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# ACTIVE/AGENTIVE CASE MARKING AND ITS MOTIVATIONS

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A kind of case marking—termed variously active, active-neutral, active-inactive, active-static, stative-active, agentive, agent-patient, split S, and split intransitive—is shown to be less arbitrary than is sometimes assumed. Its semantic bases can be missed if sought only in immediate one-to-one correspondences between meaning and form. Case systems of this kind are often the products of successive diachronic developments, each individually motivated. Several factors can obscure the motivations, including not only crosslinguistic differences in detail, but also shifts of defining features over time, grammaticization, and lexicalization. To explain why these case systems have the shapes they do, we must appreciate both the diversity of features that can underlie them and the dynamic processes that mold them.\*

**1. INTRODUCTION.** It has been known for some time that languages can differ substantially in their marking of case. For centuries, descriptions have been available of languages whose core (direct) case categories differ fundamentally from the subjects and direct objects of more familiar European languages. Montoya's 1640 grammar of Classical Guaraní, for example, and Chaumonot's grammar of Huron (Wilkie 1831, Lagarde 1980) are both over three hundred years old. Yet a diversity of opinion persists concerning the precise nature of case systems like those of Guaraní and Huron and the motivations behind them.

The basic structure of a system of this kind can be seen in the examples below from modern Colloquial Guaraní, described in Gregores & Suárez 1967. Core case is distinguished in pronominal prefixes on verbs. As can be seen in 1, the single arguments of intransitive verbs do not all appear in the same case.

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(1) Guaraní first person singular pronouns:

*a-xá.* 'I go.'    *šé-rasĩ.* 'I am sick.'  
*a-puʔã.* 'I got up.'                                   *še-ropehĩ.* 'I am sleepy.'

The pronominal prefix *a-* 'I' in the verbs on the left has the same form as that usually used for semantic agents of transitives, as in 2.

(2) Guaraní 1sg. transitive agents:

*a-gwerú aĩna.* 'I am bringing them now.'  
*ha upépe a-gařá šupé* 'and there I caught him'

The pronominal prefix *še-* 'I' in the verbs on the right in 1 has the same form as that used for semantic patients of transitives, as in 3.

(3) Guaraní 1sg. transitive patients:

*še-reraha.* 'It will carry **me** off.'  
*še-yukà varã moʔã.* 'He would have killed **me**.'

Grammatical systems in which the arguments of some intransitive verbs are categorized with transitive agents and the arguments of others with transitive patients have been designated by a variety of labels, among them active, including active-neutral, active-inactive, active-static, or stative-active (e.g. Uhlenbeck 1917, Sapir 1917, Klimov 1973, 1974); agentive or agent-patient (e.g. Chafe 1970a–b, Dahlstrom 1983); split S (e.g. Dixon 1979); and split intransitive (e.g. Merlan 1985, Van Valin 1987, 1990). The plethora of labels is no accident.

Such grammatical organization involves two kinds of classification. One is a categorization of the arguments marked for case, e.g. people who go places, get up, and bring and catch things versus those who are sick, sleepy, carried off, and killed. The other is a categorization of the predicates that appear with nominals in each case, e.g. to go or get up versus to be sick or sleepy. Such classifications are not restricted to the domain of case marking, but have also been noticed in derivational morphology (Horne 1980), auxiliary selection, passivization, and elsewhere.

There has been considerable discussion concerning the bases of the classifications—as semantic or grammatical, as motivated or arbitrary. On the one hand, they do not seem entirely random; the nominals or predicates in each class tend to share certain semantic characteristics. Furthermore, similar classifications recur in genetically unrelated languages distributed throughout the world. On the other hand, there is frustration that membership in the classes cannot usually be predicted or even accounted for exhaustively in semantic terms. As Rosen (1984) and others have pointed out, the classifications of verbs are not equivalent crosslinguistically: a verb may pattern one way in one language, but its translation may pattern the opposite way in the next. Even within a single language, a given verb root may show different characteristics in different constructions.

Some approaches to such systems have been basically syntactic. Categories are distinguished in terms of the representation of arguments and predicates in a syntactic model. Intransitive arguments with the same case forms as transitive agents are described as the underlying subjects of a class of verbs termed 'unergatives'; those with the same forms as transitive patients are described

as the underlying direct objects of a class of verbs termed 'unaccusatives' (e.g. Perlmutter 1978) or 'ergatives' (Burzio 1981, 1986).

Other approaches have been semantic. It has been pointed out that not all systems of this kind are based on precisely the same semantic distinctions (DeLancey 1981, 1985, Van Valin 1987, 1990, Zaenen 1988). Examining various constructions in Italian, Georgian, and Acehnese, Van Valin identifies 'inherent lexical aspect (Aktionsart) and agentiveness as the primary semantic parameters governing split intransitivity', noting that 'languages vary with respect to which parameter governs the split' (1990:251-2). Even within a single language, different distinctions may underlie different constructions. Zaenen 1988 reports that, in Dutch, auxiliary selection is based on aspect, while impersonal passivization is sensitive to agency.

The precise aspectual or agentive distinctions involved may themselves vary. Van Valin notes that auxiliary selection in Italian is based on a distinction between activity and nonactivity verbs, while that in Dutch is based on a contrast between telic and atelic verbs. DeLancey 1985 reports that, in Lhasa Tibetan, nominal case marking reflects control, while auxiliary selection is sensitive to volition.

In what follows, a set of case-marking systems of this kind will be examined. It will be shown that these systems reflect a coherent kind of case organization in themselves, motivated both semantically and grammatically. Certain cross-linguistic differences are the result of variation in detail, itself easily explained. The motivations behind the systems can be missed, however, if they are sought only in immediate one-to-one correspondences between meaning and form. Such case systems can be the products of successive developments over time, each individually motivated in one way or another. To explain why they show the patterns they do, we must understand not only their static forms but also the dynamic processes that shape them.

**2. SYNCHRONIC VARIABILITY.** Core case marking of the kind described above can be based on a variety of semantic distinctions, among them aspect and agency. Several features may even interact within a language to determine case categorization.

**2.1. LEXICAL ASPECT: COLLOQUIAL GUARANI.** As we saw in 1, case is distinguished in Guarani by pronominal prefixes on verbs. The pronominal system contains distinct forms for three persons, two numbers in first and second persons, and inclusive and exclusive first persons. One set of pronouns, the *a-* set, represents transitive agents and arguments of some intransitives, while a second, the *še-* set, represents transitive patients and arguments of other intransitives.

Intransitive verbs that appear with the first, or *a-*, set of pronouns include not only 'go' and 'get up' but also *gwatá* 'walk', *gweyí* 'descend, get off', *ú* 'come', *yaní* 'run', *itá* 'swim', *ɲwahē* 'arrive', *hasá* 'pass', *vevé* 'fly', *yemojetá* 'chat', *yeré* 'turn around', *yerokí* 'dance', *mokapú* 'fire a gun', *pitá* 'smoke', *yemosarái* 'play', *ma.apó* 'work', and many more. Such actions do typically involve semantic agents. Yet agency cannot be the defining feature of this class.

Other verbs that appear with the same *a-* pronouns include *ʔá* ‘fall’, *manó* ‘die’, *yepasurú* ‘sink’, *kašá* ‘stagger’, *kayĩ* ‘get lost’, *ké* ‘sleep’, *paʔá* ‘get stuck’, *pái* ‘wake up’, *yeká* ‘split, crack, burst’, *kúí* ‘come loose, lose one’s job’, and *gwé* ‘go out, die away’.

Intransitive verbs that appear with the second, or *še-*, set of pronouns include not only ‘be sick’ and ‘be sleepy’ but also *yemʔahĩ* ‘be hungry’, *kaneʔó* ‘be tired’, *akateĩ* ‘be stingy’, *akĩ* ‘be tender, unripe’, *akĩ-* ‘be wet, soaked, moist’, *kaĩ-* ‘be weak’, *-akú* ‘be hot, warm’, *akwá* ‘be fast, quick, lightfooted’, *amirĩ* ‘be dead, deceased, distant’, *aʔatá* ‘be anxious, grieved’, *aʔaʔú* ‘be downhearted’, *aʔekói* ‘be worried’, *aó* ‘have a cramp’, *aʔeyú* ‘be ripening’, *apesĩ* ‘be smooth’, *apopé* ‘be curled, waved (hair)’, *aimé* ‘be sharp’, *apovó* ‘be sticky’, *apuʔá* ‘be round’, *aranú* ‘be wise’ *mareté* ‘be strong, powerful’, *ateʔĩ* ‘be lazy’, *atĩ* ‘be grey-haired’, *mirĩ* ‘be humble’, *pošĩ* ‘be angry’, *ayú* ‘be ripe’, *anamusú* ‘be thick’, *karapé* ‘be short’, *katú* ‘be possible’, *karé* ‘be lame’, *moriahú* ‘be poor’, and *karáša* ‘be mangy, scabious’, among others.

The primary feature underlying this categorization is lexical aspect or Aktionsart. Verbs in the first class denote events—the activities, accomplishments, and achievements of Vendler 1967, adopted in Van Valin 1990. They imply a certain dynamicity or change over time. Verbs in the second class denote states and imply time stability. The distinction is quite transparent and regular throughout the lexicon in Gregores & Suárez 1967.

Several factors could obscure this regularity from the casual observer, however. One is the phenomenon of categorization itself. Grammatical markers may impose categoricity, but the real-world distinction between events and states is not always a crisp one: many situations could be described as either. For instance, English ‘he is sleeping’ and ‘he is asleep’ might both be used in the same situation, which might be described by speakers of one language as an event (‘he is sleeping’), but by speakers of the next as a state (‘he is asleep’). Similarly, the Guaraní verb *viʔá* is translated ‘to rejoice, be glad’. In English, ‘rejoice’ would usually be considered an event, but ‘be glad’ a state. The Guaraní verb is classified grammatically as an event and appears with the first case. And in English both ‘rain’ and ‘drizzle’ are classified as events, but in Guaraní *-kĩ-* ‘rain’ is an event, while *-aiviruʔi* ‘drizzle’ is a state.

Some other seeming exceptions to the general principle are due to lexicalization. A particular set of pronominal prefixes becomes established with a given verb stem and may remain unchanged even if the meaning of the verb expands or shifts. Thus, for example, the verb *esaví* ‘to wink’ appears with the second or *še-* set of prefixes, normally used with verbs denoting states. It contains the noun *esá* ‘eye’ and means literally ‘to have defective eyes’.

Guaraní speakers do have some choices; a few intransitive stems can appear with either case. The differences in their meanings confirm the semantic basis of the case distinction. The verb *karú* means ‘to have lunch or supper, to dine’ with the first case but ‘to be a glutton’ with the second. The verb *kaʔú* means ‘to get drunk’ with the first case but ‘to be a drunkard, to be drunk’ with the second. The verb *mimí* means ‘to shine’ with the first case but ‘to be brilliant’ with the second. This does not imply, of course, that speakers must select a

case every time they use a verb. Presumably they usually select a lexicalized case-plus-stem combination as a unit.

The semantic basis of the case system can also be obscured by language contact. The Guaraní verb *avuí* 'to be bored' is classified grammatically as an event, appearing with the first case. Yet being bored might seem unequivocally stative. This verb was borrowed from the Spanish verb *aburrir* (*se*). Borrowed verbs were generally categorized grammatically as events, and borrowed adjectives as states. Guaraní also contains a native verb *kaigwé* 'to be or become bored' that is classified grammatically as a state. Similarly, the Guaraní verb *apurá* 'to hurry, be in a hurry', borrowed from Spanish *apurar* (*se*), is classified as an event, while the native verb *-agē*, with the same meaning, is classified as a state.

The Guaraní system, based primarily on a distinction of lexical aspect, could thus be accurately identified as active-stative. Arguments of events such as getting up, catching things, and falling appear in one case, while arguments of states such as being sick, stingy, and strong appear in another. But not all case marking of this kind is based on aspect.

**2.2. AGENCY: LAKHOTA.** Among the best-known languages exhibiting case distinctions in intransitive clauses are those of the Siouan family, particularly Lakhota. As in Guaraní, nouns are unmarked for case, but pronominal prefixes on verbs distinguish two cases. The pronominal system consists of prefixes for first, second, and inclusive persons. Third persons are unmarked by pronouns. Plurality is expressed elsewhere in the morphology.

Compare the forms of the first-person pronouns in the Lakhota verbs in 4. The Lakhota forms cited here come primarily from the speech of Mr. Stanley Redbird, of Rosebud, South Dakota, identified with his initials (SR). Additional forms are from Boas & Deloria 1939 (BD), Buechel 1970 (B), and Rood & Taylor 1976 (RT).

