching themselves / ? each other.'

Also, the verb + *-v* construction can be interpreted either as passive or as reflexive even when the particle *yevm* 'self' is added.

- (34) Johna-ch *yevm gaḍoh-vi-k-yu.* [Yamamoto 1989:12]  
 John-Sub self kick-Pass/Refl-3-Aux  
 'John got kicked (and he was all by himself but it was his own fault).' or 'John kicked himself.'

However, Yamamoto (1989) has pointed out that when the subject is [-human], this ambiguity does not occur and the only possible interpretation is the reflexive.

- (35) Olo-h-ch *yevm gaḍoh-vi-k-yu.* [Yamamoto 1989:12]  
 horse-Dem-Sub self kick-Refl-3-Aux  
 'The horse kicked itself.' but \*'The horse got kicked.'

As we shall see in examples (36) through (38), the *v*-construction with [-human] subjects is not necessarily restricted to the reflexive interpretation like (35). We must ask whether the (b) sentences in (36) through (38) indicate not just the state itself but also the process which has brought about the state, e.g., not just 'John's car is in the state of being broken' but also 'John's car got broken' for (36b). If not, it would be hypothesized that the more active (less stative) interpretation (the 'got' interpretation) is associated only with the [+human] subject, while the [-human] subject gets either the reflexive/reciprocal interpretation ([+animate]) or the stative interpretation ([-animate]). The exact nature of correlation between the semantic features of the subject, the semantic nature of the verb, and the possible interpretation of the suffix *-v* should be further examined.

The above-mentioned functions of the suffix *-v* influence the degree of Transitivity of the clause; Transitivity becomes lower than that of the corresponding clause without *-v*. Through the passive/stative process, the agent becomes covert and the only expressed participant is the patient. In addition to decreasing the number of participants, the focus of the clause changes from the action/event itself to the state resulting from the action or event. In the reflexive/reciprocal construction, the action transfer takes place internally; that is, the agent and the

patient refer to one and the same participant or a group of participants, and the action transfer is confined to these participants. As noted by Hopper and Thompson (1980), the non-distinctness ('non-individuated') nature of the patient from the agent is also one component of low Transitivity. As expected, this change in the degree of Transitivity coincides with the auxiliary alternation, that is, the auxiliary *-wi* changes into *-yu*.

- (36) a) Misi' qech-a-ch sal-a qaw-k-wi-ny. [D]  
 girl be=little-Def-Sub hand-Def break-3-Aux-Past  
 'My daughter broke her arm.'
- b) John gweviyam nyigway nyi-wi:-ha-ch qaw-v-o-k-yu-ny.<sup>13</sup>  
 John car be=old Rel-own-Dem-Sub break-Pass-Evid-3-Aux-Past  
 'John's old car was broken (and I saw it).' [WBY]
- (37) a) Nya-ch wa:-h '-sa'am-wi. [WBY]  
 I-Sub door-Dem 3/1-close-Aux  
 'I am closing the door.'
- b) Gwema:jo nya wi:-ji-ch sa'am-v-k-yu. [WBY]  
 cafe I own-Pl-Sub close-Pass-3-Aux  
 'Our cafe is closed.'
- (38) a) Nya-ch wayyi jiyal-wi-ny. [WBY]  
 I-Sub chair paint-Aux-Past  
 'I was painting the chair.'
- b) Gwe-v-ch gwegiviya:m-a-k jiyal-vi-k-yu. [WBY]  
 something-Dem-Sub car-Def-on paint-Pass-3-Aux  
 'Something is smeared on the car.'
- (39) a) Mi-h di:swi:-k-wi. [D]  
 foot-Dem shave-3-Aux  
 'He shaved his leg.'
- b) Nya nyahm i:-ch yek'dam  
 I husband-Sub early=in=the=morning  
 di:swi:-v miyu:-ji-k-yu. [WBY]  
 shave-Refl alway=be-distributive-3-Aux  
 'My husband shaves early in the morning.'
- (40) a) Phil-ch kwa'-v-m waksi-ma:ḍ-a jigaḍ-k-wi. [WBY]  
 Phil-Sub knife-Dem-Inst cow-meat-Def cut-3-Aux  
 'Phil cuts the beef with the knife.'
- b) Nya misi'-h-ch ba:b gijihyany-ḍi-k jigaḍ-v-k-yu-ny.  
 I daughter-Dem-Sub potatoes peel-Temp-SS cut-Refl-3-Aux-Past  
 'My daughter was peeling potatoes and cut herself.' [WBY]

- (41) a) Misi'-h-a ḍaḍ'nyu:d-k-wi. [D]  
 girl-Dem-Def take=picture-3-Aux  
 'She is taking pictures of the girl.'
- b) John-ch Josie-m ḍaḍnyu:d-vi-ji-k-yu. [WBY]  
 John-Sub Josie-Com take=picture-Recip-Pl-3-Aux  
 'John and Josie are taking pictures of each other.'

