

# Polysemy and Idiomatization : A Study of Japanese Transitive-Intransitive Pairs

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# Polysemy and Idiomatization: A Study of Japanese Transitive-Intransitive Pairs

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## 1. Introduction

This study investigates Japanese transitive-intransitive pairs to determine whether their alternating behaviors will be explained by the syntax-lexical semantics interface as observed in English transitive-intransitive pairs. The primary goal is to elucidate the semantic properties that trigger the syntactic behaviors. I will demonstrate that semantic properties such as change of state and lack of agentivity are key factors in the alternatability of a verb. I further point out that specification of a means or an instrument is another crucial semantic property which distinguishes verbs which alternate in transitivity from those which do not. Furthermore, the present study focuses on the fact that transitive-intransitive pairs do not obtain unconditionally, but that they seem to be constrained by the context in which they occur. I argue that the verb's polysemy is responsible for such inconsistent behaviors of a single verb, illustrating that verbs with figurative meanings have a strong tendency to fail to undergo the transitive-intransitive alternation.

The structure of the paper is organized as follows. Section 2 presents two issues regarding transitive-intransitive verb pairs. Section 3 analyzes verbal semantic properties which contribute to the alternation of verbs. In this section I also mention several sets of verbs which show a contradictory

behavior in terms of transitivity alternation. Section 4 examines two semantic features that appear to be responsible for the unalternatability of change-of-state verbs. I argue that specification of a means or an instrument plays a key role in rendering change-of-state verbs unable to alternate in transitivity. Section 5 discusses the Japanese verb pair *kir-/kire-* ‘cut/get cut’ in light of the inconsistency of alternating behavior. I suggest that verbs characterized by such an inconsistent alternating behavior unexceptionally have multiple layers of meaning. Section 6 discusses the notion of polysemy, proposing the possibility that the inconstant behaviors of transitive-intransitive verbs are due in part to semantic drift commonly observed in the semantic change of words.

## 2. Two Issues of Transitive-Intransitive Alternation

There are two issues concerning the transitive-intransitive alternation that need to be addressed. One is that there are transitive and intransitive verbs which do not alternate in transitivity under any circumstances. As mentioned above, the English verb *hit* simply lacks an intransitive use.

- (1) a. Tom hit the boy.  
 b. \*The boy hit.

The Japanese equivalent *tatak-* ‘hit’ also fails to occur in intransitive constructions.

- (2) a. Taroo-wa Akira-o tataita. (< tatak- + ta)  
 Taro-Nom<sup>1)</sup> Akira-Acc hit  
 ‘Taro hit Akira.’  
 b. \*Akira-ga tatakatta.<sup>2)</sup> (tatar- + ta)

Akira-Nom got hit

‘Akira got hit.’

The other complex aspect of the transitive-intransitive alternation is that verbs which alternate in transitivity are not always consistent with their behaviors (Van Voorst 1995, 513, Lemmens 1998, 37). For instance, while the English verb *break* normally alternates in transitivity, it fails to undergo the alternation when the verb takes *contract* as the Theme argument.<sup>3)</sup>

(3) a. He broke the contract.

b. \*The contract broke. (Levin and Rappaport Hovav 1995, 85)

A similar phenomenon is observed among Japanese transitive-intransitive pairs. The intransitive verb *tat-* ‘to stand’ is paired with *tate-* ‘set up,’ alternating in transitivity.

(4) a. Boo-ga tat-te iru.

pole-Nom stand-Asp

‘The pole stands.’

b. Kodomo-ga boo-o tate-te iru.

child-Nom pole-Acc put up-Asp

‘The child is putting up the pole.’

However, if the intransitive verb *tat-* occurs with an animate subject, then the transitive counterpart becomes ungrammatical in the construction with the same template:

(5) a. Kodomo-ga rooka-ni tat-te iru.

child-Nom hallway-in stand-Asp

‘A child stands in the hallway.’

- b. \*Taroo-wa kodomo-o rooka-ni tate-te iru.  
 Taro-Top child-Acc hallway-in stand-Asp  
 ‘Taro stands a child in the hallway.’

Given the two issues, discussions that follow should be centered on (1) why some verbs alternate in transitivity while others simply do not and (2) what properties of a Theme argument preclude typical transitive-intransitive verbs like *break* from alternating in transitivity.