(4) Lakhota first person pronouns (SR):

<i>wapsiča.</i>	'I jumped.'	<i>mak<sup>h</sup>úže.</i>	'I'm sick.'
<i>wahí.</i>	'I came.'	<i>maxwá.</i>	'I'm sleepy.'

The pronominal prefix *wa-* 'I' that is used with verbs on the left matches the prefix used for semantic agents of transitive clauses:

(5) Lakhota transitive agents (SR):

<i>awá<sup>?</sup>u.</i>	'I brought it.'
<i>waktékte.</i>	'I'll kill him.'

The pronoun *ma-* that is used with the verbs on the right in 4 matches the one used for semantic patients of transitives:

(6) Lakhota transitive patients (SR):

<i>amá<sup>?</sup>u.</i>	'He brought <b>me</b> .'
<i>maktékte.</i>	'He'll kill <b>me</b> .'

The two sets of Lakhota pronouns have traditionally been described in terms of the kinds of verbs with which they occur. The first (*wa-*) case is said to appear with 'active' verbs, and the second (*ma-*) case with 'neutral' or 'stative'

verbs (Riggs 1893:13, Boas & Swanton 1911:908, Boas & Deloria 1939:23, among others). Boas & Swanton note that ‘subjective [*wa-*] pronouns, which designate the subject of an activity, are differentiated from object [*ma-*] pronouns, which express the object of an action or the subject of a condition or state’ (1911:908). The pronominal system thus appears to be the same as that of Guaraní, based on aspect.

The distinction between ‘active’ and ‘neutral/stative’ verbs does play a role in other areas of Lakhota structure. Under reduplication, active verbs bear stress on the first syllable (provided there is no prefix), neutral/stative verbs on the second: compare active *psípsičá* ‘jump’ with neutral *puspúza* ‘be dry’ (Boas & Deloria 1939:37). The same root may even appear in both kinds of reduplicated forms: compare active *xópxopa* ‘pose, consciously try to appear at one’s best’ with neutral *xopxópa* ‘be good looking’ (Boas & Deloria 1939:38).

A closer look at the uses of the Lakhota pronouns reveals that the aspectual distinction does not completely coincide with the pronominal case distinction. Most active verbs, i.e. those denoting events, do appear with the first case, as in 7. (There is no morphological distinction between past and present tense.)

(7) Lakhota *wa-* with events (SR):

<i>mawáni.</i>	‘I walk.’	<i>waníwe.</i>	‘I swam, bathed.’
<i>ináwažj.</i>	‘I stood up.’	<i>waškáte.</i>	‘I’m playing.’
<i>wak’é.</i>	‘I dug.’	<i>waslóhe.</i>	‘I’m crawling.’
<i>wawáte.</i>	‘I ate.’	<i>waʔi.</i>	‘I arrived.’
<i>wawáč<sup>h</sup>ikte.</i>	‘I’ll dance.’	<i>iwáye.</i>	‘I spoke.’
<i>wak<sup>h</sup>ize.</i>	‘I’m fighting.’	<i>walówq.</i>	‘I’m singing.’

Most verbs denoting states appear with the second case, as in 8.

(8) Lakhota *ma-* with states (SR):

<i>mač<sup>h</sup>úwita.</i>	‘I’m cold.’	<i>maháske.</i>	‘I’m tall.’
<i>ímap<sup>h</sup>í.</i>	‘I’m full.’	<i>wamášʔake.</i>	‘I’m strong.’
<i>wamátikha.</i>	‘I’m tired.’	<i>mawášte.</i>	‘I’m good.’
<i>mamát<sup>h</sup>o.</i>	‘I’m mad.’	<i>mašíce.</i>	‘I’m bad.’
<i>mayázq.</i>	‘I’m in pain.’	<i>masláte.</i>	‘I’m slow.’
<i>iyómakp<sup>h</sup>i.</i>	‘I’m happy.’	<i>malák<sup>h</sup>ota.</i>	‘I’m Sioux.’

Yet some verbs with the first case denote states:

(9) Lakhota *wa-* with states (SR, B):

<i>wat<sup>h</sup>í.</i>	‘I live, dwell.’	<i>tawála.</i>	‘I’m patient.’ (B)
<i>waksápa.</i>	‘I’m prudent.’	<i>ináwaxme.</i>	‘I’m hiding.’
<i>ináwawizi.</i>	‘I’m jealous.’ (B)	<i>waxpáye.</i>	‘I’m lying.’
<i>tawát<sup>h</sup>elwaya.</i>	‘I’m willing.’		

Conversely, some verbs with the second case denote events.

(10) Lakhota *ma-* with events (SR, B, RT):

<i>mahíxpaye.</i>	‘I fell.’	<i>i<sup>h</sup>emánni.</i>	‘I give out.’ (B)
<i>mat’é.</i>	‘I fainted, died.’	<i>mač<sup>h</sup>éka.</i>	‘I stagger.’ (B)
<i>imáč<sup>h</sup>aγe.</i>	‘I grew up.’	<i>amákisni.</i>	‘I got well.’ (RT)
<i>namáp<sup>h</sup>op<sup>h</sup>o.</i>	‘I blew up in anger.’		

The aspectual distinction between events and states thus fails to account for a substantial number of Lakhota forms.

Agentiveness is more effective. The notion of semantic agency is a complex one, as pointed out in Cruse 1973, Lakoff 1977, Foley & Van Valin 1984, DeLancey 1985, Richardson 1985, Tsunoda 1985, and Tuite et al. 1985, among many others. Foley & Van Valin (1984:29) characterize their general category 'actor' as 'the participant which performs, effects, instigates, or controls the situation denoted by the predicate', features shared by prototypical agents. They characterize their general category 'undergoer' as 'the participant which does not perform, initiate, or control any situation but rather is affected by it in some way', features shared by prototypical patients. These sets of features prove helpful for understanding the case-marking systems examined here.

In Lakhota, participants that 'perform, effect, instigate, and control' are designated by pronouns from the first, or *wa-*, set; those that do not are designated by pronouns from the second, or *ma-*, set. The categories of eventhood and agency largely coincide: most events, like jumping and coming, are in fact performed, effected, instigated, and controlled by their core participants. Most states, like being sick and sleepy, are not performed, effected, instigated, or controlled by their core participants, but states do affect the participants. But sometimes eventhood and agency do not coincide. Some events, like falling and dying, are in fact not performed, effected, instigated or controlled by the participant. As was seen in 10, Lakhota verbs denoting these events appear with the second (*ma-*) set of pronouns. Conversely, some states, like living in a certain place or being prudent, could be viewed as performed, effected, instigated, or controlled by the participant. Lakhota verbs denoting these states appear with the first (*wa-*) set of pronouns, as in 9. Agency takes precedence over eventhood in Lakhota case marking.

In a few situations the features constituting agency—performance/effect/instigation and control—do not themselves coincide. One who hiccoughs or sneezes may perform, effect, and instigate the hiccoughing or sneezing without being in control. In such situations, Lakhota case marking is sensitive to performance/effect/instigation rather than control: hiccoughers and sneezers are cast in the first case despite their lack of control.

(11) Lakhota performance without control—*wa-* (B, RT, SR):

<i>blowákaska.</i>	'I hiccough.'	<i>iwáxa.</i>	'I smile.'
<i>wapšá.</i>	'I sneezed.'	<i>wayiča.</i>	'I grunt, sob.'
			(B)
<i>waglépa.</i>	'I vomit.' (B)	<i>wayópa.</i>	'I snore.' (B)
<i>iyówaya.</i>	'I yawn.' (B)	<i>wáč<sup>h</sup>éya.</i>	'I cry, weep.'
			(RT)
<i>howáxpá.</i>	'I cough.'	<i>iwáhqable.</i>	'I dreamed.'
			(RT)
<i>wakačqhe.</i>	'I shiver.' (B)	<i>awaglašna.</i>	'I misspoke.' (B)
<i>šuwat<sup>h</sup>e.</i>	'I missed my aim, failed.' (B)		
<i>iéwaglašnaša.</i>	'I stutter, stammer.' (B)		



As in Guaraní, some Lakhota verb stems can appear with either case. Rood & Taylor (1976) list, for example, *huwákaše/humákaše* 'I stumbled, tripped'. Presumably stumbling could be viewed as either internally or externally instigated, although either way it would be uncontrolled.

It has sometimes been suggested that the grammaticized agent and patient categories of languages like Lakhota are essentially subjects and objects, respectively. Indeed, many subjects in languages like English are semantically agentive and would be translated into Lakhota with agent pronouns; many English direct objects are semantic patients and would be translated with patient pronouns. It should be clear from the Lakhota examples above that the English subject and Lakhota agent categories do not coincide in intransitive clauses. They do not coincide in transitive clauses either. It is not uncommon in agent-patient systems, where the morphology permits it, for both core arguments of a transitive clause to be classified grammatically as patients if neither participant performs/effects/instigates or controls. (See, among others, Lawrence 1977, Williamson 1979, and Jelinek 1990.) Both pronouns in 12, *ni-* 'you' and *ma-* 'I', are grammatical patients.

(12) Lakhota double patient constructions (BD):

- iyénimac<sup>h</sup>eča.* 'I look like **you**.'  
*ínimaskokeča.* 'I am as large as **you**.'  
*ínimaškola.* 'I am as small as **you**.'  
*iyénimahakeča.* 'I am as tall as **you**.'  
*iyónimakip<sup>h</sup>i.* 'I find **you** congenial.'  
*ínimata.* 'I am proud of **you**.'

The two kinds of case systems, nominative-accusative and agent-patient, are based on different distinctions (Mithun 1986, 1991b).

Markedness may also play a role, as with any categorization. As seen in 9 above, participants in some states, such as residing in a place or being prudent, may be viewed as performers/effectors/instigators and controllers, and cast as grammatical agents. The semantic distinction between performers and non-performers is not always an obvious one, however. In Lakhota, agent case with stative verbs is a marked choice: only participants that are highly agentive semantically are cast as grammatical agents.

Like others, the Lakhota case system is the product of development over time. Combinations of pronominal prefixes and verb stems become lexicalized—learned, stored, and selected as units. The original motivation for case choice with a particular verb may be obscured when its literal meaning is not recognized. One might certainly expect a verb meaning 'be scabbed', for example, to appear with patient case pronouns, but the Lakhota verb appears with agent case pronouns.

(13) Lakhota (B):

- hawágluxpu.* 'I (AGENT CASE) am scabbed.'

This verb stem actually consists of a noun root *há* 'skin', a beneficiary prefix *ki-*, and a verb root *yuxpu* 'pick off'. It means literally 'pick off one's own skin', an action performed by a semantic agent. Many other verb stems have similarly intricate morphological structures, often with idiomatic meanings.

Case marking in Lakhota could thus be described as an agent-patient system. First and second persons who perform, effect, and instigate, e.g. those who jump, kill, reside, and hiccough, are referred to by grammaticized agent case pronouns. Those who do not, e.g. those who are sick, killed, cold, tall, and similar and those who fall, are referred to by grammaticized patient case pronouns.

**2.3. INTERACTING SEMANTIC BASES: CENTRAL POMO.** In the Pomoan languages of California, two distinctions affect case categorization simultaneously. Case marking has been described for Eastern Pomo in McLendon 1978 and for Northern Pomo in O'Connor 1986 and 1987; O'Connor 1986 provides an especially useful discussion of case. The Central Pomo system is similar.

Case is distinguished in central Pomo on pronouns, which are morphologically free, and on some nouns referring to human beings. The pronominal system distinguishes four persons and two numbers. There are three cases, two core cases and an oblique. Some intransitive verbs appear with one core case, some with the other. The Central Pomo cited here comes from the speech of Mrs. Frances Jack of the Hopland rancheria (FJ), Mrs. Florence Paoli of the Yokaya rancheria (FP), and Mrs. Eileen Oropeza (EO) and Mrs. Winifred Leal (WL) of the Point Arena rancheria.

(14) Central Pomo 1sg. pronouns (FJ):

$\text{ʔa}$ ·  $p^h d\acute{i}w$   $\text{ʔe}$ . 'I jumped.'       $\text{ʔo}$ ·  $\text{ʔ}^h \acute{a}l$ . 'I'm sick.'  
 $\text{ʔa}$ ·  $\text{ʔ}\acute{e}y\acute{y}ow$   $\text{ʔe}$ . 'I went away.'       $\text{ʔo}$ ·  $ba\acute{c}\acute{u}$ . 'I'm tired.'

The pronoun  $\text{ʔa}$ · 'I' used with the verbs on the left is also used with transitive verbs to represent semantic agents.