Interesting exceptions for this alternation are verb forms of kinship terms and clothing items. They do not change the auxiliary *-wi* to *-yu* when the suffix *-v* is attached.<sup>14</sup>

- (42) Ma-'a:w-v-ny-wi. [WBY]  
 3/2-grandchildren-Pass-2-Aux  
 'You have grandchildren.'
- (43) '-Bi:-v-wi. [WBY]  
 3/1-nephew/niece-Pass-Aux  
 'I have a nephew/niece.'
- (44) '-Yche'-v-wi. [WBY]  
 3/1-daughter-Pass-Aux  
 'I have a daughter.'
- (45) Nya-ch bud-a '-bu:d(-v)-wi. [WBY]  
 I-Sub hat-Def 3/1-hat(-Pass)-Aux  
 'I have a hat on.'
- (46) Nyigway '-nyigway(-v)-wi. [WBY]  
 shirt 3/1-shirt(-Pass)-Aux  
 'I have a shirt on.'

In fact, kinship terms and everyday clothing items, along with body parts terms (which do not have verb forms) behave similarly in several grammatical contexts in Hualapai. For example, noun forms of these terms usually use the same frame for possessive expression: [Possessor + Person Marker-Noun], while other terms use different frames (e.g., [Noun + Possessor + Person Marker-*nyihad*] for domesticated animals like 'cow', 'horse', 'cat', etc.).

- (47) [Nya qwaw]-va-ch bu:l-k-yu. [D]  
 my hair-Dem-Sub be=wet-Aux  
 'My hair is wet.'
- (48) [Joe buda]-ch ya:d-i-k-yu-. [WBY]  
 Joe hat-Sub fly=away-suddenly-3-Aux-Past  
 'Joe's hat flew away.'
- (49) [Ma m-ḍala]-ch [waksi ma m-nyi-haḍ]-a he:d-k-wi. [WBY]  
 you 2-father-Sub cow you 2-Rel-pet-Def rope-3-Aux  
 'Your father is roping your cow.'

It should be noted that the demonstrative suffix, which semantically corresponds to and syntactically co-occurs with the possessive pronoun (e.g., *-v* 'this very close one' : 'my', *-ny* 'this/that very one' : 'you', and *-h* 'that one over there' : 'his/her'), is often attached to these terms in order to be felt natural (Watahomigie, Bender and Yamamoto 1982:185). If this demonstrative suffix can be presumed to be the reflex of the obligatory personal affix for these terms, they may be embodied as 'inalienables' and have somewhat distinctive status in Hualapai. The peculiar nature of these terms might explain the exception of the auxiliary alternation here.

### 5. Speaker's Attitude toward the Nature of the Event

So far we have examined the correlation between the Transitivity alternation and various grammatical processes. In addition, some clauses can show the auxiliary alternation without undergoing any overt grammatical process. In this case, when a clause takes a *-yu* auxiliary, it is said to indicate what is the case, while when a clause takes *-wi*, it is said to imply an accompanying action along with another covert participant's involvement in the action.

(50) a) Misi:-ch walba:-k-yu-ny. [WBY]

girl-Sub believe-3-Aux-Past  
'The girl believed it to be true.'

b) Misi:-ch walba:-k-wi-ny. [WBY]

'The girl believed it to be true (and that's why she acted that way).'

(51) a) Nya-ch sme:'-yu. [WBY]

I-Sub miss-Aux  
'I miss him.'

b) Nya-ch sme:'-wi. [WBY]

'I miss him (and that's why I am doing it - eg. getting mad at everyone).'

(52) a) Cindy-ch wi'ham jikba:-k-yu. [Yamamoto 1989]

Cindy-Sub hill climb-3-Aux  
'Cindy is climbing the hill.'

b) Cindy-ch wi'ham jikba:-k-wi. [Yamamoto 1989]

'Cindy is climbing the hill and you can see it.'

