

THE MIDDLE VOICE IN BALINESE

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1 Introduction

Through the examination of middle voice constructions in Balinese, we address two related issues raised in the recent literature dealing with this topic; namely, 1) the nature of the middle voice category (Kemmer 1993) and 2) the distribution of middle constructions (Haiman 1983). But first, a brief introduction to the Balinese structure and morphological middle forms is in order.

Balinese, like many other Indonesian and Philippine languages, has a fluid (or symmetrical) voice system, where there is no basic voice, and whereby either an agentive or patient nominal can be rather freely chosen as a primary grammatical relation (e.g., Subject, Topic, or Pivot). The following examples (1) and (2) illustrate the two relevant transitive constructions, actor-voice (AV) and undergoer-voice (UV) constructions (Arka 1998), which correspond to the Actor-Topic/Focus and Goal-Topic/Focus constructions in Philippine languages.

Transitive clauses

- (1) Actor-voice construction
Tiang nyepak cicing-e. [N-sepak] (N-verb form)
I AV.kick dog-DEF
'I kicked the dog.'
- (2) Undergoer-voice constructions
Cicing-e sepak tiang. [Ø-sepak] (Ø-verb form)
dog-DEF UV.kick I
'I kicked the dog.'

As for intransitive clauses, there are three formal classes: a) ones that have a N-verb form, b) ones that have a *ma*-verb form, and c) those that have a Ø-verb form.

Intransitive clauses

- (3) Cerik-cerik-e ngeling. [N-geling]
child-child-DEF cry
'The children cried.'

- (4) Cerik-cerik-e majujuk. [ma-jujuk]
 child-child-DEF stand up
 'The children stood up.'
- (5) Cerik-cerik-e ulung. [Ø-ulung]
 child-child-DEF fall
 'The children fell.'

Among these intransitive constructions, the *ma*-construction illustrated in (4) provides a point of departure to our inquiry of the middle voice forms in Balinese.

2 *Ma*- As a Middle Marker

In the Balinese grammatical treatments such as Artawa (1994), Clynes (1995), and Arka (1998), the *ma*-construction has generally been considered simply as an alternate or variant construction of the N-prefixed form such as (3). But there are a fair number of *ma*-forms that express those situation types that are coded by what are identified as middle voice constructions in other languages. Accordingly, it is reasonable to consider these forms as middle constructions.¹ The *ma*-prefix, in addition, has several other uses whose semantics are not straightforwardly characterizable in terms of the middle semantics. The following represent the middle and some other uses of the *ma*-prefix.

Morphological middles

- (6) *ma-suah* 'comb (hair)', *ma-suluh* 'look at oneself in the mirror'
ma-sugi 'wash (face)', *ma-ambuh* 'wash one's hair'
ma-baseh 'wash one's hands/feet'
ma-cukur 'shave' (Artawa's dialect) 'cut one's hair' (Arka's dialect)
ma-kuris 'shave one's beard/moustache' (Arka's dialect)
ma-pupur 'powder oneself'
ma-sikat 'brush oneself (e.g., own teeth)'
ma-dengdeng 'dry oneself, sun-bake', *ma-payas* 'dress oneself'
ma-topong 'have a hat on', *ma-song* 'have a hole'
ma-umah 'have a place to stay'
ma-bapa 'has a father-relation with someone' 'call someone *bapa*/father'
ma-adi 'has a sibling relation with someone' 'call *adi*/younger sibling'
ma-linge 'lie face down', *ma-sila* 'sit down cross-legged'
ma-jujuk 'stand up' (straight, not bending), *ma-tangi* 'stand up'
m(a)-engkeb 'hide', *ma-jalan* 'walk', *ma-laib* 'run'
ma-kecog 'jump', *ma-lincer* 'spin', *ma-suryak* 'shout'
ma-takon 'ask', *ma-bangkes* 'sneeze', *ma-kecuh* 'spit'
ma-kenyir 'smile very briefly', *ma-keplug* 'explode (once)'
ma-krepet 'produce cracking sounds'
ma-kebyah 'flash (of light) once', *ma-kudus* 'produce smoke'