(15) Central Pomo transitive agents (FJ):

$\text{ʔa}$ ·  $m\acute{u}\text{-}t\acute{u}$   $\text{ʔ}\acute{e}\text{-}y\acute{c}adiw$ . 'I chased him away.'  
 $\text{ʔa}$ ·  $m\acute{u}\text{-}t\acute{u}$   $hk'\acute{u}m$   $siw$ . 'I almost killed him.'

The pronoun  $\text{ʔo}$ · used with the verbs on the right in 14 also appears with transitive verbs to represent semantic patients.

(16) Central Pomo transitive patients (FJ):

$Mu\text{-}l$   $\text{ʔo}$ ·  $\text{ʔ}\acute{e}\text{-}y\acute{c}adiw$ . 'He chased **me** away.'  
 $Mu\text{-}l$   $\text{ʔo}$ ·  $hk'\acute{u}m$   $siw$ . 'He almost killed **me**.'

Most verbs denoting events appear with the first case.

(17) Central Pomo  $\text{ʔa}$ · with events (FJ):

$\text{ʔa}$ ·  $w\acute{a}q'i\text{ʔ}e$ . 'I would go.'       $\text{ʔa}$ ·  $p^h ad\acute{e}\text{-}n$ . 'I swam.'  
 $\text{ʔa}$ ·  $\acute{c}a\acute{t}\acute{o}$ ·  $\text{ʔ}\acute{c}iw$ . 'I stood up.'       $\text{ʔa}$ ·  $sw\acute{e}\text{-}lan$ . 'I play.'  
 $\text{ʔa}$ ·  $q^h ad\acute{e}\text{-}\acute{c}$ '. 'I fight.'       $\text{ʔa}$ ·  $\acute{c}^h w\acute{a}\text{-}n$ . 'I crawl.'  
 $\text{ʔa}$ ·  $p^h d\acute{i}\text{-}law$ . 'I dove in.'       $\text{ʔa}$ ·  $q\acute{o}yow$ . 'I arrived.'  
 $\text{ʔa}$ ·  $sb\acute{i}\acute{c}$ '. 'I got up.'       $\text{ʔa}$ ·  $\acute{c}\acute{a}\acute{c}$ '. 'I escaped.'  
 $\text{ʔa}$ ·  $q\text{-}^h \acute{a}mli\acute{c}$ '. 'I turned around.'       $\text{ʔa}$ ·  $\acute{c}an\acute{o}\text{-}n$ . 'I talk.'

The second case appears with many verbs denoting states, as in 18.

(18) Central Pomo  $\text{ʔo}$ · with states (FJ):

$\text{ʔo}$ ·  $kas\acute{i}la$ . 'I'm cold.'  
 $Qab\acute{o}\text{-}\acute{c}$ '  $\text{ʔe}$   $\text{ʔo}$ ·. 'I'm full from overeating.'

<i>ʔo· smá p<sup>h</sup>ta·</i>	‘I feel sleepy.’
<i>ʔo· kíts’čiw.</i>	‘I’m scared.’
<i>ʔo· ʔ<sup>h</sup>ál.</i>	‘I’m in pain.’
<i>ʔo· ščéw.</i>	‘I’m stuck.’
<i>ʔo· ma· ts’ó·ts’a.</i>	‘I’m sad, lonesome.’
<i>ʔo· q<sup>h</sup>ót’a.</i>	‘I’m ticklish.’
<i>ʔo· ʔe q’anás.</i>	‘I’m weak.’
<i>ʔo· dat’óy.</i>	‘I have a blister on my hand.’
<i>ʔo· mká·t’.</i>	‘I’m surprised.’

But the first case also appears with many verbs denoting states.

(19) Central Pomo *ʔa·* with states (FJ):

<i>ʔa· béda ʔč<sup>h</sup>á·w.</i>	‘I live here.’
<i>ʔa· yá·qač’in.</i>	‘I’m careful.’
<i>ʔa· ʔná·č’.</i>	‘I’m hiding.’
<i>ʔa· máti mtíw.</i>	‘I’m lying down.’
<i>ʔa· ʔe q<sup>h</sup>á·m q’dí.</i>	‘I’m kindhearted.’
<i>ʔa· ʔe čá·ʔbaya.</i>	‘I’m mean.’
<i>ʔa· ʔe bané·ʔ<sup>h</sup>aw.</i>	‘I’m lazy.’
<i>ʔa· čáw ʔč<sup>h</sup>á·w.</i>	‘I’m home.’
<i>ʔóč’ ʔa· čatóm.</i>	‘I’m still standing.’
<i>ʔa· ma· báhč’in.</i>	‘I’m conceited.’

And the second case appears with many verbs denoting events.

(20) Central Pomo *ʔo·* with events (FJ):

<i>ʔo· ló·ya.</i>	‘I fell.’	<i>ʔo· qašóyam.</i>	‘I recovered.’
<i>ʔo· q’alá·wʔ<sup>h</sup>e.</i>	‘I’ll die.’	<i>ʔo· qamáʔeč’.</i>	‘I got angry.’
<i>ʔo· madáts’čiw.</i>	‘I slipped.’	<i>ʔo· č<sup>h</sup>q’ála·w.</i>	‘I lost a bet.’
<i>ʔo· ʔwí mdal.</i>	‘I fainted.’	<i>ʔo· ʔqá·č’.</i>	‘I got lost.’
<i>ʔo· mčékc’iw.</i>	‘I tripped.’	<i>ʔo· ʔyá·qan.</i>	‘I remember.’
<i>ʔo· malášlašan.</i>	‘I stumbled.’	<i>ʔo· šʔú·č’iʔe.</i>	‘I’d forget.’
<i>ʔo· q<sup>h</sup>á· snámʔ<sup>h</sup>e.</i>	‘I’ll drown.’		
<i>ʔo· q<sup>h</sup>á· ʔném.</i>	‘I fell in the water.’		
<i>ʔo· šk<sup>h</sup>é·nada.</i>	‘I’m getting well.’		

The Central Pomo case system, like the Lakhota system, is obviously not based on an aspectual distinction between events and states. It reflects semantic agency. Participants cast in the first case, such as those who jump, chase, go somewhere, reside in a particular place, and are careful, could be viewed as performers, effectors, instigators, and controllers. Those cast in the second case, such as those who are sick, chased away, and cold, and who fall and die, are not.

**2.3.1. CONTROL.** In most situations the semantic features characterizing prototypical agents, performance/effect/instigation and control, co-occur. But in some situations they do not: those who hiccough or sneeze do perform, effect, and instigate the hiccoughs and sneezes, but they do not control them. In Lakhota, case marking reflects performance/effect/instigation rather than control; hiccoughers and sneezers are referred to by Lakhota agent-case pronouns.

In Central Pomo, case marking reflects control; hiccoughers and sneezers are referred to by patient-case pronouns.

(21) Central Pomo performed by uncontrolled events—*ʔo*· (FJ):

<i>ʔo</i> · <i>ʃé'úkčiya</i> .	'I hiccoughed.'	<i>ʔo</i> · <i>ʔé·q'</i> .	'I burped.'
<i>ʔo</i> · <i>ʔésʔesya</i> .	'I sneezed.'	<i>ʔo</i> · <i>msátčiw</i> .	'I blushed.'
<i>ʔo</i> · <i>yát'</i> .	'I vomited.'	<i>ʔo</i> · <i>daláščiw</i> .	'I missed.'
<i>ʔo</i> · <i>k<sup>h</sup>á·ʃk<sup>h</sup>a·š</i> .	'I yawned.'	<i>ʔo</i> · <i>p<sup>h</sup>atáyaq'</i> .	'I failed.'
<i>ʔo</i> · <i>ʔ'é·čya</i> .	'I choked.'	<i>ʔo</i> · <i>šyéšyew</i> .	'I tremble.'
<i>ʔo</i> · <i>mč<sup>h</sup>é·mč<sup>h</sup>e·q'</i> .	'I'm sweating.'	<i>ʔo</i> · <i>šq'ón</i> .	'I got a cramp.'
<i>ʔo</i> · <i>štíštíw</i> .	'I'm shivering.'		
<i>ʔo</i> · <i>šayášya·n</i> .	'I'm staggering.'		

The role of control is well illustrated by a set of verbs that can appear with either case. The case choice reflects the degree of control attributed to the referent in the situation at hand.

(22) Central Pomo contrasts in control (FJ):

a. <i>ʔa</i> · <i>sma mtí·č'</i> .	'I went to bed.'
<i>ʔo</i> · <i>sma mtí·čka</i> .	'I must have fallen asleep.'
b. <i>ʔa</i> · <i>č<sup>h</sup>ném</i> .	'I ran into it.'
<i>ʔo</i> · <i>č<sup>h</sup>ném</i> .	'I bumped into it (not watching).'
c. <i>ʔa</i> · <i>maʔ'ém</i> .	'I stepped on it (intentionally).'
<i>ʔo</i> · <i>maʔ'ém</i> .	'I stepped on it (accidentally).'
d. <i>ʔa</i> · <i>k'lí·k'lu·w</i> .	'I coughed (intentionally).'
<i>ʔo</i> · <i>k'lí·k'lu·w</i> .	'I coughed (involuntarily).'
e. <i>Wéno ʔa</i> · <i>sdí·q'</i> .	'I swallowed my medicine.'
<i>Q<sup>h</sup>awé· qadó·n ʔo</i> · <i>sdí·q'</i> .	'I swallowed my chewing gum.'

In 22 the participants in control act voluntarily, and those not in control act involuntarily. Because control and volition so often co-occur, it is difficult to disentangle their roles in case marking. One verb could suggest that control takes precedence over volition in Central Pomo case marking, although a single lexical item can be only suggestive. If I win in gambling, I may have wanted or even intended to win (volition), but I cannot be said to have been in control. The Central Pomo predicate 'win in gambling' appears with the patient case.

(23) Central Pomo volition without control—*ʔo*· (FJ):

<i>ʔo</i> · <i>t<sup>h</sup>óʔ ča·q'ya</i> .	'I'm on a lucky streak (gambling).'
--	-------------------------------------

**2.3.2. AFFECTEDNESS.** Not all out-of-control participants are classified grammatically in Central Pomo as patients. The prototypical patient was characterized above as 'the participant which does not perform, initiate, or control any situation but rather is affected by it in some way'. In Central Pomo, participants must be both out of control and significantly affected to be classified as patients.

The verbs in 18 above, with patient-case pronouns, denote states that significantly affect their participants—being cold, satiated, sleepy, scared, in pain, stuck, sad, lonesome, ticklish, weak, blistered, and surprised. Most imply that something has befallen these participants, usually resulting in a temporary condition. The predicates in 24, by contrast, denote inherent properties. They are

timeless. Participants are not necessarily aware, or conscious, of their own inherent attributes. Arguments of inherent-state predicates are cast as grammatical agents.

## (24) Central Pomo inherent states (FJ)

<i>ʔa· ʔe qól.</i>	'I'm tall.'	<i>ʔa· ʔe šmá baku.</i>	'I'm deaf.'
<i>ʔa· ʔe yá.</i>	'I'm strong.'	<i>ʔa· ʔe nasáy.</i>	'I'm blind.'
<i>ʔa· ʔe q'dí.</i>	'I'm good.'	<i>ʔa· ʔe k'lí.</i>	'I'm dark.'
<i>ʔa· ʔe baséř.</i>	'I'm ugly.'	<i>ʔa· ʔe qašóy.</i>	'I'm alive.'
<i>ʔa· ʔe hínřil.</i>	'I'm Indian.'		
<i>ʔa· ʔe mšú· ʔaw.</i>	'I'm beautiful.'		
<i>ʔa· ʔe dóq'il.</i>	'I'm righthanded.'		

The role of affectedness in case marking can be seen in inchoative constructions. The coming into being of a state is viewed as affecting a participant more than simply being in a state. In the sets of sentences in 25, basic adjectives appear with agent-case arguments, while their inchoative counterparts appear with patient-case arguments. This pattern appears in all persons and numbers. The third person agent-case pronoun is *mu·l*, and the patient case *mú·tu*.

## (25) Central Pomo inchoatives (FJ):

a. <i>Yém ʔe ʔa·.</i>	'I am old.'
<i>Yémaq' ʔo·.</i>	'I have gotten old.'
<i>Yém ʔe mu·l.</i>	'He is old.'
<i>Yémaq' mú·tu.</i>	'He has gotten old.'
b. <i>P<sup>h</sup>úy ʔe ʔa·.</i>	'I am fat.'
<i>P<sup>h</sup>ú·čya ʔo·.</i>	'I have gotten fat.'
<i>P<sup>h</sup>úy ʔe mu·l.</i>	'He is fat.'
<i>P<sup>h</sup>ú·čya mú·tu.</i>	'He has gotten fat.'
c. <i>ʔa· mačún.</i>	'I am lame.'
<i>ʔo· mačúnaq'.</i>	'I got crippled.'
<i>Mu·l mačún.</i>	'He is lame.'
<i>Mú·tu mačúnaq'.</i>	'He got crippled.'

