

Passives and controllability in Kwakwala

Robert D. Levine
British Columbia Provincial Museum

0. Two Kwakwala focus suffixes

1. Passives without active counterparts

2. Controllability

3. Complement structure

4. Conclusions

0. In Boas' 1947 Kwakwala grammar we find the following glosses for two suffixes which I have elsewhere called focus morphemes:

'-so^e passive of verbs governing objective forms...

'-ɬ passive of verbs expressing sensations and mental actions; also sensations produced by outside actions'¹

Elsewhere he notes under the heading 'Passive': '-so^e designates the thing to which something is done' and repeats his characterization of the distribution of -ɬ.²

In a forthcoming paper I have made the following observations about -su[?] and -ɬ:

'-su[?] cannot be suffixed to roots belonging to a class of stems expressing mental functions or activities of the senses, such as duq^w- see, ɬoɬ- know and others; with such roots -ɬ is used, although the object of, e. g., throwing... and the object of sight or knowledge, are both marked by x series particles. Note, however, that when a suffix intervenes between the root and the focus suffix, -ɬ is not used; instead we find -su[?].'³

In neither of these formulations is a crucial fact about the distribution of focus suffixes made explicit, although it is obliquely indicated in the first of the passages quoted from Boas: few stems exist which both form a passive by adding -ɬ and appear, with no alteration, as the stem of a verb taking a direct object. Thus, *He is known by everyone* might be given as

- (1) ɬoɬəɬi sa bax^wəs
ɬoɬ-ɬ-i s bax^wəs
know-ɬ-deic obl people

But there is no form

- (2) *ɬoɬida bax^wəsəq

corresponding to the form translating *Everyone knows him*. One must say

- (3) ɬoɬəlida bax^wəsəq
Everyone knows him.
ɬoɬ-1-i-da bax^wəs-q
know-cont-deic-da people-obj

where -1 is added to the root.⁴ Strictly speaking, then, there is no active form based on the verb stem in (1) and, in fact, the passive formed with the verb stem in (3) contains -su[?], not -ɬ.

If we assume that passives and actives are syntactically related, there are three general approaches we might con-

sider to account for the ungrammaticality of sentences such as (2). In the first place, we might assume that there are contextual features in the lexical entry for $\dot{q}\text{ol}$ - which permit this stem to be inserted only into base structures containing $\text{NP}[s \Delta]$, yielding deep structures such as

(4) $S[\text{V}[\dot{q}\text{ol}] \text{NP}[\text{b}\text{ex}^w\text{es}] \text{NP}[\text{x} \text{3rd}] \text{NP}[s \Delta]]$

where the presence of the oblique phrase containing Δ will trigger passivization. A second alternative would be formulable as a principle of semantic interpretation which 'reads' outputs such as (2) and rejects them as in some way ill-formed; in this approach $\dot{q}\text{ol}$ - can be inserted freely. Finally, we might suppose that the passive transformation can optionally affect morphology, eliminating -1 and/or -x?id in the deep structures of (5) and (6) in the course of a derivation to yield (7):

(5) $\text{duq}^w\text{elux}^w\text{da b}\text{eg}^w\text{an}\text{ema xa g}\text{enan}\text{em}$

The man saw the child.

$\text{duq}^w\text{-1-ux}^w\text{-da b}\text{eg}^w\text{an}\text{em x g}\text{enan}\text{em}$

see-cont-deic-da man obj child

(6) $\text{dux}^w\text{?idux}^w\text{da b}\text{eg}^w\text{an}\text{emx xa g}\text{enan}\text{em}$

The man saw the child.

$\text{duq}^w\text{-x?id-ux}^w\text{-da b}\text{eg}^w\text{an}\text{em-x x g}\text{enan}\text{em}$

see-punct-deic-da man-deic obj child

(7) $\text{duG}^w\text{?ida g}\text{enan}\text{ema sa b}\text{eg}^w\text{an}\text{em}$

The child was seen by the man.

$\text{duq}^w\text{-t-i-da g}\text{enan}\text{em s b}\text{eg}\text{an}\text{em}$

see-t-deic-da child obl man

As far as this last proposal is concerned, Chomsky and others have provided a number of reasons for separating the distribution of derivational morphology from the transformational component of the grammar.⁵ Brame has argued for a considerably stronger formulation.⁶ I will take the position in this paper that, whatever the status of transformations in linguistic theory generally, derivational morphology is lexical in origin; some specifically Kwakwala evidence in this direction is offered below. The suffixes -x?id and -1 are sufficiently idiosyncratic in their meaning and distribution that they may properly be regarded as derivational, and therefore the last of the hypotheses just mentioned is ruled out; the others are discussed below.

In this paper I will examine a set of stems containing -t and attempt to show that the actual distinction between -t and -su? which is inferable from these stems is rather different from that put forward by Boas in the passages cited above. Furthermore, these stems cast considerable doubt on the notion of obligatory

passivization, conceived of either as a condition on rule application or as a surface filter. The conclusions offered in the following discussion are consonant with those I have argued for elsewhere on somewhat different grounds,⁷ and have immediate consequences for the syntactic interpretation of complementation in Kwakwala.

1. Boas provides the following examples to illustrate the use of -ʔ in identifying 'sensations produced by some outer action': 'ä'mdEʔ, to be affected by a furuncle; lEgwEʔ, to be affected by fire (i. e., on body.)'⁸ Boas' gloss reflects his apparent belief that the notion of sensation, or subjective experience, was the unitary meaning to which -ʔ referred, but it seems to me that he was mistaken in this respect.