Singaraja dialect (Clynes 1995: 264)

- me-kecuh* 'spit', *me-solah* 'dance.HI', *me-tangi* 'wake up'
me-suryak 'cheer', *me-suat* 'answer', *me-gending* 'sing'

me-gendi ‘leave’, *me-keber* ‘fly’, *me-sedédég* ‘lean against’
me-bading ‘turn around’, *me-cuab* ‘sprout out (e.g., blood)’ etc.

Reciprocal *ma-...(-an)*²

- (7) Manuk-e ma-palu.
 roosters-DEF fight.each other
 ‘The roosters are fighting (each other).’
- (8) Wayan lan Made ma-jagur-an.
 Wayan and Made fight.each.other
 ‘Wayan and Made are fighting.’

Resultative *ma-*

- (9) Jajan-e suba ma-gugut.
 cake-DEF already ma-bite
 ‘The cake is already bitten.’

Antipassive *ma-*

- (10) a. Nasi-ne daar tiang.
 rice-DEF eat 1SG
 ‘I ate the rice.’
 b. Tiang ma-daar. (Antipassive)
 1SG ma-eat
 ‘I ate.’
- (11) a. Ia ngeneh-ang tiang.
 3SG think-APPL 1SG
 ‘He is thinking about me.’
 b. Ia ma-keneh **teken** tiang. (Antipassive)
 3SG ma-think to 1SG
 ‘S/he has some feeling (love) for me.’

Inchoative *ma-*

ma-medih ‘become angry’ < *depid* ‘angry’
ma-meseh ‘become swollen’ < *beseh* ‘swollen’
ma-manes ‘become troublesome/ become angry/ start to cause problems’ < *panes*
 ‘hot/angry’

“Pretend” *ma-*

ma-mongol ‘pretend to be deaf’ < *bongol* ‘deaf’
ma-mules ‘pretend to sleep’ < *pules* ‘sleep’

3 On the Nature of the Middle Category

3.1 Reflexives and Middles

The first issue we wish to deal with has to do with the nature of the middle voice category; namely, a topic extensively studied by Kemmer (1993). On the basis of the observation that there are both those languages that do not formally distinguish between reflexive and middle constructions and those that do, Kemmer recognizes two types of languages, which she identifies as “one-form languages” and “two-form languages,” respectively.

Spanish (one-form language)

- (12) a. María **se** vio. (Reflexive)
 MID see
 ‘Maria saw herself.’
 b. María **se** peinó. (Middle)
 MID comb
 ‘Maria combed (herself).’

Swedish (two-form language)

- (13) a. Hon såg **sig själv**. (Reflexive)
 she saw herself
 ‘She saw herself.’
 b. Hon kammade **sig**. (Middle)
 she comb MID
 ‘She combed (her hair).’

Kemmer (1993:28) then goes on to say that: “[t]he marking patterns described above...tell us two things. One is that since reflexive and middle markers often show synchronic and/or diachronic formal relations, we can conclude that there is a semantic relation between the categories that these markers express. On the other hand, the fact that languages often do make a formal distinction between reflexive and middle marking also suggests that there is a semantic distinction between the functional correlates of these formal markers which is susceptible to linguistic coding. It is the two-form languages in which this difference is most clearly manifested.”

On the basis of the considerations expressed above, Kemmer distinguishes reflexive situation types and middle situation types in the following manner. Those constructions that express reflexive situation types are then identified as reflexive constructions, and those that express middle situation types are treated as middle constructions.

Reflexive situation types

- Direct reflexive (*John hit/kicked/killed himself.*)
- Indirect reflexive (*John built a house for himself.*)
- Logophoric reflexive (*She feels herself (to be) abused.*)

Middle situation types

- Body action middles
 - Grooming actions (wash, shave, bathe, dress, adorn...)
 - Change in body posture actions (sit down, kneel down, lie down...)