### 3. Conditions for Transitive-Intransitive Alternation

A majority of verbs that participate in the transitive-intransitive alternation in Japanese entail change of state as one of their crucial semantic properties (Miyajima 1972, Nishio 1978, 1982, Hayatsu 1987, 1995, Jacobsen 1992, Mitsui 1992, Mitsunobu 1992). Hayatsu (1995) illustrates this point emphatically by comparing two semantically similar verbs *kawakas-* and *hos-*. According to Hayatsu, both verbs are transitive and generally understood to mean ‘to dry.’ While the English equivalent *dry* transitivizes, only *kawakas-* does so in Japanese.

- (6) a. Tom dried his clothes in the sun.  
 b. His clothes dried in the sun.
- (7) a. Taroo-wa huku-o kawakasita. (< kawakas- + ta)  
 Taro-Top clothes-Acc dried  
 ‘Taro dried his clothes.’  
 b. Huku-ga kawaita. (< kawak- + ta)  
 clothes-Nom dried  
 ‘The clothes dried.’
- (8) a. Taroo-wa huku-o hosita.

Taro-Top clothes-Acc hung to dry

‘Taro hung his clothes out to dry.’

b. \*Huku-ga hosatta. (< hosar- + ta)

clothes-Nom hung out to dry

‘The clothes hung out to dry.’

Hayatsu points out that *hos-* lacks its intransitive counterpart since it does not inherently entail the resultant state of dryness, but rather describes or “focuses on” the act of hanging out something (e.g., laundry or seaweed) to be dried. On the other hand, *kawakas-* entails not only the act associated with *hos-* but the resultant state of things being dry (1995, 179-180). The difference in meaning becomes more apparent when the two verbs are used in a coordinate construction ‘A and B’, in which the act ‘B’ always follows the act ‘A’ chronologically. Since the resultant state is the result of an act, one may expect that *kawakas-* and *hos-* should be arranged in the order ‘*hos-* and *kawakas-*’ but not vice versa. This predication proves to be correct, as illustrated below:

(9) a. Taroo-wa huku-o hosi-te kawakasita.

Taro-Top clothes-Acc hung-and let dry

‘Taro hung his clothes and let them dry.’

b. \*Taroo-wa huku-o kawakasi-te hos-ita.

Taro-Top clothes-Acc let dry-and hung out

‘Taro let his clothes dry and hung them out.’

Thus, it will be more appropriate for *hos-* to be translated into ‘to hang out (to dry).’ In short, the differing syntactic behaviors demonstrated by *kawakas-* and *hos-* in (7) and (8) seem to point to the fact that change of state plays a significant role in determining the alternatability of verbs in Japanese.

It is important to note here that Japanese verbs of change of state do not always undergo the transitive-intransitive alternation. Mitsunobu (1992, 76) elaborates on this point, providing a list of transitive verbs which, while they entail change of state, lack intransitive counterparts.

- (10) hur- ‘shake’, tutum- ‘wrap’, huse- ‘lay down’, mak- ‘wind’, migak- ‘polish’, susug- ‘rinse’, musub- ‘tie’, tog- ‘sharpen’, sibor- ‘squeeze’, nur- ‘paint’, hos- ‘dry’, kizam- ‘mince’, ara- ‘wash’, mog- ‘pluck’,<sup>4)</sup> kar- ‘mow’, tukuro- ‘mend’, hakob- ‘carry’, hik- ‘pull’, nager- ‘throw’, kazar- ‘decorate’, am- ‘knit’, sik- ‘lay’, kosirae- ‘make’, har- ‘paste’

While the verbs listed above still raise the issue of how to define change of state,<sup>5)</sup> Mitsunobu correctly observes that verbs like *kizam-* and *tog-*, which are undoubtedly considered change-of-state verbs, fail to alternate with intransitive counterparts. Towards the end of her 1995 article, Hayatsu adds several other transitive verbs that entail change of state but yet do not alternate in transitivity. As illustrated below, they primarily include verbs of cutting.

- (11) a. Taroo-wa kyuuri-o kizanda. (< kizam- + ta)  
 Taro-Top cucumber-Acc minced  
 ‘Taro minced cucumbers.’  
 b. \*Kyuuri-ga kizamatta. (kizamar- + ta)  
 Cucumber-Nom got minced  
 ‘Cucumbers got minced.’
- (12) a. Taroo-wa kusa-o katta (< kar- + ta)  
 Taro-Top grass-Acc cut  
 ‘Taro cut the grass (with a sickle).’