Not all affectedness is of equal importance. Affected participants are cast as grammatical patients only when the speaker chooses to express empathy with the affectedness.

Only nominals referring to human beings, or to those classed as human beings (pets, animals in legends), can appear in the patient case. In the transitive clauses in 26, the pronoun referring to a man appears in the patient case form *mú·tu*, but the pronoun referring to a bee can only be the basic form *mú·l*.

## (26) Central Pomo empathy and case (FJ):

<i>Mú·tu ʔa· hk'úm.</i>	'I killed <b>him</b> .'
<i>Mu·l ʔa· hk'úm.</i>	'I killed <b>it</b> (the bee).'

The same pattern restriction appears in intransitive sentences.

## (27) Central Pomo empathy and case (FJ):

<i>Q'alá·w mú·tu.</i>	' <b>He</b> died.'
<i>Mu·l q'alá·w.</i>	' <b>It</b> (the bee) died.'

If the effect of an event or state is not evident to the speaker, patient-case forms are not even used for human beings. With the predicate 'feel warm', for

example, a patient-case pronoun is usually used for first persons, but an agent-case pronoun is used for third persons. Speakers do not claim to feel what another individual is feeling.

(28) Central Pomo empathy and case (FJ):

- |    |                           |                                  |
|----|---------------------------|----------------------------------|
| a. | <i>Hó mʔ'a· ʔo.</i>       | 'I (PATIENT CASE) feel warm.'    |
|    | <i>Hó mʔ'a· mu·l.</i>     | 'He (AGENT CASE) feels warm.'    |
| b. | <i>ʔo· qʰaʔán· ʔaw.</i>   | 'I (PATIENT CASE) was dreaming.' |
|    | <i>Mu·l qʰaʔán· ʔaw.</i>  | 'He (AGENT CASE) was dreaming.'  |
| c. | <i>šyá·č'a ʔo·.</i>       | 'I (PATIENT CASE) am afraid.'    |
|    | <i>šyá·č'a mu·l.</i>      | 'He (AGENT CASE) is afraid.'     |
| d. | <i>ʔo· maʔáčo· mdál.</i>  | 'I (PATIENT CASE) am starving.'  |
|    | <i>Mu·l maʔáčo· mdál.</i> | 'He (AGENT CASE) is starving.'   |

Even when an event or state has a visible effect on a participant, the speaker may choose not to portray the affectedness and not use a patient case. The verb *čʰná·w* 'fall', for example, normally occurs with a grammatical patient, but a speaker seeing a child fall down in the distance may refer to him or her with the basic pronoun *mu·l* rather than the patient case form *mú·tu*. Speakers even opt not to use first-person patient forms in certain situations, when reporting or describing an event matter-of-factly, where the emphasis is not on the affectedness but simply on the fact. The distinction can be subtle. A group was discussing the new houses being built on one rancheria. Mrs. Oropeza commented dispassionately that, for her part, she didn't need a new house, since she had no desire to move.<sup>1</sup>

(29) Central Pomo (EO):

*ʔa· = t'o*      *béda = hʔow*   *bé· = yo-w*   *dá·-ʔ-du-w*   *čʰó-w.*

I.AGENT = CONTR here = from   away = go-P   want-RFL-IP-P   not-P

'I don't want to go away from here.'

*Béda ʔa·      q'lá-w = ʔkʰe.*

here I.AGENT die-P = INF

I'll die here.'

With the verb *q'láw* 'die', which usually appears with a grammatical patient, she used an agent-case pronoun, simply referring to a fact. Moments later, the same speaker used the same verb 'die' with a patient-case pronoun, this time with more emotion:

(30) *ʔa·      čá = ʔel      ʔčí = hla ʔo·      q'lá· = hla t'o?*

I.AGENT house = the   get = if   I.PATIENT die = if   CONTR

'What if I died after I got the house?'

The agent and patient case categories of Central Pomo, like those of Lakota, do not correspond to the subject and direct object categories of languages like English even in transitive clauses. Central Pomo transitive clauses may contain

<sup>1</sup> The following abbreviations appear in Central Pomo glosses: AGT = grammatical agent, CAUS = causative, CONTR = contrastive, IMM = immediate, INF = infinitive/future, IP = imperfective aspect, P = perfective aspect, PAT = grammatical patient, RFL = reflexive, and SML = semelfactive. Hyphens (-) indicate affixes; equals signs (=) indicate clitics.

two agent-case arguments, two patient-case arguments, or one agent and one patient, either of which might correspond to an English subject.

(31) Central Pomo:

- a. *Mu-l ʔa ʔá·q-an-ka-w ʕʰó-w.* (FP)  
 3.AGT 1.AGT remember-IP-CAUS-P not-P  
 'I (AGENT CASE) couldn't think of it (AGENT CASE).'
- b. *ʔo = wa mʔo ʔá·qan?* (FJ)  
 1.PAT = Q 2.PAT remember  
 'Do you (PATIENT CASE) remember me (PATIENT CASE)?'
- c. *ʔo qadál-m-ad = a mu-l.* (FJ)  
 1.PAT hate-NON.EMPATHETIC-IP = IMM 3.AGT  
 'He (AGENT CASE) hates me (PATIENT CASE).'
- d. *Mu-l qadál = a ʔo ʔá·w.* (FJ)  
 3.AGT hate = IMM 1.PAT really  
 'I (PATIENT CASE) really hate him (AGENT CASE).'

Case marking in Central Pomo is thus based on the interaction of two semantic distinctions: control and significant affectedness. The grammatical patient case is more specific or more marked semantically than the agent case. Core arguments are classified as grammatical patients only if they are simultaneously out of control and affected in such a way that the speaker chooses to express empathy with them.

**2.4. SUMMARY: THE DIVERSITY OF SEMANTIC BASES.** Overall, the case systems of Guaraní, Lakhota, and Central Pomo appear quite similar. In all of these languages, one case is used for semantic agents of most transitive verbs and the single argument of some intransitives, while a different case is used for the semantic patients of most transitive verbs and the single argument of other intransitives. The sets of verbs occurring with each case are largely the same from one language to the next. Most verbs in the first set denote events performed, effected, instigated, and controlled by their participants ('jump', 'go', 'catch'). Most verbs in the second set denote states significantly affecting their participants ('be sick', 'be tired', 'be caught').

In a few situations, the features of eventhood, performance/effect/instigation, control, and affectedness do not cluster in the usual ways. It is here that the differences among the three languages become apparent. In each language a different feature is critical. In Guaraní it is lexical aspect, specifically eventhood; in Lakhota it is performance/effect/instigation; and in Central Pomo it is the interaction of control and significant affectedness.

The kinds of intransitive verbs that reveal these differences can be seen in Table 1. Criterial features are listed in the first column; P/E/I stands for performed/effected/instigated. The symbols I and II identify the case used with such verbs in each language—I for active or grammatical agent, II for stative or grammatical patient. For the languages discussed here, performance, effect, and instigation do not appear to function independently in case categorization. Affectedness plays a role only with stative verbs.

	Guaraní	Lakhota	C. Pomo
a. +event 'jump', 'go', 'run' + P/E/I + control	I	I	I
b. +event 'hiccough', 'sneeze', 'vomit' + P/E/I - control	I	I	II
c. +event 'fall', 'die', 'slip' - P/E/I - control	I	II	II
d. -event 'reside', 'be prudent', 'be patient' + P/E/I + control	II	I	I
e. -event 'be tall', 'be strong', 'be righthanded' - P/E/I - control - affect	II	II	I
f. -event 'be sick', 'be tired', 'be cold' - P/E/I - control + affect	II	II	II

TABLE 1. Summary of case marking.

3. DIACHRONIC STABILITY OF THE SEMANTIC DISTINCTIONS. If multiple distinctions can affect case categorization simultaneously within a language, as in Central Pomo, we might wonder whether the distinctions underlying such systems can shift over time. We know that active/agentive case marking has persisted in some languages for a considerable period. It has been documented, for instance, in both Classical and Modern Guaraní, and across the rest of the Tupí-Guaraní family as well (Jensen 1990). It is found not only in Central Pomo, but also in other Pomoan languages, as can be seen from the Kashaya material in Oswalt 1960, 1964, the Southeastern Pomo in Moshinsky 1974, the Eastern Pomo in McLendon 1978, and the Northern Pomo in O'Connor 1986 and 1987. Among the Siouan languages, it is not limited to Lakhota, but appears across the family, as is clear from the lexical and textual material provided on Ioway in Hamilton & Irvin 1848, on Tutelo in Hale 1883, on Omaha and Ponca in Dorsey 1890, on Biloxi and Ofo in Dorsey & Swanton 1912, on Osage in La Flesche 1932, on Winnebago in Lipkind 1945, on Crow in Lowie 1960a-b and Medicine Horse 1987, on Assiniboine in Levin 1964, on Hidatsa in Matthews 1965, and on Mandan in Hollow 1970.

The Siouan languages are remotely related to two other groups, the Caddoan and Iroquoian languages (Allen 1931, Chafe 1964, 1976). These languages also exhibit active/agentive pronominal case marking. The case systems in the modern Siouan, Caddoan, and Iroquoian languages are not precisely equivalent in detail, however. A comparison of these groups, focusing on one modern language from each group, reveals ways in which case categories of this type can shift over time.



**3.1. CADDOAN.** The Caddoan family includes Caddo, Wichita, Kitsai, Pawnee, and Arikara. As in Guaraní and Lakhota, nouns in these languages bear no case marking, but case is distinguished by pronominal prefixes on verbs. Separate pronominal forms exist for first, second, inclusive, and indefinite third persons. There are no prefixes for referential third persons. Arguments of intransitive clauses do not all appear in the same case, as can be seen in 32. The Caddo material cited here comes from the speech of Sadie Bedoka Weller (SB) of Anadarko, Oklahoma, recorded by Wallace Chafe.

(32) Caddo 1sg. pronouns (SB):

- |                             |                                 |
|-----------------------------|---------------------------------|
| a. <i>ci:widahšahyah.</i>   | 'I jumped.'                     |
| <i>cihahyúnčah.</i>         | 'I'm going to go home.'         |
| b. <i>hákkutʔnávʔuhšaʔ.</i> | 'I'm sick.'                     |
| <i>ku:táyʔayah.</i>         | 'I'm tired, disgusted, fed up.' |

The pronoun *ci-* in the verbs of 32a is also used for semantic agents of transitive clauses.

(33) Caddo transitive agents (SB):

- |                        |                          |
|------------------------|--------------------------|
| <i>ci:wida:kuhnah.</i> | 'I grabbed him.'         |
| <i>ci:kí:ʔčah.</i>     | 'I'm going to kill him.' |

The pronoun *ku-* in the verbs of 32b is also used for semantic patients of transitive clauses.

(34) Caddo transitive patients (SB):

- |                        |                                  |
|------------------------|----------------------------------|
| <i>ku:wida:kuhnah.</i> | 'He grabbed <b>me</b> .'         |
| <i>ku:kí:ʔčah.</i>     | 'He's going to kill <b>me</b> .' |

As in the other languages, the first case typically appears with verbs denoting events, as in 35.

(35) Caddo *ci-* with events (SB):

- |                            |                              |
|----------------------------|------------------------------|
| <i>ci:dihʔaʔ.</i>          | 'I'll go.'                   |
| <i>ci:nihsahá:yah.</i>     | 'I stood up.'                |
| <i>hítciwtahšaʔ.</i>       | 'I fought.'                  |
| <i>cikà:cutánʔahuhnah.</i> | 'I backed up.'               |
| <i>hítcihwatnukahyuh.</i>  | 'I dove in.'                 |
| <i>hítciyahkis.</i>        | 'I bathed, swam.'            |
| <i>háhciháwkaššíʔsaʔ.</i>  | 'I'm whispering.'            |
| <i>ci:yúnkihah.</i>        | 'I'm running off.'           |
| <i>háhciwká:nná:saʔ.</i>   | 'I'm talking.'               |
| <i>háhcišdáváʔsaʔ.</i>     | 'I'm gambling.'              |
| <i>háhcihánniwkisaʔ.</i>   | 'I'm digging.'               |
| <i>háhci:cudakánniyah.</i> | 'I'm crawling on the floor.' |
| <i>cihahnínʔaʔ.</i>        | 'I'll stop.'                 |

The second case appears with verbs denoting states.