Consider the following example:

(8) Gəld^Zəʔux^wda ʔod^Zuʔix

The wall is overpainted.

Gəls-ʔ-ux^w-da ʔod^Zu-i-iʔ

paint-ʔ-deic-da wall-nom-deic

The gloss *overpainted* is a convenient abbreviation for a situation in which part of the wall one was painting became 'globbed up' with paint, or paint got on a certain portion of the wall which should have been bare. Obviously

no sensations are involved here. Furthermore, although a human agent must have done the painting, no oblique phrase involving a human being can be associated with Gəld^Zəʔ:

(9) *Gəld^Zəʔux^wda ʔod^Zuʔi sa bəg^wanəm

An oblique phrase can be associated with (8), but it must refer to the paint itself:

(10) Gəld^Zəʔux^wda ʔod^Zuʔix sa Gəlyayu

The wall is overpainted with paint.

Gəls-ʔ-ux^w-da ʔod^Zu-i-iʔ s Gəls-ayu

paint-ʔ-deic-da wall-nom-deic obl paint-means

There is no possible reformulation of (10) as an active sentence. A causative suffix -amas can be added to Gəld^Zəʔ to give Gəld^Zəʔamas *make (something) be overpainted*, but this latter stem, which can be predicated of a person, cannot be predicated of Gəlyayu *paint*.

Returning to Boas' examples, we notice that they have the same properties as those just cited for Gəld^Zəʔ:

(11) ləG^wəʔida bəg^wanəma sa xiqəla

The man was burned by (sparks from) the fire.

ləq^w-ʔ-i-da bəg^wanəm s xiq-1-a

fire-ʔ-deic-da man obl fire-cont-lex

but

(12) *ləG^wəfida bəg^wanəma sa čədaq

where čədaq *woman* would be interpreted as an agent.

We can, however, make čədaq an agent by using -amas:

(13) ləG^wəfamasida čədaqa xa bəg^wanəm

The woman caused the man to be burned.

ləq^w-amas-i-da čədaq x bəg^wanəm

fire-1-caus-deic-da woman obj man

As in the corresponding case involving Gəlyayu, xiqəla can appear as a subject neither in active sentences of the form (13) nor in any other corresponding to (11).

One might suppose that xiqəla in (11) represented some instrumental element, but this is ruled out by the fact that there are no sentences of the form *ləq^w-ayu-deic-da xiqəla, where -ayu is Boas' 'instrumental passive'.

Similarly, we have

(14) ?amdəfida bəg^wanəma (sa ?amta)

That man is sore-ridden (with sores).

?amt-1-i-da bəg^wanəm (s. ?amt-a)

sore-1-deic-da man (obl sore-nom)

and again it is impossible to make ?amt a subject here.

Other examples of this sort are

(15) čəmd^zəfida bəg^wanəma (sa čəmsaʔi)

That man is boil-ridden (with boils).

čəms-1-i-da bəg^wanəm (s čəms-aʔi)

boil-1-deic-da man (obl boil-nom)

(16) xəd^zəfida k^wənik^w (sa xəd^zəxa)

The bread is moldy (with mold).

xəd^z-1-i-da k^wənik^w (s xəd^z-xa)

mold-1-deic-da bread (obl mold-nom)

(17) ʔid^zəfida bəg^wanəma (sa ʔisəm)

The man was injured (by a rock).

ʔis-1-i-da bəg^wanəm (s ʔis-əm)

rock-1-deic-da man (obl rock-nom)

(17) refers specifically to a kind of injury which would result if someone stepped on a rock which did not necessarily break the skin, but did leave a bruise that became infected. But an identical sort of injury, in which the person stepped on an exposed tree root rather than a rock, could not be reported as in (17); there is no stem of the form ʔupək *tree root* + -1 in the Kwakwala lexicon.

(18) məngeʔi (sa mənka)

It's rusty (with rust).

mənk-1-i (s mənka-a)

rust-1-deic (obl rust-nom)

(19) xiGəfida bəg^wanəm

The man was burned.

xiq-ɬ-i-da bəg^vanəm

fire-ɬ-deic-da man

Because of the extremely idiosyncratic distribution of -ɬ with respect to the set of stems, it is not easy to obtain many examples of stems containing -ɬ of the sort illustrated here by elicitation. Those already given represent my entire corpus at present. It is apparent, however, that such stems do not refer to sensations, and it should be stressed again that in none of these instances is an active formulation possible, except by adding -amas to a stem containing -ɬ as noted.

Passive-like sentences with no active counterparts exist in other languages. One of the most celebrated examples of this phenomenon is so-called Subject-Object Inversion (SOI) in Navajo. On the assumption that entities which are the referents of Navajo NPs are ranked semantically according to an animacy hierarchy, Hale posits an SOI rule:

'Navajo possesses a rule whose effect is roughly that of the passive in English... in addition to inverting the linear order of the subject and the object noun phrases, the rule also involves a change in the object marking prefix in the verb word--/yi-/ is replaced by /bi-/... thus, the effect of the rule

is to convert a sentence of the form

S(subject) O(bject) yi-V(erb)

into a new sentence of the form

O(bject) S(subject) bi-V(erb)

We are evidently justified in relating the two forms, since they are cognitively synonymous and, moreover, exhibit the same structural relationships between their verbs and nouns. Let us assume, for the sake of this discussion, that we are correct in relating the two by means of a transformational rule which inverts the subject and object noun phrases.⁹