- b. \*Kusa-ga kareta (< kare- +ta)  
 grass-Nom got cut  
 ‘The grass got cut (with a sickle).’
- (13) a. Taroo-wa kama-de kusa-o naida. (< nag + ta)  
 Taro-Top sickle-with grass-Acc cut  
 ‘Taro cut the grass horizontally (with a sickle).’
- b. \*Kusa-ga nagatta. (< nagar- + ta)  
 grass-Nom got cut  
 ‘The grass got cut horizontally (with a sickle).’
- (14) a. Taroo-wa katagami-ni sotto nuno-o tatta.  
 Taro-Top pattern-along cloth-Acc cut  
 ‘Taro cut the cloth along the pattern (with a pair of scissors).’
- b. \*Katagami-ni sotto nuno-ga tatatta. (< tatar- + ta)  
 pattern-along cloth-Nom got cut  
 ‘The cloth got cut along the pattern (with a pair of scissors).’
- (15) a. Taroo-wa hootyoo-o togu  
 Taro-Top knife-Acc sharpen  
 ‘Taro sharpens a knife.’
- b. \*Hootyoo-ga togaru  
 knife-Nom sharpen  
 ‘A knife sharpens.’

Thus, the next question that needs to be addressed is whether there are other semantic properties that differentiate non-alternating verbs as in (10) from a large number of alternating verbs in Japanese.

#### 4. Semantic Factors Preventing Alternating Behaviors of Verbs

##### 4.1. Specification of Means and Instrument

Hayatsu characterizes the verbs in (11)-(15) in the preceding section as



special verbs with limited use, suggesting that the lack of the intransitive counterparts is due to the verbs' detailed description of the process of actions (1995, 192-3). For instance, *kizam-* in (11) emphasizes the repetition of the action (i.e., cutting an object into pieces) more than the resulting state of an entity after being minced. In a similar vein, *tog-* in (15) cannot be used intransitively because it is more concerned with the object and the situation where the knife is sharpened. In this light, Hayatsu maintains that *kir-* alternates with the intransitive counterpart *kire-* because it describes the act of cutting in general (for more detailed discussion of *kir-/kire-*, see Section 5 below).

Fundamentally, I concur with Hayatsu's analysis of Japanese non-alternating verbs of cutting. My position, however, is crucially different from Hayatsu's in that the semantic property shared by those non-alternating verbs could be minimally characterized as the entailment of the use of an instrument. Verbs like *oros-* 'grate,' *hik-* 'ground' and *kezur-* 'sharpen' lexicalize the use of an instrument but lack intransitive counterparts.

- (16) a. Taroo-wa daikon-o (orosigane-de) orosita.  
 Taro-Top radish-Acc (grater-with) grated  
 'Taro grated the radish (with the grater).'
- b. \*Daikon-ga (orosigane-de) orita.  
 radish-Nom (grater-with) got grated  
 'The radish got grated well (with a grater).'
- (17) a. Taroo-wa koohii mame-o hiita. (< hik- + ta)  
 Taro-Top coffee bean-Acc ground  
 'Taro ground the coffee beans.'
- b. \*Koohii mame-ga hiketa.

coffee bean-Nom got ground

‘Coffee beans got ground.’

- (18) a. Taroo-wa enpitu-o kezutta. (< kezur- + ta)

Taro-Top pencil-Acc sharpened

‘Taro sharpened a pencil.’

- b. \*Enpitu-ga kezur-eta.

pencil-Nom got sharpened

‘The pencil got sharpened.’

The specificity of an instrument or a means associated with the verbs in (16)-(18) will be made more explicit when compared with alternating change-of-state verbs like *war-* ‘break’ and *or-* ‘snap,’ none of which presuppose the use of an instrument or a means in order for an event to take place. My argument will be corroborated by the fact that the events denoted by such verbs can occur in a variety of ways, as illustrated below:

- (19) a. Taroo-wa kabin-o yuka-ni otosi te watte simatta.

Taro-Top vase-Acc floor-onto dropped and broke

‘Taro dropped the vase and broke it.’

- b. Taroo-wa koron de ude-no hone-o otte simatta.

Taro-Top fell and arm-Gen bone-Acc broke

‘Taro fell down and broke his arm.’

In short, change of state is a key semantic property that has to do with a verb’s alternatability in Japanese. It is important to note that an additional concept ‘specificity of a means’ should be taken into consideration in accounting for certain change-of-state verbs that fail to alternate in transitivity.