(36) Caddo *ku-* with states (SB):

- |                        |                               |
|------------------------|-------------------------------|
| <i>hákku:nássaʔ.</i>   | 'I'm cold.'                   |
| <i>kubindáyniḥʔaʔ.</i> | 'I'm full (I've had plenty).' |
| <i>kú:čaháhdah.</i>    | 'I'm satisfied.'              |

<i>hákkudikínʔusaʔ.</i>	'I'm sleepy.'
<i>hákkukà:wisáyʔáysaʔ.</i>	'I'm angry.'
<i>hákkunahʔnúhsaʔ.</i>	'I'm hungry.'
<i>hákkuyahk'ánʔusaʔ.</i>	'I'm thirsty.'
<i>ku:hi:nihah.</i>	'I'm afraid.'
<i>hákkú:ciháhsaʔ.</i>	'I'm sad.'
<i>hákkuskúmmáínkuʔsaʔ.</i>	'I'm dizzy.'
<i>kúbámʔitnaʔ.</i>	'I'm weak.'
<i>hákkukádadihsaʔ.</i>	'I'm apprehensive.'
<i>hákkúnčáʔsuh.</i>	'I'm awful hot.'
<i>hákkú:támmáʔsaʔ.</i>	'I'm embarrassed.'
<i>kú:t'ič'ahkúʔhah.</i>	'I'm enthused.'
<i>hákkukáwʔáʔsaʔ.</i>	'I'm nauseated.'

Yet, as in Lakhota and Central Pomo, the first case sometimes appears with verbs denoting states.

(37) Caddo *ci-* with states (SB):

<i>náhciʔyaʔ.</i>	'I live there, am there.'
<i>háhci:kà:wisaʔ.</i>	'I'm sitting by the fire.'
<i>háhʔuhcǐhʔyaʔ.</i>	'I'm still living.'
<i>kúci:wiyasʔnihnah.</i>	'I just remained standing.'
<i>hítcikkaʔa:yʔah.</i>	'I was in the crowd.'
<i>hítci:dakin.</i>	'I wore a shawl.'
<i>č'áyk'ah cí:ʔah.</i>	'I'm greedy.'
<i>widahciwaʔ cí:ʔah.</i>	'I'm awkward, clumsy.'
<i>wiʔná:nit cí:ʔah.</i>	'I'm gentle.'
<i>wínná:ʔah cí:ʔah.</i>	'I'm ornery, mean.'

Conversely, the second case also appears with events.

(38) Caddo *ku-* with events (SB):

<i>kúnáwyánhiʔah.</i>	'I fell.'
<i>híkku:wíyánnínʔunah.</i>	'I stumbled.'
<i>híkku:nibáhyunih.</i>	'I slipped.'
<i>ku:wíyahyašatcúhʔnah.</i>	'I got lost.'
<i>tákkukáwʔahkidah.</i>	'I remembered it.'
<i>kudawʔnah.</i>	'I ran into (a tree).'
<i>kukáywáhdíʔaʔ.</i>	'I'll forget.'
<i>kúykahíhčah.</i>	'I'm going to get stuck.'
<i>ku:kí:ʔah.</i>	'I lost a bet, got killed.'
<i>kukáppakkah.</i>	'I got scared.'

The primary distinction underlying Caddo case marking is clearly not aspect. It is agency. Those who jump, grab, kill, live in a place, and sit by the fire are classified as grammatical agents: they perform, effect, instigate and control. Those who are sick, tired, grabbed, and killed, and who fall, are classified as grammatical patients: they do not perform, effect, instigate, and control.

When the usual components of agency do not coincide, Caddo case marking

reflects control. Those not in control of events are classified grammatically as patients, even if they are performers, effectors, and instigators.

(39) Caddo performance without control—*ku-* (SB):

<i>híkúnk'uhc'i?</i>	'I hiccoughed.'
<i>híkku:wišnu?</i>	'I coughed.'
<i>kúnnaškudah.</i>	'I choked.'
<i>hákkukawtahsa?</i>	'I'm sweating.'
<i>kún?náwtakah.</i>	'I got an erection.'
<i>híkkuháwkátdikahih.</i>	'I stuttered.'
<i>hákkukà:suhánná:sa?</i>	'I'm staggering.'
<i>kuhán?áy?unah.</i>	'I laughed.'
<i>ku:t'áwya:wnutnah.</i>	'I smiled.'
<i>kukah?íw?nah.</i>	'I burped.'

As in Central Pomo, lack of control is not sufficient grounds for classification as a grammatical patient. A second requirement is affectedness. The verbs in 32 and 36 with patient-case prefixes all denote states that significantly affect their participants—being sick, tired, cold, satiated, sleepy, angry, hungry, thirsty, afraid, sad, dizzy, weak, apprehensive, hot, embarrassed, enthused, nauseated, and dry/exhausted. Often something has happened to the participant that has resulted in a condition of which the participant is aware. By contrast, inherent properties of arguments are generally expressed in Caddo with a different construction, an adjective plus the verb *ya?ah* 'be'. This verb always appears with the agent case, as in 40.

(40) Caddo inherent states with *ci-* (SB):

<i>hadiba? cí:?ah.</i>	'I'm tall.'
<i>hadúнку? cí:?ah.</i>	'I'm short.'
<i>biduhk'uh cí:?ah.</i>	'I'm short and squat.'
<i>ha?ík'ay cí:?ah.</i>	'I'm strong.'
<i>ha?imay cí:?ah.</i>	'I'm big.'
<i>háyúhtiti? cí:?ah.</i>	'I'm small.'
<i>hasá:yu? cí:?ah.</i>	'I'm fat.'
<i>widah?ni? cí:?ah.</i>	'I'm intelligent.'
<i>ha?ahat cí:?ah.</i>	'I'm good.'
<i>habarah cí:?ah.</i>	'I'm bad.'
<i>hasak'ay cí:?ah.</i>	'I'm light-skinned.'

In Caddo, as in Central Pomo, the coming into being of a state is viewed as having more effect than simply being in a state; I am considered more affected by a change that happens to me than by a property that I embody. While inherent properties are expressed with adjectives plus the verb 'be' with agent case, inchoatives are expressed with adjectives plus a verb 'become' with patient case.

(41) Caddo inchoatives (SB):

<i>habíwkat cí:?ah.</i>	'I (AGENT CASE) am old.'
<i>habíwkat hákku:nihsa?</i>	'I (PATIENT CASE) am getting old.'

As in Lakhota and Central Pomo, the Caddo agent and patient categories are not equivalent to the subject and object categories of languages like English even in transitive clauses. Thus, for instance, the first-person arguments in 42 are categorized as transitive subjects in English but as grammatical patients in Caddo.

(42) English transitive subjects = Caddo grammatical patients (SB):

*kú:ʔnutah.* 'I (PATIENT CASE) like it.'  
*kú:nit' aihah.* 'I (PATIENT CASE) want it.'

As in other languages, processes of grammaticization can sometimes obscure the semantic basis of case selection. The verb 'to lose' might be expected to appear with a patient case in Caddo (as it does in Central Pomo), since losing an object is normally not controlled. It appears with agent case pronouns, however.

(43) Caddo grammaticization (SB):

*ci:yúniʔnah.* 'I (AGENT CASE) lost (something).'

This verb stem consists of *ʔyunik-* 'absent' plus a causative suffix *-ʔn* and means literally 'I caused it to be absent'. Case selection has been grammaticized with causative verbs: all verbs containing the causative suffix automatically appear with the agent case, regardless of the actual degree of control involved in the particular situation.

Lexicalization can also obscure the basis on which case was initially established. The verb in 44 contains an agent prefix.

(44) Caddo lexicalization (SB):

*hákihahyúysaʔ.* 'We (AGENT) die.'

The case choice initially seems strange, since dying is normally beyond one's control, and anyone who dies is certainly significantly affected. This verb actually consists of a progressive prefix *hák-*, an indefinite (first person inclusive) agent pronominal prefix *yi-*, the verb stem *-hah-yún-* 'go home' and a progressive suffix *-saʔ*. The full verb means literally 'one goes home'. Since going home is usually under the control of the participant, that stem has been lexicalized with agent case pronouns.

Case marking in the other Caddoan languages, Wichita (Rood 1976), Kitsai (Lesser 1977), Pawnee (Parks 1976), and Arikara (Merlan 1975, 1985), is similar to that in Caddo—basically agent-patient. Those who jump, grab, go places, and are tall are classified as grammatical agents. Those who are out of control and significantly affected, such as persons who are sick, tired, and cold, and who live in a place, fall, hiccough, and like something, are classified as grammatical patients.

**3.2. IROQUOIAN.** Remotely related to Siouan and Caddoan are the Iroquoian languages. The Iroquoian family includes Huron, mentioned at the beginning of §1, as well as Mohawk, Oneida, Onondaga, Susquehannock, Cayuga, Seneca, Tuscarora, Nottoway, and Cherokee. In all of these languages, as in Siouan and Caddoan, nouns bear no case marking, but obligatory pronominal

prefixes on verbs distinguish core case.<sup>2</sup> The Iroquoian pronouns distinguish three persons, two numbers, and inclusive and exclusive first person. Arguments of intransitive verbs do not all appear in the same case.

All of the Iroquoian languages show essentially the same case-marking patterns. They are illustrated here with Mohawk examples from the speakers at Kahnawà:ke and Kanehsatà:ke (Oka), Quebec; from Ahkwesáhsne, New York and Quebec; and from Six Nations, Ontario, listed in the Acknowledgments note. All the Mohawk forms below were rechecked with Mrs. Annette Jacobs (AJ) of Kahnawà:ke and are given in that dialect.

(45) Mohawk 1sg. pronouns (AJ):

- |    |                         |                 |
|----|-------------------------|-----------------|
| a. | <i>waʔkatkétskoʔ.</i>   | 'I got up.'     |
|    | <i>Δkahtá:tiʔ.</i>      | 'I'll go away.' |
| b. | <i>wakenúhwáktani.</i>  | 'I'm sick.'     |
|    | <i>tewakhwisáhé:yu.</i> | 'I'm tired.'    |

The pronoun *k-* 'I' in the verbs in 45a is also used for semantic agents of transitive clauses.

(46) Mohawk 1sg. transitive agents (AJ):

- |                   |                 |
|-------------------|-----------------|
| <i>íkshereʔs.</i> | 'I chase it.'   |
| <i>Δkéryoʔ.</i>   | 'I'll kill it.' |

The pronoun *wak-* 'I' in the verbs in 45b is also used for semantic patients of transitive clauses.

(47) Mohawk 1sg. transitive patients (AJ):

- |                    |                    |
|--------------------|--------------------|
| <i>wákshereʔs.</i> | 'It chases me.'    |
| <i>Δwakéryoʔ.</i>  | 'It will kill me.' |

The basis for the case distinction in the Iroquoian languages is more complex than in the Siouan and Caddoan languages, but the complexities are not arbitrary.

**3.2.1. ASPECT VERSUS AGENCY.** AS would be expected, the first case most often appears with verbs denoting events.

(48) Mohawk *k-* with events (AJ):

- |                        |                |                      |                   |
|------------------------|----------------|----------------------|-------------------|
| <i>katá:wás.</i>       | 'I swim.'      | <i>katerí:yos.</i>   | 'I fight.'        |
| <i>katsherú:nis.</i>   | 'I dress up.'  | <i>tékyáʔs.</i>      | 'I gamble.'       |
| <i>Δkásheteʔ.</i>      | 'I'll count.'  | <i>katá:tis.</i>     | 'I talk.'         |
| <i>Δkeʔnyá:káʔneʔ.</i> | 'I'll escape.' | <i>Δkáthkwiʔteʔ.</i> | 'I'll move over.' |
| <i>waʔkatítaʔ.</i>     | 'I got in.'    | <i>sakáhketeʔ.</i>   | 'I went back.'    |
| <i>waʔkerátháʔ.</i>    | 'I climbed.'   | <i>waʔká:rateʔ.</i>  | 'I lay down.'     |

The second case appears with many verbs denoting states.

(49) Mohawk *wak-* with states (AJ):

- |                      |                       |
|----------------------|-----------------------|
| <i>wakáhtu.</i>      | 'I'm full, satiated.' |
| <i>wakhterú:ni.</i>  | 'I'm afraid.'         |
| <i>waktsiʔyó:ha.</i> | 'I'm weak.'           |

<sup>2</sup> Most Mohawk nouns contain pronominal prefixes similar in form to those that appear in verbs, but these do not reflect their case roles within the clause.

<i>wakatshenú:ni.</i>	'I'm happy.'
<i>wake<sup>?</sup>nikúhrá:tá.</i>	'I'm depressed.'
<i>wakí:tá.</i>	'I'm poor, pitiful.'
<i>wakóre<sup>?</sup>sá?</i>	'I'm fat.'
<i>wakenhrà:thá.</i>	'I have grey hair.'