It is difficult to translate this alternation precisely into English. Compared to the corresponding (a) sentences, (50b) and (51b) indicate not only the state of mind of the subject, but also some accompanying action by the subject (which possibly affects some other covert participants). In (52a), Cindy's climbing is reported just as the fact, while in (52b), it is indicated as the progressive action which the speaker and other participants (hearers) are observing. Because of the indication of the additional activity involving another participant, the (b) sentences can be said to have a higher degree of Transitivity than the corresponding (a) sentences, as marked by a *-wi* auxiliary.

Yamamoto (1989) has reported that some *-yu* verbs, which do not take *-wi* when the subject is singular, allow the auxiliary to alternate when the subject is plural. Examples are from Yamamoto (1989):

- (53) a) *Vo:-k-yu.* 'She is walking.'  
 b) \**Vo:-k-wi.*  
 c) *Vo:-j-k-yu.* 'They are walking.'  
 d) *Vo:-j-k-wi.*
- (54) a) *De:v-k-yu.* 'She is playing.'  
 b) \**De:v-k-wi.*  
 c) *Da:y-k-yu.* 'They are playing.'  
 d) *Da:y-k-wi.*
- (55) a) *Sma:-k-yu.* 'She is sleeping.'  
 b) \**Sma:-k-wi.*  
 c) *Sma:-j-k-yu.* 'They are sleeping.'  
 d) *Sma:-j-k-wi.*
- (56) a) *Skwi:-k-yu.* 'She is standing.'  
 b) \**Skwi:-k-wi.*  
 c) *Gige:v-k-yu.* 'They are standing.'  
 d) *Gige:v-k-wi.*

When the verb takes *-wi* along with the plural subject, some kind of interaction between subject participants is implied. For example:

- (57) a) Margaret-ch Jorigine-m *ɖanyu:d'u:jo ɖiya:v-k vo:-j-k-yu.*  
 Margaret-Sub Jorigine-Com school face-SS walk-Pl-3-Aux  
 'Margaret and Jorigine are walking to(ward) school (and this fact is transmitted by the speaker).' [Yamamoto 1989]
- b) Margaret-ch Jorigine-m *ɖanyu:d'u:jo ɖiya:v-k vo:-j-k-wi.*  
 'Margaret and Jorigine are walking to(ward) school (and they are walking closely together - e.g., holding hands).' [Yamamoto 1989]

One way to look at this phenomenon is to assume that the increased number of participants (even though the number of arguments has not been changed) may increase the Transitivity of the clause. However, this is not the case for the following cognitive verbs (Yamamoto 1989).

- (58) a) *Jigwad-k-yu.* 'She is laughing.'  
 b) \**Jigwad-k-wi.*  
 c) *Jigwad-j-k-yu.* 'They are laughing.'  
 d) \**Jigwad-j-k-wi.*

- (59) a) Wamiye-k-yu. 'She is mad.'  
 b) \*Wamiye-k-wi.  
 c) Wamiye-j-k-yu. 'They are mad.'  
 d) \*Wamiye-j-k-wi
- (60) a) Swal-k-yu. 'She loves him.'  
 b) \*Swal-k-wi.  
 c) Swal-j-k-yu. 'They love him.'  
 d) \*Swal-j-k-wi.

The above data show that the key to the auxiliary change here is the inferred (inter)action between participants rather than just the increased number of participants. No matter how many participants there are, cognition can be still regarded as 'personal'.<sup>15</sup> On the other hand, in clauses like (53) through (56), when there is more than one participant, the additional interaction between participants (besides the action denoted by the verb which is not enough by itself to make the clause coded as 'high' Transitive) can be suggested. This additional activity causes the degree of Transitivity to be increased and the clause is marked with the auxiliary *-wi*.

In sum, we may say that the choice of auxiliary verbs reflects what the speaker describes as a whole event, i.e., the speaker's attitude regarding the active or non-/less-active nature of the event. When the state or fact itself is referred to, the auxiliary *-yu* is used. When the additional action (and possible affectedness) is indicated, *-wi* is used. In other words, how the speaker sees and treats the event also contributes to the degree of Transitivity of the clause.

## 6. Concluding Remarks

The examination of data in the previous sections leads us to the conclusion that the auxiliary alternation between *-yu* and *-wi* in Hualapai basically corresponds to the perceived degree of Transitivity of the clause. Therefore, the auxiliary *-wi* may be called a 'high-Transitivity marker' and the auxiliary *-yu* a 'low-Transitivity marker'. As we observed in Section 5, the speaker's attitude regarding the active or non-/less-active nature of the event is also an important factor in determining Transitivity of the clause in Hualapai. Thus, the evaluation for the activity (*Kinesis*) parameter is not made based upon only the semantics of verbs but also the overall interpretation of utterances, which suggests that the degree of Transitivity is not determined objectively according to the surface form, rather it is evaluated subjectively by the speaker based on the context and the speaker's conceptualization of the event.