Nontranslational motion actions (stretch, bow, turn, shake...)
 Translational motion actions (fly, flee, go away, climb up...)
 Indirect middles (choose, acquire, get, obtain...)
 Emotion middles (be angry, fear, desire...)
 Cognition middles (think, cogitate, consider, deliberate...)
 Spontaneous middles (break, open, freeze, melt...)

As a way of representing the similarity and distinction between reflexive and middle situations, Kemmer (1993:73) proposes the following table, where different situation or event types are placed on the continuum based on the parameter of what she calls “degree of distinguishability of participants.”

Table 1: *Distribution of event types according to Kemmer (1993)*

Two-participant event	Reflexive	Middle	One-participant event
+ ←-----> -			
Degree of distinguishability of participants			

Our first criticism of Kemmer’s approach arises from the observation in Balinese that the so-called reflexive constructions and the so-called middle constructions are sometimes not easily distinguishable on the basis of meaning. For example, there is an area of overlap between these two constructions as observed by Artawa (1994), who says that “[*ma*-prefix] is used to express a reflexive meaning. The base form can be a noun as in [(14)] or a precatatorial as in [(15)] below.”

- (14) Ia sedek mapupur. [ma-pupur]
 3SG ASP put on.powder
 ‘She is putting powder on her face.’

- (15) Ia sedek masugi. [ma-sugi]
 3SG ASP wash.face
 ‘She is washing her face.’

“The activity signified by the verb in each of the above examples has a reflexive meaning, that is, the subject of the sentence does something on himself/herself. These sentences are paraphrasable as follows respectively.”

- (16) Ia sedek mupurin awak-ne. [N-pupur-in]
 3SG ASP AV.put on.powder self-3SGPOSS
 ‘She is putting powder on herself.’

- (17) Ia sedek nyugiin awak-ne. [N-sugi-in]
 3SG ASP AV.wash.face self-3SGPOSS
 ‘She is (face-)washing herself.’

Indeed, as observed below, there is no clear cutoff point between reflexive situations and middle situations, or the constructions representing them. Kemmer’s representation of the relevant situation types in Table 1 countenances a continuum, and as such our criticism here may appear pointless. But in fact it is not. The point is that drawing a line between reflexives and middles as proposed by Kemmer is arbitrary. Why not, for example, recognize grooming actions as a reflexive situation type, as suggested by Artawa’s observation above? Plausibility of other divisions is evident if one examines middle data from any language at a greater depth, as apparent in the Balinese data examined below and in the Swedish data studied by Sundman (1987) and Tohno (1999).

The question of what really distinguishes reflexive constructions from middles has not been made explicit either in Faltz (1985), who focuses on reflexive constructions; or in Kemmer (1993), focusing on middles. Faltz’s general assumption seems to be that while reflexives are generally transitive, as in the English form *John hit himself*, middles are generally intransitive. This observation is reflected in Kemmer’s representation in Table 1, where middle situations are leaning toward the one-participant (i.e., intransitive) situation type, whereas reflexive situations are positioned closer to the two-participant (transitive) situation type. Unfortunately, actual situations are not as straightforward as these assumptions suggest. There are numerous languages in which certain middle constructions assume the form of a transitive clause. Just to illustrate this point from two quite divergent languages, observe the following patterns from Classical Greek and the Tibeto-Burman language Sanxiang Dulong/Rawang.

Classical Greek

- (18) a. túptomai (Reflexive)
 ‘I strike myself.’
 b. louómai (Middle)
 ‘I am washing (myself).’
- (19) a. louō **khitôna** (Active)
 wash.1SG.ACT shirt
 ‘I wash a shirt.’
 b. louómai **khitôna** (Middle)
 wash.1SG.MID shirt
 ‘I wash my shirt/I wash a shirt for myself.’