Hale advocates interpretation of the animacy hierarchy as a kind of principle of semantic well-formedness, applying to the output of SOI and marking as semantically anomalous outputs which violate this hierarchy.¹⁰ Regardless of how one interprets the animacy hierarchy, it is important to note that the evidence Hale cites does not in itself motivate the existence of a movement rule such as SOI. For the corresponding rule in English, i. e. passivization, Hoard has observed that 'the evidence that corresponding active and passive sentences are in large measure equivalent is entirely semantic. The semantic co-occurrence restrictions that permit *John admires sincerity* and *Sincerity is admired by John* but do not permit **Sincerity admires John* and **John is admired by sincerity*, could not possibly constitute

an argument for a syntactic relationship between actives and passives.¹¹ The difference in acceptability between the sentences which Hale glosses respectively as *The bee stung the boy* (*) and *The boy was stung by the bee* in fact indicates that the selectional restrictions holding amongst S, O and V in the Navajo sentences he cites are not parallel in the two sorts of construction related by SOI. Hence, to the extent that such parallelism is relied on to motivate *independently* a syntactic relation between active and passive sentences or comparable construction types, there is no independent justification for a movement rule (i. e., a syntactic representation) of the relationship between the yi- and bi- sentences in Hale's example, even leaving aside Hoard's observation.¹²

In the case of Kwakwala, no animacy hierarchy at all can be invoked; sentences such as the following are entirely typical:

(20) xədənsida qadusi xa bəgʷanəm

The whirlpool pulled down the man.

xət-ns-i-da qadus-i x bəgʷanəm

suck-under water-deic-da whirlpool-nom obj man

Such a hierarchy would in any case be unable to account for (8) and (16). Moreover, regardless of any

semantic considerations pertaining to the derivation of these Kwakwala sentences, there are important syntactic objections to deriving them from deep structures resembling active forms. In terms of the first hypothesis considered above in connection with (2), for example, we are required to posit a deep structure for (17) of the form

(21) S [V [¹tis] NP [¹tisəm] NP [x bəgʷanəm] NP [s Δ]]

The problem is that the root ¹tis- never appears in 'bare' form in Kwakwala, either in contexts which require one to interpret it as an NP or as a syntactic verb taking a subject. Furthermore, ¹tis- must be restricted from appearing in any other contexts than

(22) ___ NP [¹tisəm] x NP s Δ

___ Δ x NP

The subject NP in the first context in (22) must, so far as I am able to tell, be restricted to ¹tisəm, or perhaps a minute class of stems identifying kinds of rocks, in which case we would take ¹tisəm to be some kind of class name or feature. Similarly, an identical lexical feature must be entered for xəd^z- in (16), except that the subject is restricted to a

different lexical item, xəd^Zəxa. I cannot easily envision a defense for any derivation which requires such subcategorization features to be entered in the lexicon for the items listed there. One might therefore suppose that, in place of *tisəm* in (22), we allow any stem to appear, and filter out the ungrammatical sequences by means of interpretive rules operating on surface structures. It does not seem to me that this would significantly increase the plausibility of (22); rather, it would immediately eliminate the argument from parallel selectional restrictions for a passive transformation in Kwakwala. That is, since it is semantic considerations which are to determine the appropriateness of co-occurrence between various elements in the surface form of sentences, and since these considerations are to apply to surface structures, one can eliminate a good deal of now unnecessary derivational machinery simply by directly generating the sentences in question, with no movement rules involved at all.

Even if one were prepared to accept (22) as a partial lexical entry for *tis-*, it seems quite impossible for any analysis incorporating the lexicalist hypothesis to provide a transformational

source for *-t* in sentences like the following one (which, it should be noted, contains both 'passive' suffixes *-t* and *-su?*):

(23) ləG^wə^tamacəwida bəg^wanəm (sa čədaq)

The man was caused to be burned (by the woman).

ləq^w-*t*-amas-su?-i-da bəg^wanəm (s čədaq)

fire-*t*-caus-su?-deic-da man (obl woman)

In order to derive *-t* in this sentence transformationally, it is necessary that both *-amas causative* and *-su?* be derived transformationally as well, as in, e. g., the suggested deep structure for (23) given in Fig. 1.

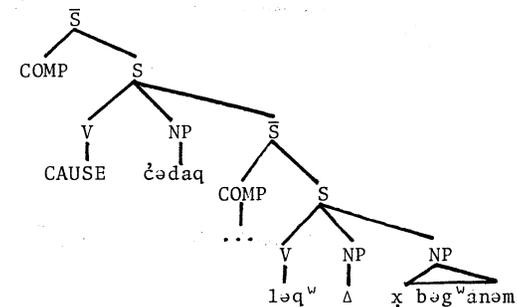


Fig. 1

The first problem is that *-amas* cannot be a verb, because it is not a root at all, but a suffix, with the typically idiosyncratic distribution displayed by most

non-inflectional morphemes in Kwakwala. Hence we seem to require an abstract causative verb, written as CAUSE in Fig. 1, which obligatorily lexicalizes as a suffix -amas. This sort of analysis has, of course, been shown to be a completely untenable approach to syntactic description in numerous critiques during the past decade, and is precisely what the lexicalist hypothesis was formulated as an alternative to.¹³ Another difficulty is that -su[?] itself must, on the same sort of grounds, be considered derivational in nature, since it occurs in forms such as

(24) naɣ[?]idsu[?]nuk^wxəntən

It must be that I had something to drink.

naq-x[?]id-su[?]-nuk^w-xənt-ən

drink-punct-su[?]-have-evid-I

(25) məx[?]idsəw[?]ixsdən

I want to get hit.