#### 4.2. *Subject and Animacy*

It has been shown that lexical specification of the use of an instrument precludes a causative transitive verb from de-transitivizing in Japanese. Given this observation, one may question how we can tell whether a given verb is lexically specified in terms of the use of an instrument. One characteristic of English change of state verbs is that they can occur with inanimate subjects. For example, the verb *break* can take instrument or natural force as its subject.

- (20) a. The earthquake broke the window.  
b. The stone broke the window.  
c. The ball's hitting broke the ball.

On the other hand, verbs entailing a lexically specified instrument as part of their meanings restrict choices of syntactic subjects: they are almost limited to animate or quasi-animate agents (cf. Langendoen 1970, 72-3, Talmy 1976, 1985, Levin and Rappaport Hovav 1995). As a result, the verb *cut* cannot obtain with non-animate subjects.

- (21) a. \*The earthquake cut the cord.  
b. \*The ax cut the rope.  
c. \*The ax's falling cut the curtain.

It has been noted in the literature, however, that a number of languages, including Japanese, have a strong tendency to prevent non-volitional agents such as natural forces and instruments from occurring as transitive subjects (Delancey 1984, 203, Croft 1990, 59; cf. Talmy 1976, 45, Langacker 1991, 332, Yoshikawa 1995). For instance, the transitive *war-* 'break' does not occur with an inanimate subject as illustrated below.

- (22) a. #Zisin-ga mado-o watta.  
 earthquake-Nom window-Acc broke  
 ‘The earthquake broke the window.’
- b. \*Ono-ga mado-o watta.  
 ax-Nom window-Acc broke  
 ‘The ax broke the window.’
- c. \*Booru-ga atatta-koto-ga mado-o watta.  
 ball-Nom hit-Ger-Nom window-Acc broke  
 ‘The ball’s hitting broke the ball.’

Rather, Japanese is most likely to describe events brought about by inanimate causes as intransitive events, placing affected themes in subject positions. Thus, de-subjectivized causing events are represented in the form of an adverbial phrase as in (23a) or a adverbial clause as in (23b-c).

- (23) a. Zisin-no seide mado-ga wareta.  
 earthquake-Gen due to window-Nom broke  
 ‘Due to the earthquake the window broke.’
- b. Ono-ga atat-te mado-ga wareta.  
 ax-Nom hit-and window-Nom broke  
 ‘The ax hit the window and the window broke.’
- c. Booru-ga korogat-te kabin-ni atari kabin-ga wareta.  
 ball-Nom roll-and vase-Obl hit vase-Nom broke  
 ‘The rolling ball hit the vase and the vase broke.’

Other Japanese equivalents to English *break*-type verbs follow the same syntactic pattern.

- (24) a. The nail tore my shirt.  
 b. Syatu-ga kugi-ni hikkakat-te saketa.

shirt-Nom nail-on catch-and tore

‘The shirt caught on the nail and tore.’

(25) a. Too much weight fractured my bones.

b. Zyuuryo-ga kakari sugi-te hone-ga oreta.

weight-Nom on too much-and bones-Nom fractured

‘Too much weight was on me and my bones fractured.’

Given the unacceptability or, at best, much less acceptability of inanimate causing events as syntactic subjects in Japanese, the view that the degree of specification of an instrument can be measured by the range of causing events that verbs permit, as observed with English transitive-intransitive pairs, does not hold for Japanese verbs. Rather, I propose that it is our lexical knowledge of verbs that determines the degree of specification of a causer or a causing event. In the following section I discuss the Japanese transitive-intransitive pair *kir-/kire-* ‘cut/get cut’ to corroborate my argument for the lexicalist view.

## 5. A Problematic Case: *kir-/kire-* ‘cut/get cut’

The Japanese contact-effect verb *kir-* ‘cut,’ unlike the corresponding English verb *cut*, is morphologically related to the intransitive equivalent *kire-*, displaying a typical pattern of the transitive-intransitive alternation.

(26) a. Akira cut the thread.

b. \*The thread cut.

(27) a. Taroo-ga ito-o kitta (< kir- + ta).

Taro-Nom thread-Acc cut

‘Taro cut the thread.’

b. Ito-ga kireta.

thread-Nom got cut

‘The thread got cut.’

It is interesting to note, however, that in some cases *kir-* fails to alternate with *kire-*, as illustrated below.

(28) a. Taroo-wa keeki-o kitta.