Sanxiang Dulong/Rawang (Tibeto-Burman; LaPolla 1996:1943-1945)

- (20) a. aŋ⁵³ sat⁵⁵ -ɕu³¹ (Reflexive)
 3SG hit-MID
 ‘S/he is hitting her/himself.’
 b. aŋ⁵³ et⁵⁵ -ɕu³¹ (Middle)
 3SG laugh-MID
 ‘S/he is laughing.’

- (21) a. aŋ⁵³ a³¹dʒuɫ³¹ a³¹beʔ⁵⁵ (Active)
 3SG mosquito hit
 ‘S/he is hitting the mosquito.’
 b. aŋ⁵³ a³¹dʒuɫ³¹ a³¹beʔ⁵⁵-ɕu³¹ (Middle)
 3SG mosquito hit-MID
 ‘S/he is hitting the mosquito (on her/his body).’

(19a) and (21a) are transitive active sentences, with *khitôna* ‘shirt’ and a³¹dʒuɫ³¹ ‘mosquito’, respectively, as a direct object. Notice that (19b) and (21b) have the middle inflection/affixation, formally indicating that they clearly are middle constructions, but they also contain the same direct object as the corresponding transitive active construction. Thus there are middle constructions that are syntactically transitive.

More disturbing to Kemmer’s positioning of reflexive and middle situations in Table 1 is that these middle constructions with a direct object, hence the middle situations they represent, clearly involve two highly distinguishable participants, requiring their positioning farther toward the two-participant event than reflexives.³

Finally, it is observed that in certain languages (e.g., Greek) a reflexive pronoun and a middle inflection can co-occur, indicating that reflexive and middle constructions are not disjoint.

Classical Greek

- (22) èautòn apokúrtesthai ‘to hide himself’ (Smyth 1956:391)

Modern Greek

- (23) iperaspízete ton eaftó tu (Manney 2000:51)
 defend.3SG.MID the self.ACC 3SG.GEN
 ‘He’s defending himself (with a great deal of passion and zeal).’

3.2 Functional-Typological Approach

The problem inherent in the past studies dealing with reflexive and middle constructions such as Faltz (1985) and Kemmer (1993) is due to their failure to follow the basic procedures of functional-typology. The functional-typological methods, as practiced even in such early typological studies of causative constructions as Shibatani (1973, 1976), require a semantic definition of the functional domain to be typed. Approaching a functional domain based on the form, e.g., middle morphological marking or causative marking, constitutes only an initial step in establishing form-function correlation in this framework. Both a thorough language internal and a crosslinguistic study require us to step back from the initial, form-based observation and to posit a form-independent definition for the particular functional domain under investigation. This is because, for one thing, different languages may use different grammatical resources in the expression of a similar function; and, for another, a language may possess more than one formal expression-type for the relevant functional domain.

Form-independent definitions of voice domains have been notoriously difficult and controversial. Indeed, in the past a coherent and comprehensive conceptual framework for various voice phenomena has been lacking. Much progress, however, has been made in

recent years. Shibatani (2006), for example, sees voice as grammatical categories representing different aspects of the evolution of an action (including a process). Under this view, three major parameters are recognized, each representing a different evolutionary phase of an action. The following summarizes these and some subparameters and the relevant voice oppositions and grammatical constructions:

Voice parameters

1) Origin of an action

- (a) How is the action brought about? (Active-spontaneous)
- (b) Where does the action originate? (Active-passive; Direct-inverse; Split-ergativity; Causatives)

2) Development of an action

How does the action develop—beyond the agent or confined to the agent? (Active-middle; see below)

3) Termination of an action

- (a) Does the action develop to its full extent and affect the patient; or does it fail to do so? (Ergative-antipassive; Conatives; Partitive constructions)
- (b) Does the action develop further than its normal course such that the effect is registered in an entity beyond the direct participants of the event? (Benefactives/applicatives; External possession; Ethical datives; Adversative passives)

As indicated above, the active-middle opposition pertains to the developmental phase of an action. The question is essentially whether an action (or process) extends beyond the sphere of an agent and develops in another entity (active voice) or it is confined within the sphere of the protagonist (middle voice).