məx[?]id-su[?]-ixsd-ən

strike-su[?]-want-I

Both -nuk^w and -ixsd must be regarded as non-inflectional; indeed -nuk^w has one of the most idiosyncratic distributions of any suffix in Kwakwala. In particular, its behavior is extremely complex vis-a-vis -ad, another suf-

fix with a partially overlapping use and a comparably unpredictable range of appearance. Boas observes that

'-ad is generally used as a stem suffix while -nuk^u is a word suffix. In a number of cases -ad attached to the stem, or -nuk^u attached to a nominal form of the same stem are used as synonyms... -ad does not seem to be used after l, m, n; -nuk^u being used instead even in the case of stems i.e. g.i'l^unuk^u belonging to ancient times, ancestors.'¹⁴ [my emphasis].

Boas' example here, gəl^wnuk^w, is based on the root gəl- *first*, which gives some idea of the misleading character of the gloss *have* for -nuk^w. Another example Boas provides in the same discussion is ʔaxnug^wad *owner*, in which both -nuk^w and -ad appear, attached to the root ʔax- *do*. When this root is followed by the continuous aspect suffix -l, however, addition of -nuk^w yields the stem 'e'axElanuk^u one of them is working'¹⁵, where -nuk^w now corresponds to *one of them*. In a word like

(26) duɣ^w?idsu[?]nuk^wən

I went to look at something.

duq^w-x[?]id-su[?]-nuk^w-ən

see-punct-su[?]-nuk^w-I

-nuk^w seems to have some sort of aspectual use, which may be better captured by a gloss like *I've got something*

looked at. Similar facts, though perhaps not as extreme, characterize the distribution of -ixsd. It seems difficult to avoid the conclusion, therefore, that -nuk^w and -ixsd are derivational, i. e. that their distribution is to be stated in terms of lexical, rather than syntactic, relations. Assuming, as usual, that lexical items are inserted into base structures in the extended standard theoretical model of syntactic derivation, the conclusion just stated now obliges -su? to be derivational as well, since whatever lexical rules combine -nuk^w and -ixsd with stems to form new stems must have access to information about the grammatical composition of the forms to which these suffixes are to be added, in order to determine whether the output will be a legitimate lexical item or not. Furthermore, in Kwakwala all derivation morphology is located to the left of the inflectional morphology, so that the presence of -i and -su? embedded, in different locations, amongst the derivational suffixes, seems quite inexplicable on the assumption that they are transformationally derived.

Finally, there is good reason to believe that Fig. 1 is not a possible source for (23) involving the marking of subordination in Kwakwala. In every clear instance of

genuine $S_0[\dots S_1[\dots] \dots]$ structure, the lower S is associated with *at least* one complementizer and, in addition, the highest V in S_1 contains an overt subordinating element, usually -i or -a. No trace of either of the complementizer (represented in Fig. 1 as ...) or the subordinate element are present in (23). Nor is it possible to claim that the subordinate marker in the verb is added by a late 'housekeeping' rule, at a stage in the derivation after -amas has been added to the stem and the $S[\dots S[\dots] \dots]$ structure of (23) has been eliminated. Such an argument would be based on the claim that since the embedding in Fig. 1 did not exist when the putative housekeeping rule marking such structures was to apply, it simply did not apply and so no subordinate morpheme appears. But in fact there are subordinate sentences which do show up marked as such in surface structure, even though they are not embedded: qalka?as (*but*) s/he's tired (for further discussion, see the reference in ftn. 20). Thus, while all embedded forms bear subordinate marking, not all subordinate forms need be embedded. Hence we have every reason to expect that if (23) did derive from Fig. 1, it would bear the appropriate marker(s), and we would expect some sign of the complementizer(s).

Any attempt to derive -amas transformationally will have to posit a number of otherwise quite unnecessary rules to overcome the problems just noted. This fact, taken together with the others discussed above, makes a derivation for (23) based on Fig. 1 thoroughly implausible, and strongly motivates a purely lexical source for stems containing -su? and -ɬ.

2. If the semantic distinction sensation vs. action is not adequate to account for the difference between -ɬ and -su?, it may be possible to approach this problem by noting that in all cases of which we have been speaking, stems of the form Stem-ɬ denote a condition brought about by something which *affects* the subject, but which is not really *done to* the subject; rather, we might say that something just happens. I am suggesting here that while -ɬ and -su? in some sense identify the locus or target of some process, -ɬ marks just those instances which are not under the control or direction of some instigator or force because, by their very nature, the process involved is not controllable. The target of the process is thus affected by a combination of circumstances, rather than a deliberate action, and the circumstances are such that they are not 'do-able' by deliberate action

on the part of some agent or instigator against the participant who happens to be the target. I shall continue to use the term 'controllability' to refer to this distinction, though perhaps 'circumstantiality' would be more to the point. In these terms, -ɬ refers to the target of uncontrollable events.

This notion of 'controllability' bears a certain kinship to the grammatical category 'control' identified by Thompson for the Salishan languages:

'These forms... express either accidental involuntary acts, states and processes, or those for which an agent makes a special effort...

'What these rather different notions have in common is a limitation on the degree of control that the agent exerts over the action, state or process.'¹⁶

The contribution of various suffixes, as Thompson makes clear, adds different degrees of control to roots which themselves involve either control or (much more typically) its lack. I am going to suggest that an analogous state of affairs exists for Kwakwala suffixes vis-a-vis the stems they appear with, but that the relevant notion, controllability, characterizes not a participant in a situation, but the situation

itself as expressed by lexical stems.