Among the Transitivity parameters, the existence of the second and affected participants and the activity indicated by the clause seem to be crucial components for deciding the degree of Transitivity in Hualapai. A further survey would be needed in order to determine to what extent each parameter contributes to the overall degree of Transitivity of the clause.

Investigations in this paper lead us to several further inquiries. More detailed observation about the precise nature of each grammatical process mentioned



here would reveal, e.g., semantic constraints on matrix verbs or arguments for the application of the process. It does not seem that all clauses undergo the auxiliary alternation. Some clauses always take a *-yu* auxiliary (e.g., those containing cognitive verbs as in examples (58) through (60)) and others a *-wi* auxiliary (e.g., those containing 'inalienable' verbs in Section 4). It can be hypothesized that clauses which are marginal members of the *-wi* (more 'high' Transitive) and *-yu* (more 'low' Transitive) categories allow auxiliary alternation more easily than those at the extreme ends of the Transitivity continuum. A certain degree of change in Transitivity might be enough for 'marginal' clauses to go across the boundary between 'high' and 'low' categories. The same degree of change, however, might not be enough for 'extreme' clauses. Also 'true marginal' clauses may fluctuate between 'high' and 'low' categories, that is, alternate the auxiliary, possibly without changing any meaning. If the degree of Transitivity of clauses and changed degree of Transitivity are somehow quantified, these correlations can be represented numerically.

All data used in this paper are individual sentences. Since the degree of Transitivity of a clause seems to be affected also by the context in which the clause is contained, it is necessary in further research to look at texts, and examine how the auxiliary selection is made in wider contexts.

## NOTES

<sup>1</sup> I would like to thank members of the Seminar on the Structure of Hualapai (University of Kansas, Fall 1990). Discussions in the class evoked some of the ideas in this paper. I would especially like to thank Dr. Akira Yamamoto for his comments, suggestions and constant encouragement. I would also like to thank Dr. Sandra A. Thompson and Dr. Marianne Mithun for their valuable comments.

<sup>2</sup> Hualapai is an SOV language. The subject and object may be overtly expressed or indicated only by the person prefix on the verb.

<sup>3</sup> Hualapai examples are written using their orthographic system: *ch*=[č<sup>h</sup>] but [č] as a subject marker; *ny*=[ñ]; *ɕ*=[t̪]; '=[ʔ]. Since I have not conducted fieldwork on this language myself, most of examples cited in this paper are taken from Watahomigie, Bender and Yamamoto (1982) (indicated as [WBY]) or Hualapai Dictionary ([D]). Other sources will be specified.

Abbreviations are:

##: object/subject person marking  
2: 2nd person

1: 1st person  
3: 3rd person

Appl: Applicative Suffix  
 Caus: Causative Prefix  
 Def: Definitizer  
 Evid: Evidential Marker  
 Irreal: Irrealis Suffix  
 Nom: Nominalizer  
 Past: Past Tense  
 Recip: Reciprocal Suffix  
 Rel: Relative Marker  
 Sub: Subject Marker

Aux: Auxiliary Verb  
 Com: Comitative Marker  
 Dem: Demonstrative  
 Inst: Instrumental Suffix  
 Loc: Locative Marker  
 Pass: Passive/Stative Suffix  
 Pl: Plural Marker  
 Refl: Reflexive Suffix  
 SS: Same Subject Marker  
 Temp: Temporal Suffix

If more than one English word correspond to a Hualapai word, they are joined by =.

4 Auxiliary verbs in Hualapai still retain some properties of lexical verbs. The matrix verb takes the same subject marker *-k* which indicates that the subject-reference is identical with that of the following (auxiliary) verb; and the auxiliary verb takes a person prefix. The sequence of the same subject marker and person prefix has been omitted totally (in the case of 1st person), changed phonologically (2nd person) or retained (3rd person), and is now reinterpreted as a person marking for auxiliary verbs: 1) 1st person: V-Aux, 2) 2nd person: V-*ng*(*<-k+m-*)-Aux, and 3) 3rd person: V-*k*(*-ø*)-Aux.