An aspectual distinction between events and states does not account for all case marking, however. The first case also appears with verbs denoting states.

(50) Mohawk *k-* with states (AJ):

<i>kenákere<sup>?</sup>.</i>	'I reside (somewhere).'
<i>ke<sup>?</sup>nikù:rara<sup>?</sup>.</i>	'I'm careful.'
<i>kátórha<sup>?</sup>.</i>	'I'm lazy.'
<i>kí:teru.</i>	'I'm home, I live (in a place).'
<i>keweyá:te<sup>?</sup>.</i>	'I know how.'
<i>ke<sup>?</sup>nóshas.</i>	'I'm envious.'
<i>kená:ye.</i>	'I'm conceited.'

The second case also appears with verbs denoting events. (The combination of aorist tense *wa<sup>?</sup>* and first person *wak-* yields *uk-*. In the Kahnawà:ke dialect *k* appears as *t* before *y*.)

(51) Mohawk *wak-* with events (AJ):

<i>wa<sup>?</sup>tewako<sup>?</sup>tsísko<sup>?</sup>.</i>	'I slipped.'
<i>áwakí:ta<sup>?</sup>we<sup>?</sup>.</i>	'I'll sleep.'
<i>wakáhta<sup>?</sup>s.</i>	'I get full, satiated.'
<i>wakenà:khwás.</i>	'I get angry.'
<i>watyé:was.</i>	'I fail to find.'
<i>táwaksteríhá<sup>?</sup>.</i>	'I'll hurry.'
<i>áwake<sup>?</sup>nikúhrhá<sup>?</sup>.</i>	'I'll forget.'
<i>áwakitskwehtáryehste<sup>?</sup>.</i>	'I'll slip on ice.'
<i>úkwatáhré:<sup>?</sup>úhske<sup>?</sup>.</i>	'I was widowed, became a widow(er).'
<i>úkenó:ru<sup>?</sup>se<sup>?</sup>.</i>	'I collapsed: it was so difficult that I quit.'

Agency provides a better account of case choice here. Participants who get up, chase, swim, and are careful perform/effect/instigate and control, while those who are sick, chased, and afraid, and who slip, do not.

It was shown above that, in Lakota, performance, effect, and instigation take precedence over control, while in Caddo control is the criterial feature. In Mohawk both patterns exist.

(52) Mohawk performance without control—*k-* (AJ):

<i>wa<sup>?</sup>káhsa<sup>?</sup>ke<sup>?</sup>.</i>	'I coughed.'
<i>wa<sup>?</sup>kátstike<sup>?</sup>.</i>	'I vomited.'
<i>tekewawáheks.</i>	'I choke.'
<i>katehyá:ru<sup>?</sup>s.</i>	'I grow.'
<i>skate<sup>?</sup>wáhtha<sup>?</sup>.</i>	'I miss my aim.'
<i>wa<sup>?</sup>tkateryá<sup>?</sup>tawárye<sup>?</sup>.</i>	'I made a mistake.'

(53) Mohawk performance without control—*wak-* (AJ):

<i>wakhnyò:tskare<sup>?</sup>.</i>	'I have the hiccoughs.'
<i>wa<sup>?</sup>tewakí<sup>?</sup>tsúhkwe<sup>?</sup>.</i>	'I sneezed.'

<i>t<sub>Δ</sub>wakskará:wate?</i>	'I will yawn.'
<i>watya<sup>?</sup>tishúhkhwa?</i>	'I tremble.'
<i>wakew<sub>Δ</sub>:nis.</i>	'I stutter.'
<i>útyéshu?</i>	'I smiled.'

Some of the variation stems from the extensive idiomaticity that pervades the Mohawk lexicon, particularly the small set of verbs denoting events that are performed but not controlled by the central participant. The literal meanings of some of these verbs can still be recovered, such as *wa<sup>?</sup>tkatery<sub>Δ</sub><sup>?</sup>taw<sub>Δ</sub>rye<sup>?</sup>* 'I made a mistake', literally 'I mixed my knowing'. Other forms are sufficiently complex morphologically that it is clear they were once idioms, but their original literal senses are no longer recoverable.

One verb suggests that control might take precedence over volition, although a single verb cannot constitute sufficient evidence for a firm conclusion. Presumably fishermen always want to catch fish (+volition) but cannot control their luck. The verb *-enaw-* 'have extraordinarily good luck in fishing' appears with the patient case.

(54) Mohawk volition without control—*wak-* (AJ):

<i>uké:nawe?</i>	'I (PATIENT CASE) was lucky in fishing, caught a lot (of fish).'
------------------	--

Whatever the relative importance of performance, control, and volition, the verbs in this section indicate that Mohawk case marking is sensitive to agency. Yet this is not the full story.

**3.2.2. AFFECTEDNESS.** Agency accounted well for the differences in case marking with the stative verbs in 49 and 50 above. Those classified as agents—people who reside in a place, are careful, lazy, at home, envious, and conceited—could be viewed as performers and controllers. Those classified as patients—people who are satiated, afraid, weak, happy, and depressed—would not be. But agency does not account for all case marking with states. As in Caddo, affectedness also plays a role. People may not control their height any more than their happiness, but they are usually less affected by being tall than by being happy. Stative verbs denoting inherent properties like being tall appear with agent-case pronouns.

(55) Mohawk inherent states with *k-* (AJ):

<i>khn<sub>Δ</sub>:yes.</i>	'I'm tall.'
<i>ke<sup>?</sup>shátste?</i>	'I'm strong.'
<i>kkowá:n<sub>Δ</sub>.</i>	'I'm big.'
<i>k<sub>Δ</sub><sup>?</sup>niká:ʔa.</i>	'I'm small.'
<i>khétk<sub>Δ</sub>.</i>	'I'm ugly.'
<i>keksá:ʔa.</i>	'I'm a child.'
<i>kúkwehú:we.</i>	'I'm Indian.'
<i>kúñhe?</i>	'I'm alive.'

This distinction of affectedness accounts for case marking with another set of verbs. A large number of stative verbs are appropriate only for inanimate arguments. In Lakhota and Caddo the arguments of such verbs would never be distinguished for case, because those languages contain no definite third-

person pronominal prefixes. In Iroquoian, however, such verbs appear with obligatory, case-marked pronominal prefixes. Some appear with neuter agent pronouns (*w-* before certain vowels, *ka-* elsewhere).

- (56) Mohawk states with neuter agents (AJ):
- |                                  |                        |
|----------------------------------|------------------------|
| <i>kará:k<sub>Δ</sub></i> .      | 'It's white.'          |
| <i>kahù:tsi</i> .                | 'It's dark, black.'    |
| <i>tkayé:ri</i> .                | 'It's right, correct.' |
| <i>ká:t<sub>ΔS</sub></i> .       | 'It's thick.'          |
| <i>kató:k<sub>Δ</sub></i> .      | 'It's certain.'        |
| <i>kanó:r<sub>u</sub></i> .      | 'It's precious.'       |
| <i>tewatakwáht<sub>u</sub></i> . | 'It's flat.'           |
| <i>shaʔté:wa</i> .               | 'It's the same size.'  |

Others appear with neuter patient pronouns.

- (57) Mohawk states with neuter patients (AJ):
- |   |                    |
|---|--------------------|
| <i>yostáth<sub>Δ</sub></i> .            | 'It's dry.'        |
| <i>yóhter<sub>u</sub></i> .             | 'It's dangerous.'  |
| <i>yohrà:r<sub>u</sub>téʔ</i> .         | 'It's empty.'      |
| <i>yohr<sub>Δ</sub>:t<sub>u</sub></i> . | 'It's hanging.'    |
| <i>yokà:r<sub>u</sub>téʔ</i> .          | 'It has a hole.'   |
| <i>yohyoʔthí:ye</i> .                   | 'It's sharp.'      |
| <i>yokè:toteʔ</i> .                     | 'It's protruding.' |
| <i>yoná:naw<sub>Δ</sub></i> .           | 'It's damp.'       |

The difference between these two sets of verbs is obviously not performance or control. It is affectedness. Being white, dark, right, thick, certain, precious, flat, or a certain size, like being tall or strong, are considered inherent properties. Verbs denoting these states appear with agent-case arguments. By contrast, being dry, dangerous, empty, hanging, etc., like being satiated or afraid, are considered resultant, possibly temporary conditions: something has happened to their participants. Verbs denoting these conditions appear with patient-case arguments.

**3.2.3. THE GRAMMATICIZATION OF ASPECT.** A large number of verbs occur with patient-case pronouns that might seem surprising on semantic grounds.

- (58) Mohawk patients (AJ):
- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| <i>wakatá:w<sub>Δ</sub></i> .        | 'I (PATIENT CASE) have bathed.'      |
| <i>tewakshà:kt<sub>u</sub></i> .     | 'I (PATIENT CASE) have bent (it).'   |
| <i>yewakatewánnát<sub>Δ</sub></i> .  | 'I (PATIENT CASE) have telephoned.'  |
| <i>wakeʔnikyhrhà:t<sub>u</sub></i> . | 'I (PATIENT CASE) have cheated.'     |
| <i>wakerákw<sub>Δ</sub></i> .        | 'I (PATIENT CASE) have chosen.'      |
| <i>wakenhó:t<sub>u</sub></i> .       | 'I (PATIENT CASE) have closed (it).' |

Mohawk verbs fall into two categories on the basis of their aspectual inflection. Some verbs denote only states and appear in only one aspect, the stative. Other verbs denote events and appear in three different aspects, marked by verbal suffixes.



(59) Mohawk aspects (AJ):

- a. *kahtátyeʔs*. 'I (AGENT CASE) go away (often).'  
 b. *ákahtá:tiʔ*. 'I (AGENT CASE) will go away.'  
 c. *wakahtátyu*. 'I (PATIENT CASE) have gone away.'

The verb in 59a is used for habitual, ongoing, and generic activities. That in 59b, traditionally termed the punctual, is a perfective, and that in 59c, marked with the same suffix as many stative verbs, is a perfect. It describes a resultant state, the effect of an earlier event.

An interesting feature of the aspectual system is its interaction with case marking. The habitual and perfective aspect verbs in 59a–b appear with the agent-case pronoun *k-*; the perfect aspect verb in 59c appears with the patient-case pronoun *wak-*. Arguments of intransitive verbs in the perfect aspect, i.e. participants currently affected by an earlier event, are systematically classified as grammatical patients. The verbs in 58 thus contain patient-case pronouns because they are in the perfect aspect. Speakers have no choice: case selection has been fully grammaticized in this aspect. Because nearly all verbs denoting events appear in all three aspects, the generalization of patient case in the perfect has had a substantial effect on case marking patterns in the Iroquoian languages.<sup>3</sup>

**3.2.4. LEXICALIZATION.** As in other languages, the process of lexicalization can result in seemingly unmotivated case choices in several ways. When a verb enters the language, it becomes established with a particular case. Smiling, for example, was apparently viewed initially as uncontrolled: the verb *-yeshu* 'smile' has been lexicalized with a patient pronoun. The patient case appears every time the verb is used, not only to describe involuntary grinning, but even in requests to smile for a photograph.

(60) Mohawk (AJ):

- watyéshuʔ*. 'I (PATIENT CASE) am smiling.'  
*sayéshu!* '(You PATIENT CASE) Smile!'

<sup>3</sup> Northern Iroquoian statives actually have two interpretations with verbs denoting events, as first shown by Chafe (1980) for Seneca. He pointed out that with some verbs, particularly those denoting events with perceptible consequences like those in 58, the stative aspect is interpreted as a perfect. With others, it indicates a continuous activity. Some verbs, like Mohawk *tewakatskà:hu*, can be interpreted both ways—'I have eaten' or 'I am eating'. Whatever the interpretation, the single core argument appears as a grammatical patient in this aspect.

In transitive verbs involving two animate core arguments, there is no shift in case. The transitive pronominal prefixes remain the same in all aspects.

(i) Mohawk transitives (AJ):

- HABITUAL *khehrewáhtaʔ*. 'I (AGT) punish **her** (PAT).'  
 PERFECTIVE *ákehré:wahteʔ*. 'I (AGT) will punish **her** (PAT).'  
 PERFECT *khehrewáhtu*. 'I (AGT) have punished **her** (PAT).'

Intransitive verbs whose single arguments would be patients anyway appear with patient-case prefixes in all aspects.