An imperfect English analogy may be helpful. Thompson notes that, in English, *get* constructions may convey the sense of limited control, as in *She got him started*. It seems to me that *get* also maintains this sense in at least some of its appearances in passive constructions; thus in *John got hit by a car* the passive appears to indicate something of the contingent nature of the event, as opposed to *John was hit by a car*, which is neutral reporting. The distinction emerged more clearly in connection with adverbial elements: *John was intentionally dropped from the team by his coach* but *?John got intentionally dropped from the team by his coach*. To my ear there is something wrong with the latter sentence, as compared with the former and also as compared with *John got accidentally dropped from the team by his coach*, which sounds fine. The difference between such *get* passives and stems in Kwakwala with *-t* is that *get* seems to add this contingent sense to otherwise controllable verbs in English, whereas in Kwakwala use of an uncontrollable stem is what motivates the appearance of *-t*.

The sense of *-t* just outlined is reinforced by certain aspects of the behavior of *-su?*, which signals the victim

or goal of a controllable event. There is in Kwakwala a suffix sequence *-gaλ-1* for which Boas in his later grammar does not give a unified gloss, but notes that it is 'used with stems denoting sense impressions, and with some others to mean for the first time, suddenly.'¹⁷ However, when suffixed to stems referring to actions, *-gaλ-1* reveals that its meaning is much closer to the range indicated by the glosses 'inadvertantly, accidentally, unanticipatedly.'

(27) məxalələnλa xa bəgʷanəm

I accidentally hit that man.

məx-gaλ-1-ənλ x bəgʷanəm

hit-gaλ-cont-I obj man

(28) ɖəyaxalələnλa xa ʔisəm

I kicked that stone without meaning to.

ɖəyag-gaλ-1-ənλ x ʔisəm

kick-gaλ-cont-I obj rock

(29) nəpələlida bəgʷanəma sa ʔisəm

The man accidentally threw the rock

nəp-gaλ-1-i-da bəgʷanəm s ʔisəm

throw-gaλ-cont-deic-da man obl rock

(30) duxʷalələnλa xa bəgʷanəm

I saw that man.

duxʷ-gaλ-1-ənλ x bəgʷanəm

see-gaλ-cont-I obj man

(27) would be appropriate in a situation in which the speaker was yawning, and stretched out his or her arms at just the moment when the victim was walking past, striking him unintentionally. For (28) and (29) similar contexts are involved. (30) contains the stem $\text{duq}^w\text{-ga}\lambda\text{-l}$, which Boas glosses as 'to see suddenly (to discover)'¹⁸ and 'to discover by seeing'¹⁹. What is striking about such stems is that they cannot appear with $-\text{su}^?$ focus suffixation, even though they all take x -series objects:

(31) * $\text{m}\acute{\text{a}}\text{x}\text{a}\lambda\text{e}\lambda\text{a}\text{s}\acute{\text{e}}\text{w}\text{i}\text{d}\text{a}\ \text{b}\acute{\text{e}}\text{g}^w\text{a}\text{n}\acute{\text{e}}\text{m}$

(32) * $\acute{\text{q}}\acute{\text{e}}\text{y}\text{a}\text{x}\text{a}\lambda\text{e}\lambda\text{a}\text{s}\acute{\text{e}}\text{w}\text{i}\text{d}\text{a}\ \acute{\text{t}}\text{i}\text{s}\acute{\text{e}}\text{m}$

(33) * $\text{n}\acute{\text{e}}\text{p}\text{a}\lambda\text{e}\lambda\text{a}\text{s}\acute{\text{e}}\text{w}\text{i}\text{d}\text{a}\ \text{g}\text{u}\text{k}^w$

(34) * $\text{d}\text{u}\text{x}^w\text{a}\lambda\text{e}\lambda\text{a}\text{s}\acute{\text{e}}\text{w}\text{i}\text{d}\text{a}\ \text{b}\acute{\text{e}}\text{g}^w\text{a}\text{n}\acute{\text{e}}\text{m}$

This distribution is just what we would expect if $-\text{su}^?$ does in fact identify the target of events or processes which are in some respect 'do-able.' Conversely, we would predict that $-\acute{\text{t}}$ ought to be able to co-occur with stems containing the sequence $-\text{ga}\lambda\text{-l}$.

This prediction is not borne out in certain respects, although it is partially correct. Thus, com-

pare (34) with

(35) $\text{d}\text{u}\text{x}^w\text{a}\lambda\text{e}\lambda\text{i}\text{d}\text{a}\ \text{b}\acute{\text{e}}\text{g}^w\text{a}\text{n}\acute{\text{e}}\text{m}$

The man was discovered.

$\text{d}\text{u}\text{q}^w\text{-ga}\lambda\text{-}\acute{\text{t}}\text{-i}\text{-da}\ \text{b}\acute{\text{e}}\text{g}^w\text{a}\text{n}\acute{\text{e}}\text{m}$

see-ga}\lambda\text{-}\acute{\text{t}}\text{-deic-da man}

Here $-\acute{\text{t}}$ directly follows $-\text{ga}\lambda$. The same stem with $-\acute{\text{t}}$ following $-\text{ga}\lambda\text{-l}$ is forbidden, however. Furthermore, even when only $-\text{ga}\lambda$ follows the root, $-\acute{\text{t}}$ cannot appear in stems parallel to that of the verb in (35) with $\text{m}\acute{\text{e}}\text{x}$ -, $\acute{\text{q}}\acute{\text{e}}\text{y}\text{a}\text{g}$ - or $\text{n}\acute{\text{e}}\text{p}$ - in place of $\text{d}\text{u}\text{q}^w$ -.