Taro-Top cake-Acc cut

‘Taro cut the cake.’

b. \*Keeki-ga kireta.

cake-Nom got cut

‘The cake got cut.’

(29) a. Niwasi-ga ki-no eda-o kitta

gardener-Nom tree-Gen branch-Acc cut

‘The gardener cut the branches of the tree.’

b. \*Ki-no eda-ga kire-ta.

tree-Gen branch-Nom got cut

‘The branches of the tree got cut.’ (Washio 1997, 75)

It seems that the Theme arguments (i.e., *cake* and *branch of the tree*) are the only constituents that are responsible for the aberrant behaviors displayed in (28) and (29). The question to be addressed is what semantic element(s) of a Theme may play a role in triggering such conflicting behaviors of the pair *kir-/kire-*.

I argue that specification of a means or an instrument still provides an explanation for the problem. More specifically, *kir-* in (28) and (29) shows no alternation since it presupposes the use of an instrument. Its non-instrumental nature is made more explicit by the fact that the verb is not compatible with the adjunct *te-de* ‘by hand.’

- (30) a. #Taroo-wa keeki-o te-de kitta  
 Taro-Top cake-Acc hand-by cut  
 ‘Taro cut the cake by hand.’
- b. #Niwasi-ga ki-no eda-o te-de kitta  
 gardener-Nom tree-Gen branch-Acc hand-by cut  
 ‘The gardener cut the branches of the tree by hand.’

By contrast, when *kir-* alternates with *kire-*, no instrument is necessarily specified for the verb. Thus, the verb can occur both with instrumental and non-instrumental adjuncts, as shown below.

- (31) a. Taroo-wa ito-o te-de kitta  
 Taro-Top thread-Acc hand-by cut  
 ‘Taro snapped the thread by hand.’
- b. Taroo-wa ito-o hasami-de kitta  
 Taro-Top thread-Acc scissors-with cut  
 ‘Taro cut the thread with a pair of scissors.’

In short, whether the Japanese contact-effect verb *kir-* lexically specifies the use of an instrument depends on a Theme with which it occurs (cf. Washio 1997, 73-5). In view of the discussions presented above, I propose that the verb *kir-* be semantically differentiated: that is, (1) to cut something by using any possible means and (2) to cut something by using an instrument. The verb in the latter sense fails to undergo the transitive-intransitive alternation due to the specification of an external causer (i.e., instrument).

## 6. Polysemy

In the preceding section we have observed that the differing alternating

behaviors demonstrated by the Japanese contact-and-effect verb *kir-* rest on whether or not it specifies the use of an instrument lexically. In fact, it has been noticed in the literature that there are hardly any transitive-intransitive verbs in Japanese which always show the alternating behavior (Nishio 1978, Kageyama 1996, Ono 2000). Even *war-/ware-* ‘break’, which is considered a typical transitive-intransitive pair, does not obtain when the transitive is used more or less in a figurative sense, not describing destruction of physical objects.

- (32) a. Taroo-wa uisukii-o mizu-de watta.  
 Taro-Top whisky-Acc water-with mixed  
 ‘Taro mixed whisky with water.’  
 b. \*Uisukii-ga mizu-de wareta.  
 whisky-Nom water-with mix  
 (‘Whisky mixed with water.’) (Kageyama 1996, 191)
- (33) a. Minna-de kanzyoo-o watta  
 everyone-among bill-Acc split  
 ‘Among everybody, (we) split the bill.’  
 b. \*Minna-de kanzyoo-ga wareta  
 everyone-among bill-Nom split  
 ‘The bill split among everyone.’
- (34) a. Yokozuna-wa dohyoo-o watta  
 grand champion-Top sumo-ring-Acc stepped over  
 ‘The *sumo* grand champion stepped over the ring.’  
 b. \*Dohyoo-ga wareta  
 sumo-ring-Nom got stepped over  
 ‘The ring got stepped over.’

Nishio (1978, 175) suggests that a verb’s inconsistent behavior regarding



the transitive-intransitive alternation is attributed in general to polysemy of the verb. The meanings of *war-* in (33a) and (34a) above are among many other meanings that are associated with *war-*. It is this figurative meaning, as opposed to the basic meaning of physical destruction, which prevents the alternation of *war-* and *yabur-*. Other physical change-of-state alternating verbs like *yabur-/yabure-* ‘tear, break’ show the same phenomenon.