(i) Mohawk aspect (AJ):

- HABITUAL *wakeʔnikúhrháʔs*. 'I (PATIENT) forget.'  
 PERFECTIVE *áwakeʔnikúhrháʔ*. 'I (PATIENT) will forget.'  
 PERFECT *wakeʔnikúhrhá:ʔá*. 'I (PATIENT) have forgotten.'

A Mohawk verb meaning 'ride horseback' appears with patient-case prefixes, like its cognate in related languages.

(61) Mohawk (AJ):

$\Delta$ *wakhsá:t* $\Delta$ ? 'I (PATIENT CASE) will ride (horseback).'

The case might seem odd until it is realized that the verb root *-hsat* $\Delta$  actually means 'carry on one's back'. (The pronominal prefix *wak-* is used both for a first-person patient alone and for a first-person patient acted on by a nonhuman agent—'it/me'.) The literal meaning of 61 is 'it will carry *me* on its back'. This verb is used for riding any animal as well as for riding piggyback, but not for riding a bicycle, etc. Interestingly, speakers have initially shown surprise when the literal meaning of the verb was pointed out, but they soon recognized the connection between riding and carrying. The verbs for riding an animal and for carrying on the back are separate lexical items for those speakers, learned and used as separate units.

When the meaning of a verb is extended, the original case usually remains unaltered. The verb 'yell, scream', for instance, appears in Mohawk, like its cognate in other Iroquoian languages, with patient pronouns in all three aspects and in commands.

(62) Mohawk (AJ):

<i>tewakh</i> $\Delta$ <i>réththa</i> ?	'I (PATIENT CASE) yell.'
<i>wa</i> $\Delta$ <i>tewakh</i> $\Delta$ <i>rehte</i> ?	'I (PATIENT CASE) yelled.'
<i>tewakh</i> $\Delta$ <i>réhtu</i> .	'I (PATIENT CASE) have yelled.'
<i>tesah</i> $\Delta$ <i>reht</i> .	'(You PATIENT CASE) Yell!'

The suffix *-ht* is a causative, suggesting that the verb may once have meant something like 'it makes me scream, yell', etc. The root no longer occurs without the causative in any of the modern languages. The verbs in 62, like their cognates in the other languages, are now used for both voluntary and involuntary actions, but the original patient-case selection remains unaltered.

Case usually remains unchanged even when the meaning of the verb shifts completely. People who throw things would seem highly agentive semantically, but the verb 'throw' appears in Mohawk with patient pronouns.

(63) Mohawk (AJ):

<i>yewakátye</i> $\Delta$ <i>s</i> .	'I (PATIENT CASE) throw (it).'
<i>ísi</i> $\Delta$ <i>ya</i> $\Delta$ <i>sá:ti</i> .	'(You (PATIENT CASE) Throw (it) away!'

This verb has cognates meaning 'throw' throughout the family, all appearing with patient-case prefixes, so it is clear that the form is quite old. The verb stem has an additional sense in Mohawk, Oneida, and Tuscarora. Without a directional prefix such as the translocative *ye-/ya* $\Delta$  in 63, it means 'lose': Mohawk *wakátye* $\Delta$ *s* 'I (PATIENT CASE) lose (it)'. (The directional prefixes do not ordinarily affect case marking.) Even with the semantic extension from 'lose' to 'throw', the case has remained unaltered: throwers are classified grammatically as patients. In Onondaga, Cayuga, Seneca, and Cherokee, the original meaning 'lose' has been lost entirely, rendering the basis for case selection opaque.

Straightness certainly seems like an inherent property, so we might expect

a verb meaning 'be straight' to appear with the agent case. Yet this verb appears in Mohawk with the patient case.

(64) Mohawk (AJ):

*yottakwarihsyu*. 'It (PATIENT CASE) is straight.'

An understanding of the derivational history of the verb clarifies the basis for case marking. The verb consists of the neuter patient prefix *yo-*, the semi-reflexive (middle voice) *-at-*, the root *-ta-kwar-* 'bulge', a stative suffix *-i*, a reversive suffix *-hsy-* 'un-', and a second stative suffix *-u*. The literal meaning of the verb is 'it has unbulged (itself)'. This verb is now used for inherent states as well: *yothahakwarihsyu*, with incorporated noun root *-hah-* 'road', means 'the road is straight'.<sup>4</sup>

Finally, the development of lexical items can obscure the initial motivation for case selection in another way. It would seem that no one is more agentive semantically than a worker, yet this verb 'work' appears only with patient-case pronouns in Mohawk.

(65) Mohawk (AJ):

<i>wakyó?te?</i>	'I (PATIENT CASE) work.'	(HABITUAL)
<i>Δwakyó?tΔ?</i>	'I (PATIENT CASE) will work.'	(PERFECTIVE)
<i>wakyó?tΔ.</i>	'I (PATIENT CASE) have worked.'	(STATIVE/PERFECT)
<i>sayó?te?</i>	'(YOU PATIENT CASE) Work!'	(IMPERATIVE)

Comparative evidence indicates that this verb began as a basic stative, perhaps meaning something like 'be occupied, engaged'. (In modern Oneida the root *-yo?te?* plus a causative means 'bother'.) Modern stative forms in the other languages are cognate: Oneida *wakyo:te?*, Onondaga *akyó?te?*, Cayuga *akriho?te?*, Seneca *akyó?:te?*, Tuscarora *wakyú?næ?*. (The Cayuga and Seneca forms contain an incorporated noun root *\*-rihw-* 'matter, affair'.) It was only after the languages had diverged that new aspectual forms were derived, and working was expressed as an event—a habitual activity, a perfective act, or a command.

Different devices were used in the various languages to derive the new aspectual forms. In Mohawk, an original stative form *wakyó?te?* was adopted as the habitual with its patient-case prefix intact, and new punctual, perfect, and imperative forms were derived, all retaining the patient case. Oneida forms

<sup>4</sup> The semireflexive is somewhat similar to a middle-voice marker, not unlike some reflexives in Romance languages. Its basic function can be seen by comparing the verbs *wa?kétsko?* 'I raised (it)' and *wa?katkétsko?* 'I got up', or *Δkè:sere?* 'I'll drag (it)' and *Δkatè:sere?* 'I'll crawl'. It contrasts subtly with the full reflexive *-atat-* in implying less conceptual separation between the roles of agent and patient. It appears with large numbers of verbs but is clearly derivational, producing autonomous lexical items. Many roots that appear with the semireflexive never appear without it. Combinations are often not fully transparent semantically: the root *-hniñu-* means 'buy', but the stem *-atΔ-hniñu-*, composed of that root plus the semireflexive, means 'sell'. The majority of semireflexive verbs appear with agent-case pronouns in the habitual and perfective aspects, like the forms here. The core participant instigates and controls an action intimately involving him- or herself. Many semireflexive verbs appear with patient-case pronouns, however; an example is *wakathú:te?* 'I hear'. Hearers neither instigate nor control their hearing. (This root does not occur without the semireflexive.)

were derived in the same way, but the patient-case pronoun was replaced with the agent case:  $\Delta kyo:t\Delta^?$  'I will work'. In Onondaga a distributive suffix was added to the older stative to form a new habitual verb, but the patient case was retained. The perfective stem took the same form:  $\xi wa:ky\acute{o}?\acute{t}eh\acute{o}?$  ( $\xi-wak-yo?\acute{t}e-h\acute{o}-?$  FUTURE-I.PATIENT-WORK-DISTRIBUTIVE-PUNCTUAL) 'I will work'. In Cayuga and Seneca causative and semireflexive affixes were added, and agent case-prefixes were used: Cayuga  $\xi katrih\acute{o}?\acute{t}a:t$  and Seneca  $\xi katy\acute{o}:\acute{t}a:t$  ( $\xi-k-at-rihw-o?\acute{t}-at$  FUTURE-I.AGENT-SEMIREFLEXIVE-matter-work-CAUSATIVE) 'I will cause myself to be engaged in the matter' > 'I will work'.

The extension of this verb  $-yo?\acute{t}e?$  from a stative 'be occupied' to a full active verb 'work' may have been prompted by European contact. A general term for work may not have been necessary in precontact times; one carried out a variety of activities necessary to daily life, but there may not have been an important distinction between work and leisure. As Reginald Henry, a Cayuga speaker, points out (personal communication, 1990), verbs like the newer Cayuga habitual  $katriho?\acute{t}a:s$  'I work' are usually used even now for paid employment outside of the home. If one is working around the house, more specific verbs are usually used—plowing, planting, washing, etc.

Case in Mohawk, as in the other Iroquoian languages, reflects a variety of distinctions (some not discussed here), but the role of each can be obscured by grammaticization and/or lexicalization.

**3.3. SHIFT OF DEFINING FEATURES OVER TIME.** Comparison of the related Lakhota (Siouan), Caddo (Caddoan), and Mohawk (Iroquoian) systems shows that the semantic bases of case categorization can shift over time. Proto-Siouan-Caddoan-Iroquoian case marking was apparently based on agency. Agency remains the primary distinction in the modern Siouan and Caddoan languages, but another major distinction has been added in Iroquoian: aspect. A comparison of the pronominal systems of these three groups of languages reveals a likely stimulus for the shift.

The Proto-Siouan-Caddoan-Iroquoian pronominal system contained prefixes only for first and second persons, a common pattern crosslinguistically (Chafe 1977, Mithun 1991a). Cognates for first and second person prefixes can be found across the three groups. The modern Siouan languages still contain only first and second person pronominal prefixes. The Caddoan languages contain first, second, and indefinite human third person pronominal prefixes. In Proto-Siouan-Caddoan-Iroquoian, as in the modern Siouan and Caddoan languages, case distinctions were made only for human beings. The Iroquoian languages, however, have developed full sets of third person pronominal prefixes referring to both humans and nonhumans. This development probably prompted the shift in the semantic basis underlying case marking.

Crosslinguistically, case systems based on agency are frequently restricted to nominals referring to human beings. Such features as performance, effect, instigation, and control are more readily attributable to human beings than to inanimate objects. A similar system in Haida appears only in 1sg. and 1plu. pronouns (Lawrence 1977). Dixon 1910 describes a Chimariko system based

on control that is restricted to 1sg. and 1plu. Tonkawa exhibits a case distinction in pronominal affixes based on control, and affixes exist only for first and second persons (Hoijer 1931). The Muskogean languages show case distinctions based on control and contain pronominal affixes only for first and second persons. (See Nicklas 1974, Heath 1977, Davies 1986, Ulrich 1986, and Jelinek 1990 on Choctaw; Nathan 1977 on Florida Seminole; Booker 1980 on Proto-Muskogean; Boynton 1982 on Mikasuki; Lupardus 1982 and Hardy & Davis 1992 on Alabama; Munro & Gordon 1982 on Western Muskogean; and Kimball 1985 on Koasati.) A Chitimacha system described in Swadesh 1946 operates only within first person. The volition distinction described in DeLancey 1985 for Lhasa Tibetan is restricted to first persons and to second persons in interrogatives. The Tsova-Tush control distinction described in Holisky 1983, 1987 is limited to first and second persons. The Central Pomo system distinguishes control and affectedness in nominals referring to humans only. The Georgian system distinguishing agents in Series II verbs, described in Harris 1981, 1982, is restricted to human beings. The Yuki system described by Kroeber 1911 and Elmendorf 1981 is restricted to animates.

Sometime after their separation from the Siouan and Caddoan languages, the Iroquoian languages developed obligatory pronominal prefixes referring to both human and nonhuman third persons. A substantial proportion of verbs, particularly those denoting states, appear only with nonhuman arguments. A distinction based on agency would have little motivation applied to inanimate entities: specifying whether rocks and trees are performers and controllers every time they are discussed would hardly be efficient. A distinction based on aspect, by contrast, would be equally applicable to human and nonhuman participants.

The feature of affectedness could provide a useful bridge between agency and aspect. Grammatical patients were characterized as those who do not perform/effect/instigate and control but who are significantly affected. Participants are significantly affected when they are in resultant and/or temporary states: things have happened to them. The criterial feature for grammatical patient status could easily be reanalyzed as aspectual, a distinction between events and inherent states on the one hand versus resultant states (perfects) on the other.

The extent of lexicalization in the Iroquoian languages may have facilitated the reinterpretation of the system. Because of the elaborate derivational morphology and noun incorporation characteristic of Proto-Iroquoian, a substantial portion of the lexicon is highly idiomatic. The meanings of many morphologically complex verb stems do not equal the semantic sums of their parts. The motivation behind case choice for many of the verbs was and is opaque, even to speakers. Speakers would have fewer transparent forms on which to base inductive generalizations.

**4. CONCLUSION: SUMMARY OF MOTIVATIONS.** The active and agentive case systems described here are grammaticized, but they are certainly not arbitrary. They share a general semantic basis, although differences in detail have resulted

in minor but systematic differences crosslinguistically. The semantic bases of these systems may be obscured by several processes, however, including shifts in defining features over time, grammaticization, and lexicalization.