The first of these contrary facts is consistent with an apparent incompatibility between $-\acute{\text{t}}$ and either of the aspect suffixes $-l$ and $-\text{x}^?\text{id}$. On the basis of other data, in fact, there is reason to believe that these aspect suffixes have an extra-aspectual element of meaning. For example, $-\text{k}^w$, another of the suffixes Boas glosses as passive, seems to have an essentially stative meaning: $\text{q}\acute{\text{e}}\text{x}$ *to twist something*, $\text{q}\acute{\text{e}}\text{n}\text{k}^w$ *bent or twisted*. But when $-\text{k}^w$ is followed by $-l$, the sequence, in Boas' words, seems to indicate a successful action of some sort, e. g. $\acute{\text{q}}\acute{\text{e}}\text{y}\text{a}\text{g}\text{e}\text{k}^w\text{e}\lambda\text{a}$ *to kill by kicking*; compare with $\acute{\text{q}}\acute{\text{e}}\text{y}\text{a}\text{g}\text{e}\text{k}^w$, which would be applied to something which has been kicked. $\acute{\text{q}}\acute{\text{e}}\text{y}\text{a}\text{g}\text{e}\text{k}^w\text{e}\lambda\text{a}$, as one would expect, takes a direct object, so that the use of the continuous aspect

has the effect of transitivizing the stative stem, in much the way that -amas does as discussed above. -l thus seems to 'add' controllability to certain stems, an impression also made by the ability of duq^w-l, as opposed to duq^w-, to take a direct object and -su[?] focus suffixation. Thus it is not really surprising that -ɬ and -ga^λ-l cannot co-occur. On the other hand, it is true that the grammatical effect of combining -ga^λ with -l, while creating a stem which can take a direct object as in (27)-(30), still does not allow for a -su[?] focus suffix to follow, as shown by (31)-(34).

It is also true, however, that not all stems which resist -su[?] can appear with -ɬ. With some roots, the addition of -ga^λ permits -ɬ suffixation, as in (35), but in other cases -ɬ is forbidden, as already noted. It seems to me likely that such fact reflect the semantic effects of particular combinations of root and suffix(es), and that it is not always possible to predict what this effect will be for any given combination. The truth of the matter is that, while we have excellent inventories of roots and suffixes for Kwakwala, we have very little understanding of the semantic and syntactic properties of stems, and urgently need to develop a data base for acquiring such

understanding.

3. In a Salish Conference paper given a few years ago,²⁰ I noted that Boas' 'causal' and 'temporal' subordination markers were also used in forming complement constructions of the following type:

(36) ǰo^λələn^λa^χs qəlka[?]i

I know he's tired.

ǰo^λ-l-ən^λ ɣs qəl^k-a-i

know-cont-I sub tired-sub-deic

It is necessary to provide a syntactic account of such sentences which also takes cognizance of sentences like

(37) ǰo^λəlida bax^wəs ga^χən^λa^χgən qəl^kik

Everyone knows that I'm tired.

ǰo^λ-l-i-da bax^wəs ga^χən^λ ɣgən qəl^k-i-k

know-cont-deic-da people me sub tired-sub-I

and

(38) ǰo^λəlida bax^wəs ga^χən^λa^χs qəlka[?]ən ʔomp

Everyone knows that my father's tired.

ǰo^λ-l-i-da bax^wəs ga^χən^λ ɣs qəl^k-a-ən ʔomp

know-cont-deic-da people me sub tired-sub-my father

On the basis of (36) and (37), we might suppose that when $\dot{q}\lambda$ -1 has both a direct object and a complement clause, the former arises by a copying or raising rule. This was the solution offered, for example, by Frantz in connection with a parallel class of constructions in Blackfoot.²¹ If one assumes, unlike Frantz, that the transformationalist hypothesis in question is some version of the extended standard theory, it must follow from the lexical origin of Stem- \dot{t} stems that the clause $\dot{q}\lambda$ - \dot{t} - $\text{en}\lambda$ *I am known* is base-generated, and hence in

(39) $\dot{q}\lambda\text{en}\lambda\text{asa } \text{bax}^w\text{esaxg}\text{en } \text{q}\text{elkik}$

They know I'm tired.

$\dot{q}\lambda$ - \dot{t} - $\text{en}\lambda$ s $\text{bax}^w\text{es } \text{xg}\text{en } \text{q}\text{elk-i-k}$

know- \dot{t} -I obl people sub tired-sub-I

the subject of the matrix must be base generated as well. Since our analysis requires that it be rules of semantic interpretation which relate

(40) $\dot{q}\lambda\text{elux}^w\text{da } \text{b}\text{eg}^w\text{an}\text{em } \text{gax}\text{en}$

The man knows me.

$\dot{q}\lambda$ -1- ux^w -da $\text{b}\text{eg}^w\text{an}\text{em } \text{gax}\text{en}$

know-cont-deic-da man me

and

(41) $\dot{q}\lambda\text{en}\lambda\text{asa } \text{b}\text{eg}^w\text{an}\text{em}$

I'm known by the man.