Active-Middle opposition

Active voice:

The action is transferred to and develops in an entity beyond the sphere of the agent.

Middle voice:

The development of an action/process is confined within the sphere of the protagonist.

The definition of the middle voice category in terms of the confinement of an action/process within the sphere of the protagonist is a traditional one, as can be seen from Benveniste's (1950/1971:148) characterization of the active-middle opposition: "In the active, the verbs denote a process that is accomplished outside the subject. In the middle, which is the diathesis to be defined by the opposition, the verb indicates a process centering in the subject, the subject being inside the process."

Once the semantic characterization of the middle voice domain is reached, our next task is to collect various forms representing the meaning of this domain. Given the above definition of the middle category, it is easy to see that the so-called reflexive constructions are middle expressions par excellence. For example, if one transfers one's action of killing to another person and the process of dying is achieved in the latter, we obtain an active

situation, whereas if one confines such an action within one's own domain, we would obtain a middle situation expressed by a reflexive construction such as the English form *John killed himself*. Reflexive constructions of this type are then nothing but periphrastic middle constructions, where a middle marker (the reflexive pronoun *himself*, in our example) occurs as an independent word.⁴

If one makes someone squat, we obtain an active situation. If, on the other hand, one confines the activity of squatting to oneself, we obtain a middle situation, expressible in an intransitive construction as in the English form *John squatted*. This form, while there is no overt middle marking, is a middle construction because it represents a middle situation, as much as a verb such as *kill* is a causative verb despite its lack of a causative marker. What verbs such as *squat*, *shave* (as used in *John is shaving*) and, in fact, all underived intransitive verbs represent is a class of lexical middles. Our claim, essentially, is that the traditional transitive-intransitive distinction is rooted in the active-middle voice opposition.

Balinese *ma*-marked middles represent a class of morphological middles, where middle marking is realized morphologically, i.e., as part of a word. What Kemmer (1993) and others in the past have concentrated on in the name of middle construction are these morphological middles. But a typological study demands that we examine the entire spectrum of middle constructions, ranging from the periphrastic to the lexical type (as in the case of causatives), and to determine the form-function correlation. Indeed, not only causatives and middles, but the whole host of constructions come in the three formal types, which must be said to typically form a continuum (see Shibatani and Pardeshi 2002). For example, reciprocals may be lexical (e.g., English *marry*, *quarrel*), morphological (e.g., Japanese *naguri-a(w)-u* 'hit each other'), or periphrastic (e.g., *John and Bill hate each other*). English negation shows three types also: e.g., lexical *deny*, morphological *impossible*, and periphrastic *not possible*.

The organization of the active-middle opposition is thus expressible as in the following table, where the correspondence between our representation and Kemmer's is also indicated at the bottom.⁵

Table 2: *Organization of the active-middle opposition*

Active-Middle Opposition	
Active voice category	Middle voice category:
	Periphrastic.....MorphologicalLexical middle middle middle
	+ ←-----→ - Productivity ⁶
Two-participant event	Reflexive Middle One-participant event

Returning to Balinese, we now recognize that the language has all three types of middle represented.

Table 3: *Balinese middle types*

Periphrastic.....	Morphological.....	Lexical
<i>nyagur awak</i> - ‘hit oneself’	xxx	xxx
<i>nyukur awak</i> - ‘shave oneself’	<i>ma-cukur</i> ‘shave’	xxx
xxx	<i>ma-jalan</i> ‘walk’	xxx
(causative + <i>awak</i>)	xxx	<i>nyongkok</i> ‘squat’
(causative+ <i>awak</i>)	xxx	<i>negak</i> ‘sit’

4 Distribution of Middle Forms

Having identified the types of middle form found in Balinese, our next task is accounting for the form-function correlation; i.e., how the different types of middle form are distributed over the middle domain. Again, some progress toward this goal has been made in recent years. We will specifically examine the account offered in Haiman (1983). In this paper, Haiman compares what he calls “reduced” and “full” reflexive forms and proposes a functional explanation for their distribution. The data examined are illustrated by the following examples from English and Russian, where the (a) sentences have a full form and the (b) sentences a reduced form.