**4.1. THE SEMANTIC BASIS.** Prototypical agents of both transitive and intransitive clauses share certain characteristics: they perform, effect, instigate, and control events. They do things. Prototypical patients of both transitive and intransitive clauses also share certain characteristics: they do not perform, effect, instigate, or control events, but they are affected. Things happen or have happened to them. Systems based on any of these features would yield similar case marking with the majority of verbs in most languages.

There are a few situations in which the features do not co-occur in their usual clusters. Some events, such as falling or dying, are neither instigated nor controlled by their participants. Some, such as hiccupping or sneezing, are instigated but not controlled. Some states, such as living in a place or being careful, may be viewed as performed and controlled by their participants. Some states, such as being tall or fair, affect their participants less than others, like being cold or satiated. A crosslinguistic examination of these minor classes of verbs reveals that active/agentive case-marking systems are not all based on the same single feature. In some languages aspect takes precedence (Colloquial Guaraní), in some, performance/instigation (Lakhota), and in some, control (Caddo); and in some languages several features interact (Central Pomo). Other features may be criterial in similar systems in other languages. As a result, not all active/agentive case systems are perfectly isomorphic, although they are based on the same prototypes.

Understanding the delicacy, complexity, and variability of the semantic distinctions involved can take us a long way toward explaining why languages differ in their classifications of particular verbs. This understanding is seldom sufficient to render all case marking predictable, however. Active/agentive case systems are usually the result of layers of diachronic development. Case may be selected on some principled basis at the time a lexical item enters the language, but several factors can obscure the original motivation.

**4.2. DIACHRONIC SHIFT IN DEFINING FEATURES.** Because the majority of verbs in most languages would be categorized the same way no matter which feature in the prototype were criterial, the distinguishing feature can shift over time. Since relatively few verbs are diagnostic of the actual criterial feature, speakers can easily reinterpret the semantic basis of the system to one that is still consistent with the majority of verbs in the language. Such a shift was traced through the Siouan, Caddoan, and Iroquoian languages here. An agentive feature was reinterpreted in Iroquoian as one of aspect, probably prompted by the addition of obligatory third-person pronominal prefixes referring to non-humans as well as humans. A comparison of descriptions of Tupí-Guaraní languages in Gregores & Suárez 1967, Kakumasu 1986, Jensen 1990, and Seki 1990 suggests that similar shifts may have taken place within that family.

**4.3. GRAMMATICIZATION.** Even if the semantic basis of an active/agentive case system remains unchanged over time, other factors may obscure it. Gram-

matical markers are by their nature categorical. Agent-patient case marking typically allows little room for differentiating degrees of agenthood or patienthood with either intransitive or transitive verbs. People who jump or cut things may seem more agentive semantically than those who reside or listen, yet all may be classified equivalently as grammatical agents.

The case categories may not divide the continuum of possibilities equally. One category may be semantically marked in a language, so that, for example, only highly agentive human beings are classified as agents, and all others as patients; or only those who are simultaneously noninstigators, out of control, and human are classified as patients, with all others as agents (Holisky 1978, 1979, 1981, Harris 1981, 1982, O'Connor 1986). Within a language, one case may represent a marked choice with some verbs, but an unmarked choice with others (Holisky 1983, 1987).

Grammaticization can also obscure the semantic bases of case marking when certain case choices become automatic consequences of other grammatical distinctions. In Caddo, verbs containing a causative appear with the agent case regardless of the actual amount of control involved. In Arikara the argument of any verb containing an inchoative suffix is classified as a grammatical patient. In Mohawk all arguments of intransitive perfect verbs are categorized grammatically as patients, regardless of their actual affectedness.

Like most grammatical systems, case marking can be affected by the presence of other categories and constructions in the language. If there is a separate dative case, it may assume some of the roles carried by a patient case in other languages, as in the Muskogean family. Derivational morphology—inchoative markers, causatives, reflexives or middle voice markers, benefactive applicatives, and others—may interact in important ways with case. The use of agent-case, patient-case, and/or dative-case pronouns for alienable and inalienable possession may also contribute to the overall shape of the case-marking system, as in Central Pomo *to· q<sup>h</sup>amál šaq<sup>h</sup>ó-l* 'I (PATIENT) got diarrhea', literally 'My insides came pouring out', or *to· baláy ba-né· ?čiw* 'I (PATIENT) bled', literally 'My blood spurted out'.

Despite its effects in obscuring the motivation behind some case marking, the process of grammaticization is itself highly functional. The grammaticization of case in particular constructions routinizes recurring grammatical decisions, allowing speakers to concentrate on other aspects of their message.

**4.4. LEXICALIZATION.** The effect of lexicalization in masking the semantic basis of case marking is well recognized (see for example Munro & Gordon 1982). As mentioned above, case selection may be made on some principled basis when a predicate becomes established in the language; but the combination of predicate plus case can become lexicalized and subsequently learned and used as a unit. Lexical items may be quite complex morphologically and highly idiomatic. If the literal meaning of the idiom is not perceived, the original motivation behind the case choice may be obscured. The basic meanings of verbs themselves may be extended or shift over time, while the case remains intact. Extensive lexicalization may even facilitate reanalysis of the primary factor underlying case categorization, as the motivation behind fewer cases is

discernible. If the basis of case categorization does shift, lexicalization can further complicate the picture by ensuring that combinations based on earlier criteria remain in the language along with those based on newer ones.

Lexicalization can be a particularly powerful factor in active/agentive case systems. These systems encode semantic relations between arguments and verb stems, not the status of participants in sentences or discourse. Accordingly, pronouns in these systems very often fuse with verbs morphologically, as in Guaraní, Lakhota, Caddo, and Mohawk. This coalescence may facilitate lexicalization—the learning, storage, and selection of such combinations as conceptual units. In fact, lexicalization and idiomatization have more pervasive effects in Caddo and Mohawk, where all pronouns are morphologically bound and obligatory, than in Central Pomo, where pronouns are separate words and frequently not even present in natural connected speech. The degree of fusion may also have an effect. Lexicalization seems to play a stronger role in Caddo and Mohawk, where verbs like ‘smile’ and ‘scream’ appear with patient pronouns even in commands, than in Acehnese, where, as reported in Durie 1985, imperatives are addressed only to grammatical agents. Caddo and Mohawk pronouns are tightly fused with verb stems, while Acehnese pronouns are loosely cliticized to verb phrases that may consist of long strings of words.

Because of lexicalization, a single verb cannot be taken as a reliable indicator of the primary semantic distinction underlying case marking. Still, despite its sometimes perverse effects on the transparency of case marking, lexicalization is also highly functional. It permits speakers to select larger, preformed units of language as they speak, automating recurrent case choices so that they may concentrate on more newsworthy aspects of their message.

**4.5. COGNITIVE RELEVANCE.** If the semantic bases underlying some active/agentive case marking can be obscure, should we consider such systems simply useless artifacts of history with nothing to tell us about the synchronic linguistic abilities of speakers?

There is good evidence that, even when grammaticization and lexicalization have eliminated choices, speakers are conscious at some level of the general principles underlying the system. Recall that in Central Pomo some verbs appear only with agent-case pronouns, some only with patient-case pronouns, and some with either. Even when speakers have no choice, their comments can reveal the salience of the semantic distinctions underlying the case categories. As Mrs. Jack and I transcribed and translated a taped Central Pomo conversation together, she heard the sentence in 66, over considerable background noise.

(66) Central Pomo (WL):

*Mu·l má·ta = ʔel = ʔo wá· ʔw-an*  
 that woman = the = PAT walk-around-IP  
*q'ó = ʔti ló·č' ʔi·n.*  
 what = even help-SML not-IP

‘That woman (PATIENT CASE) was walking around not helping at all.’

The use of the patient enclitic = ʔo with ‘the woman’ was surprising. Mrs. Jack



commented: 'It sounds like she's not walking around on her own power, but something's making her walk. She [Mrs. Leal] should leave that *to* out.' Because of the background noise, we may never know whether Mrs. Leal actually used the patient enclitic or the hearsay particle *do*. Nevertheless, Mrs. Jack's comment reveals her own awareness of the semantic basis of case marking, even where she feels alternatives do not exist.

Similarly, David Rood (personal communication, 1990) reports that a young Lakhota speaker once gave his an unusual form, the verb 'fall' with an agent-case pronoun.

(67) Lakhota (DR):

*wahǰxpaye* 'I (AGENT CASE) fell'

An older speaker in the room quickly corrected him: 'No one would ever say that. It would mean you did it on purpose.' The form in 67 was not part of the language, as pointed out by the older speaker, but the younger speaker had analyzed the system sufficiently to produce it, and the older speaker was sufficiently aware of the analysis to interpret it. Similar comments have been cited from speakers of Tsova-Tush (Batsbi) by Holisky (1987), speakers of Alabama by Hardy & Davis (1992), and others.

In both Central Pomo and Lakhota the semantic bases of case marking are relatively transparent. In Mohawk, case marking has been affected so extensively by grammaticization and lexicalization that we might expect modern speakers to have little access to the semantic distinctions it encodes. Yet even here there is evidence of the ongoing cognitive reality of the system. Recall that the Mohawk verb *-yoʔteʔ* 'work' appears with a patient-case pronoun in all aspects. Asked what she was doing at the blackboard one day, a three-year-old Mohawk child, Kahnekiióhstha' Edwards, gave the reply in 68, regularizing the verb along semantic grounds.

(68) Mohawk (KE):

*kyóʔteʔ*. 'I (AGENT CASE) am working.'

Adult speakers first heard her answer as *wakyóʔteʔ*, the version with a patient case that they would use, but a tape recording confirmed her use of the agent prefix. Her semantic regularization was not an isolated incident. Since that time, I have heard the same form from two other children, one aged two years ten months, the other four years.<sup>5</sup>

Should we conclude from this evidence that speakers actually do make each case choice on a semantic basis as they speak? Certainly not. The primary functions of grammaticization and lexicalization are to automate such on-line decisions. As is well known, some languages (termed fluid S in Dixon 1979) offer speakers choices with substantial numbers of verbs, such as Tsova-Tush

<sup>5</sup> An alternative explanation of this form might be the limitation in child Mohawk on the possible number of syllables per word. The early utterances of children acquiring Mohawk tend to be limited first to the single stressed syllable of a word, which is usually penultimate, then to the two final syllables, then to the last three, etc. The form *kyóʔteʔ* could be interpreted as a phonological truncation of *wakyóʔteʔ*. That explanation seems unlikely in these cases, since these children comfortably used large numbers of longer words (Mithun 1989).

or Batsbi (Holisky 1983, 1987), Tonkawa (Hoijer 1931), and languages of the Pomoan family (McLendon 1978, O'Connor 1986, 1987, §2.3 above). Many more languages, however, allow speakers few case choices. The semantic bases of these case systems come into play most clearly when speakers are the most creative, acquiring, remodeling, and extending the systems, not necessarily every time they utter a morpheme.

**4.6. ACTIVE/AGENTIVE CASE MARKING.** Case-marking patterns like those described in this paper constitute coherent, semantically motivated grammatical systems in themselves. They are not simply inefficient vehicles for expressing the subject and object categories of languages like English (Mithun 1986, 1991b, 1992, Durie 1987). They are also not hybrids of accusative and ergative systems. They reflect the grammaticization of semantic distinctions of their own.

Like other case systems, they need not underlie all constructions throughout a language. Active/agentive patterns appear especially frequently in pronominal affixes within verbs. This is no accident: they represent the grammaticization of semantic relations between predicates and arguments. Active/agentive patterns seldom if ever govern word order or complex sentence constructions, areas where other distinctions are more pertinent. In Lakhota, basic word order is best described in terms of the kinds of distinctions that underlie subject and object categories, such as starting point and topicality. In Mohawk, word order is best described in discourse/pragmatic terms: the most newsworthy information appears earliest (Mithun 1987).

Of course active/agentive case patterns, like other case patterns, can constitute components of split systems. Just as Dyirbal shows accusative case marking on pronouns but ergative case marking on nouns (Dixon 1972), Koasati shows agentive case marking on pronominal prefixes within verbs but accusative case marking on nouns (Kimball 1985). As might be expected, the arrangements of splits are not random. Different distinctions are pertinent to different areas of grammar.

Human beings can perceive such a rich variety of semantic distinctions that we should not be surprised to find different sets of features underlying various grammatical constructions in various languages at various times. If we can appreciate the variety and dynamism of grammatical patterns like those discussed here, we may be able to come closer to understanding how and why languages take the shapes they do.

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