$\dot{q}\lambda$ - \dot{t} - $\text{en}\lambda$ s $\text{b}\text{eg}^w\text{an}\text{em}$

know- \dot{t} -I obl man

--where there is no question that (40) is base-generated--there is clearly no need to suppose that sentences like (37) and (39) are related any differently. Specifically, we may suppose that the base rules of Kwakwala generate strings of the form V (NP) (x NP) (s NP) (\bar{S}). Stem- \dot{t} stems will be specified in the lexicon as intransitive, so that (41) and (39) will be derivable by not taking the (x NP) option in this string, and by taking (S) in (39) but not in (41). Similarly, we can get both (36) and (37) by taking various optional possibilities in this same string.

If, however, we insist that structures like V NP x NP \bar{S} are only produced as the result of a copying or raising rule of some sort, we will need the following schemata:

(42) V NP (s NP) (\bar{S}) [for (39) and (41)];

V NP (x NP) [for (40)];

V NP (\bar{S}) [for (36), (37) and (38)]

as well as the raising rule itself. The latter will not be particularly easy to formulate in any case, because of sentences like

(43) $\dot{q}o\lambda\dot{e}l\dot{e}n\lambda\dot{x}\dot{a}x\dot{a}$ $b\dot{e}g^w\dot{a}n\dot{e}m\dot{x}s$ $\dot{c}\dot{e}x\dot{q}\dot{a}'is$ $G\dot{e}n\dot{e}m$

I know that man's wife is sick.

$\dot{q}o\lambda-1-\dot{e}n\lambda$ \dot{x} $b\dot{e}g^w\dot{a}n\dot{e}m$ $\dot{x}s$ $\dot{c}\dot{e}x\dot{q}-a-i-s$ $G\dot{e}n\dot{e}m$

know-cont-I-obj man sub sick-sub-deic-his wife

or (38). If $b\dot{e}g^w\dot{a}n\dot{e}m$ were derived in (43) by copying, for example, we would have to have a deep structure something like

(44) \bar{S} [COMP S [V [$\dot{q}o\lambda-1$] NP [$\dot{e}n\lambda$] \bar{S} [COMP [$\dot{x}s$] S [$\dot{c}\dot{e}x\dot{q}$] NP [NP [$G\dot{e}n\dot{e}m$] NP [s $b\dot{e}g^w\dot{a}n\dot{e}m$]]]]]]]

(It is not difficult to demonstrate that the NP which is the subject of the complement sentence in (44) must have the structure NP [NP NP].) Now we must have not only a copying rule, but a deletion rule as well, applying to

(45) \bar{S} [COMP S [V [$\dot{q}o\lambda-1$] NP [$\dot{e}n\lambda$] NP [$b\dot{e}g^w\dot{a}n\dot{e}m$] \bar{S} [COMP [$\dot{x}s$] S [V [$\dot{c}\dot{e}x\dot{q}$] NP [NP [$G\dot{e}n\dot{e}m$] NP [sa $b\dot{e}g^w\dot{a}n\dot{e}m$]]]]]]]

This deletion rule will have to contain an Equi-condition of some sort, as well as a rule to add \dot{x} be-

fore $b\dot{e}g^w\dot{a}n\dot{e}m$ in the matrix. We must order this Equi rule so that deixis is copied into the lower oblique marker before Equi, and then add still another rule to move the s marker into the V as a possessive suffix.²²

Thus, a copying source for matrix objects in sentences like (38) and (43) entails at least two undesirable consequences. In the first place, a clearly non-disjunctive base schema must be forced into the shape (42), which we must formulate as a disjunction

(46) V NP (s NP) ($\left\{ \begin{array}{l} \dot{x} \text{ NP} \\ \bar{S} \end{array} \right\}$)

instead of being statable as

(47) V NP (s NP) (\dot{x} NP) (\bar{S})

In the second place, a good deal of otherwise apparently unnecessary derivational machinery is required to implement the copy/raising analysis. Furthermore, the fact that sentences like (39) must be base-generated indicates that there is semantic motivation for matrix sentences containing a participant corresponding to the 'logical target' of the event mentioned in the verb stem *in the base*. Taken together, it seems to me the evidence adduced here leads us to prefer strongly the direct generation of matrix objects over the copying

or raising analysis.

4. In conclusion, it appears that transitivity in Kwakwala is a bit more complex than one might have supposed. In particular, different combinations of non-inflectional suffixes seem to produce different values of controllability for the various stems thus created; these values manifest themselves as different possibilities of co-occurrence with focus suffixes, such as *-ɬ* and *-suʔ*, and with direct object. There may be other relevant conditions as well. One of the more important goals of Kwakwala research, I believe, is the examination of these questions over a considerable number of roots and suffixes. We might in this respect anticipate results fully comparable with those reported in Gross' research on French: 'if we compare the syntactic properties of any two lexical items... it is observed that no two have the identical syntactic properties.'²³ In the Wakashan context, this means that different stems based on the same root will probably turn out to have significantly different co-occurrence possibilities. If so, I suspect that controllability as a grammatical category will play an important role in determining these possibilities.