- (35) a. Taroo-wa yakusoku-o yabutta  
 Taro-Top promise-Acc broke  
 ‘Taro broke his promise.’  
 b. \*Yakusoku-ga yabureta  
 promise-Nom broke  
 ‘His promise broke.’

Given this view, what remains to be explained is why a verb with a figurative sense is less likely to alternate in transitivity. I propose that the most probable solution to this issue will be sought in the concept of semantic drift. Miyagawa (1989) originally proposed this concept to explain idiomatization of a verbal phrase consisting of a nominal and a verb. Idiomatization, by definition, refers to a process in which a combination of a nominal and a verb takes on a non-literal meaning due to the linguistic phenomenon called semantic drift (Miyagawa 1989, 123). For instance, the subject-verb structure consisting of Japanese nominal *ude* ‘arm’ and the verb *nar-* ‘ring’ gives rise to a non-literal meaning as illustrated below:

- (36) ude + nar-      ude ga      naru  
 arm ring      arm Nom      ring  
 ‘be itching for (lit. one’s arm rings)’      (Miyagawa 1989, 124)

The key assumption behind idiomatization is that the meaning of an idiomatic verb phrase triggered by semantic drift is unpredictable from its original meaning. In the current discussion I would use semantic drift to mean any type of semantic shift away from the prototypical sense of a word. Under this assumption, the notion of semantic drift might explain the ungrammaticality of (32b) above: *war-* in *uisukii-o war-* is used figuratively, that is drifting away from its original and fundamental meaning of physical destruction.

## 7. Conclusion

In this paper, I presented a lexical semantic analysis of transitive-intransitive pairs in Japanese, addressing at the outset two issues regarding the particular pairs. First, I illustrated that not all verbs alternate in transitivity. Given this fact, the principal goal of the first part of the paper was to explain what semantic elements of verbs differentiate alternating verbs from non-alternating ones in Japanese. My study showed that change of state is the key semantic property which accounts for why such verbs as *hos-* ‘hang (to dry)’ and *tatak-* ‘hit’, which lexically entails no change of state brought about on a Theme argument, fail to alternate in transitivity. Furthermore, I demonstrated that specification of a means or an instrument whereby an event is carried out seems to be more crucial in describing certain transitive change-of-state verbs which, under no circumstances, alternate with intransitive equivalents. Since an instrument is almost always associated with agentivity due to the inseparable connection existing between the two, agentivity may be another key concept that needs to be further investigated.

The second issue has to do with the fact that the alternating behavior

does not always obtain for transitive-intransitive pairs. Rather, whether or not a transitive-intransitive pair successfully alternates seems to depend on the context - or more specifically - the type of a Theme argument that the verb takes. Based on this view, I demonstrated that the transitive-intransitive pair *kir-/kire-* fails to obtain when it takes a Theme argument which requires that the agent use a cutting tool to achieve the act of cutting. Furthermore, I introduced the notions of polysemy and semantic drift to account for non-alternating behaviors of the transitive-intransitive pair *war-/ware-*. One problem with the concept of semantic drift is that it is not always clear how we should determine the basic meaning of a verb. That is, it seems almost impossible to determine which meaning of the pair *kir-/kire-* - the act of cutting something by hand or with an instrument - is the basic one. Nevertheless, in view of the examples of non-alternating contexts examined above, I suggest that the effect of semantic drift on the alternatability of the transitive-intransitive verb deserves further investigation.

#### Notes

- 1 ) The following abbreviations are used in the present study: Acc=accusative particle, Asp= *te-iru* aspect marker, Gen=genitive, Ger=gerund, Nom=nominative particle, Obl=oblique, Top=topic particle.
- 2 ) Since there is no intransitive counterpart to *tatak-*, I have coined a hypothetical form, upon which native speakers would agree as the most probable form. In what follows, whenever I need to coin a hypothetical form, I follow this principle.
- 3 ) Brousseau and Ritter (1991:60) note that the same phenomenon is observed in French.
  - (i) a. Jean a brisesa l'accord  
'John broke the argument'
  - b. \*L'accord s'est brise(e)  
'The agreement broke'
- 4 ) Jacobsen (1992) and Hayatsu (1995) consider *mog-* to make an transitive-

intransitive pair, paring it with the transitive *moge-*.

5 ) For example, the following example shows that *migak-* does not necessarily entail change of state.

- (i) Kutu-o migaita kedo, yogore-wa otinakatta  
shoe-Acc polished but stain-Top did not come off  
'(I) polished the shoes, but the stain did not come off.'

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