5 As for example (6), it is not clear whether 'take care of' expresses an emotional state or actual nursing.

6 But note that the  $\theta$ -criterion in Generative Grammar does not allow two thematic roles to be assigned to the same single argument.

7 Not all verbs may undergo the causative process. The examination of the range of verbs which have causative counterparts and their semantic or syntactic properties are subjects for further research.

8 Here I assume that the Applicative can be distinguished from the causative based on the thematic role (non-agent vs. agent) and grammatical function of the added argument (object vs. subject). Further research is needed to determine the semantic difference between them since sometimes the causative-like translation ('make someone/something do') is obtained as may be hinted at by the English translation of the Applicative construction (see examples (22b), (25b), (26b) and (27b)). According to the data available, it seems that verbs which take the Applicative suffix and those which take the causative prefix are in complementary distribution. If this is the case, these two affixes may be unified as having the function of adding another argument to the predicate, and it may be determined by, e.g., semantic properties of verbs, whether they take either the Applicative or causative. Whether or not this is indeed the case, what kind of verbs take the causative/Applicative affixes and what kind of verbs do not, and what determines the thematic role of the added argument and the semantic interpretation of the resultant clause are left to further investigation.

<sup>9</sup> The person prefix to transitive verbs show the person of the object as well as that of the subject as follows (Watahomigie, Bender and Yamamoto 1982:207, 356):

Object / Subject :	2nd/1st	3/1	1/2	3/2	1/3	2/3	3/3
	<i>ny-</i>	'- or $\emptyset$ -	'm- or m-	m-	<i>ny-</i>	m-	$\emptyset$ -

(Plurality of the object is indicated by *ba* before the prefix.)

<sup>10</sup> This phenomenon is not just a result of the Applicative process. Whenever the verb takes two objects (three-place predicate), the [+human] one is treated as the object in the person marking:

- (i) Bill-ch bes *nyi-tham-'a-k-wi.* [WBY]  
 Bill-Sub money 1/3-borrow-momentarily-3-Aux  
 'Bill borrowed money from me for a while.'
- (ii) Yiwa numa:-ha-ch bes *nyi-gava:-k-i-ny.* [WBY]  
 that friend-Dem-Sub money 1/3-ask-3-Aux-Past  
 'That friend (at whom I am pointing) asked for money for me.'
- (iii) Baqi handav qwaw-gi-nyimsaua-ch thabal *ba ny'-e:-k-wi-ny*  
 woman pretty hair-Nom-white-Sub peaches Pl 1/3-give-3-Aux-Past  
 'That pretty woman with white hair gave us peaches.' [WBY]

<sup>11</sup> It is interesting that verbs derived by the causative process may also undergo this process and 'reverse' their meaning to produce more of a stative indication than the underived form (even though less stative than the stem verb + -v).

- (iv) *lu:th-k* '(something large) to burst'  
           |  
*ḍa-luth-k* 'to burst (something large)'  
           |  
*ḍa-luth-v-k* '(something large) to be burst'  
 cf. *luth-v-k* '(something large) to be burst'

The semantic (and syntactic) relationships among these related forms require further investigation.

<sup>12</sup> The noun phrase with the Comitative suffix *-m* can be regarded as a part of the subject since number agreement in the verb here (i.e., *-ji*) shows the plurality of the subject.

<sup>13</sup> The verb *qawk* can also be used in the 'unaccusative' construction by itself without the *-v* suffix. Note that it takes *-yu* instead of *-wi* in this case.

- (v) Nyi-ya-ch qaw-k-yu. [WBY]  
 specific-Dem-Sub break-3-Aux  
 'This very one is broken.'

14 Some verb forms of kinship terms do not seem to take the -*v* suffix.

- (vi) John-ch Mary lowe:-k-wi. [WBY]  
 john-Sub Mary wife-3-Aux  
 'John is wifed with Mary.'

- (vii) Nya-ch John '-nyahmi:-wi. [WBY]  
 I-Sub John 3/1-husband-Aux  
 'I am married to John.'

There may be some distinction between the inherent relationship and the affinal relationship which affects the possibility of the *v*-construction.

15 However, as shown in examples (50) and (51), some cognitive verbs can appear with *-wi* (even though the subject is singlar) when an accompanying action is implied. If we assume that it is the transitional stage of extending the notion of Transitivity in Hualapai to include the speaker's implication of an accompanying action in parameters which affect the degree of Transitivity of the clause, these verbs which do not now take a *-wi* auxiliary may also appear with *-wi* in the future if the context potentially suggests an accompanying action.

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