FOOTNOTES

1. F. Boas, *Kwakwala Grammar with a glossary of the suffixes*, ed. by H. B. Yampolsky and Z. S. Harris (Philadelphia: American Philosophical Society Transactions, 1947), p. 241.
2. Boas, p. 270.
3. R. Levine, 'On the lexical origin of the Kwakwala passive', *International Journal of American Linguistics* 46.4 (in press), 1980.
4. I will assume here that this suffix *-l* is in fact the continuous aspect suffix.
5. See N. Chomsky, 'Remarks on nominalization' in *Readings in English Transformational Grammar*, ed. by R. Jacobs and P. Rosenbaum (Waltham: Blaisdell, 1970), and R. Jackendoff, 'Introduction to the \bar{X} convention' (mimeographed, UILC). T. Lightner strongly objects to the lexicalist hypothesis in 'The role of derivational morphology in generative grammar', citing, among other critiques of the hypothesis, work by Frederick Newmeyer, and indicates a strong preference for transformational solutions to morphological problems (*Language* 51.3: 617-638), 1975. But Newmeyer himself has, in recent discussion, indicated his own preference for a lexical-interpretive approach to derivational morphology ('Review article on J. Levi's *The Syntax and Semantics of Complex Nominals*', *Language* 55.2: 396-407, 1979.) See also P. Downing, 'On the creation

and use of English compound nouns', *Language* 53.4: 810-842, 1977, for further evidence that such forms do not derive from sentential sources.

6. M. Brame, 'The base hypothesis and the spelling prohibition', *Linguistic Analysis* 4: 1-30, 1978.
7. Levine, n. 3.
8. Boas, p. 270.
9. K. Hale, 'Linguistic autonomy and the linguistics of Carl Voegelin', *Anthropological Linguistics* 18.3: 120-128, pp. 120-121.
10. An excellent discussion of the semantic ramifications of the animacy hierarchy in Navajo is given in G. Witherspoon, 'Language in culture and culture in language', *International Journal of American Linguistics* 46.1: 1-14, 1980.
11. J. Hoard, 'On the semantic representation of oblique complements', *Language* 55.2: 319-332, p. 323.
12. Note that it was primarily a matter of selectional restrictions--those involving NPs and Vs and those involving Vs and the (be en) element which would otherwise have to be included in Aux--which formed the basis for Chomsky's arguments in *Syntactic Structures* that passive and active sentences are transformationally related.
13. See, for example, J. Fodor, 'Three reasons for not deriving *kill* from *cause to die*', *Linguistic Inquiry* 1: 429-38, 1970; J. Kimball, 'Remind remains', *Linguistic Inquiry* 1: 511-523; J. Hust, 'Dissuaded', *Linguistic Analysis* 1: 173-189, 1975; M. Brame, *Conjectures and*

Refutations in Syntax and Semantics (Amsterdam: North Holland, 1976) and many other works. While it may be true, as some have pointed out in response to the huge volume of effective refutational literature directed against generative semantics, that bad hypotheses do not necessarily mean the underlying theory is incorrect, the fact is that as far as I know, not one 'abstract' treatment of lexical items in this tradition has been able to avoid effective refutation.

14. Boas, p. 316.
15. Boas, p. 348.
16. L. C. Thompson, 'The control system: a major category in the grammar of Salishan languages', *The Victoria Conference on Northwestern Languages* (Victoria: British Columbia Provincial Museum, 1976), p. 157.
17. Boas, p. 350.
18. Boas, p. 350.
19. F. Boas, 'Kwakiutl', *Handbook of American Indian Languages* (BAE-B 40) (Washington, D. C.: Smithsonian Institution, 1911), p. 490.
20. This paper, titled 'Apposition and Relativization in Kwakwaka', was given in 1978 at the Thirteenth Salish Conference. It underwent many revision and changes and will appear as Levine, n. 1; much of the original argumentation has been completely changed, and some of what I wrote then I now disagree with.
21. D. Frantz, 'Copying from complements in Blackfoot', in *Linguistic Studies of Native Canada*, ed. by E.-D. Cook and J. Kaye (Vancouver: University of British Col-

umbia Press, 1978). Frantz' model appears to be so powerful that it is difficult for me to imagine data which would constitute counterevidence to his hypothesis, given this model. However, in an extended standard theory framework, the material he alludes to in his Footnote 10 definitely represents counterevidence, for those speakers who can use such constructions (similar to my examples (38) and (43)).

22. I have argued elsewhere that in order to maintain a transformationalist interpretation of relatives and passives, we must suppose that deixis is copied into Verbs and particles from the NPs with which they are associated, but that there is good evidence that such a copying rule cannot in fact be maintained. This discussion is provided in R. Levine, 'Syntactic consequences of Kwakwala deixis', ms. written for the Conference on the Syntax of Native American Languages, University of Calgary, March 1981.

23. M. Gross, 'On the failure of generative grammar', *Language* 55.4: 859-885, 1979, p. 860.

CONTROL and DEVELOPMENT in Bella Coola—II

Philip W. Davis
Rice University

Ross Saunders
Simon Fraser University

There is in Bella Coola a set of derivational suffixes that occur attached to the element within the sentence that conveys information of some event.¹ Rather than further specifying the event itself, in the manner, say, of aspectual marking, these suffixes encode information concerning the participants. The members of this affixal set are displayed in Table 1. Visual inspection immediately yields the hypothesis that

| | | |
|-----|------|-------|
| -m | -nm | -tnm |
| -am | -anm | -atnm |

Table 1

they themselves are morphologically complex, and the discussion will proceed along those lines, i.e. of determining the degree to which this initial guess is valid. In doing this, we shall include some elaboration on the syntax and semantics of the recurrent partials by way of justifying that segmentation.

Let us begin by considering the following forms:

- (1) (a) nuyam̄-tnm-c
sing- -I
(b) *nuyam̄-atnm-c
- (2) (a) Xs-tnm-c
fat- -I
(b) *Xs-atnm-c
- (3) (a) *nix-tnm-c
(b) nix-atnm-c
saw- -I
- (4) (a) k̄t-tnm-c
fall- -I
(b) k̄t-atnm-c

Each of the correct, unasterisked forms has an English gloss that appears