English

- (24) a. Max kicked **himself**.
b. Max washed.

Russian

- (25) a. On porezal **sebja**.
he cut self
‘He cut himself.’
b. Ona odevaet-**sja**.
she dress-MID
‘She is getting dressed.’

In accounting for the distribution of these forms, Haiman (1983:803) distinguishes between what he calls “extroverted verbs” and “introverted verbs,” whose definitions are given as below:

Extroverted verbs: “describe actions which the subject usually performs toward others”

Introverted verbs: “refer to actions which one generally performs upon one’s self”

Capitalizing on Zipf’s (1935) observation on the correlation between the form size and the familiarity of concept, Haiman tells us that: “the **full form** corresponds to an unexpected object, and the **reduced form** to an expected object—where both are

coreferential with the subject of the verb” (1983:803; emphasis added). That is, with an extroverted verb like *kick* and *cut*, the normal expectation is that the action is directed toward others. The full reflexive forms in (24a) and (25a) indicate unexpected situations where extroverted actions are directed to the patient coreferential with the subject. When introverted activities are directed toward the subject in accord with the normal expectation, the reduced forms would be used, as in the (b) forms above. In short, “[w]e have then an economic explanation for the null [or reduced] expression of the reflexive pronoun with introverted verbs: the familiar or expected case is signaled by a reduced form” (Haiman 1983:803).

Haiman’s account is an excellent demonstration of how cognition and grammar interact, and for this reason it is a functional explanation par excellence. Though on the right track, Haiman’s account still leaves many details to be filled in. In the next section, we will take up some of the residual issues associated with Haiman’s functional explanation. A more substantive argument against Haiman’s formulation of economic motivation will subsequently be advanced.

5 Continuum in the Balinese Middle

An initial problem with Haiman’s account has to do with the binary distinction posited between extroverted and introverted verbs. A closer examination in Balinese and other languages reveals that there is no clear-cut boundary between these two types of verbs; rather, verbs form a continuum. This is shown in the patterns of active-middle formation in Balinese.

The first pattern involves unambiguous extroverted verbs. Here i) the active verb form is underived, ii) no morphological middle formation in term of the *ma*-prefix is permitted, and iii) the middle situation is expressed exclusively by the periphrastic form involving the reflexive *awak*, as seen below:

Pattern 1. Underived active form; no *ma*- form; reflexive (periphrastic middle) forms only (stab, kick, hit, etc.).

- (26) a. Tiang nebek Wayan. (Active)
 I N-stab Wayan
 ‘I stabbed Wayan.’
 b. Tiang nebek awak tiang-e. (Periphrastic middle)
 I N-stab self I-POSS
 ‘I stabbed myself.’
 c. *Tiang ma-tebek. (Morphological middle)
 I MID-stab
 ‘I stabbed myself.’

We have been able to identify only one verb (*gagas* ‘scratch’) exemplifying the second pattern, which deviates from the first pattern in that the *ma*-morphological middle is marginally permitted. Instead of the simple *ma*-form, the reciprocal *ma*...-*an* form may be used, as in (d) below.

Pattern 2. Underived active form; simple *ma*-form marginal; reflexive form preferred (scratch).

- (27) a. Tiang ngagas Wayan. (Active)
 I N-scratch Wayan
 'I scratched Wayan.'
 b. Tiang ngagas awak tiang-e. (Periphrastic middle)
 I N-scratch self I-POSS
 'I scratched myself.'
 c. ?*Tiang ma-gagas. (Morphological middle)
 I MID-scratch
 'I scratched myself.'
 d. Tiang ma-gagas-an.
 'I scratched myself.'

The third pattern involves i) underived active verb forms, and both ii) periphrastic and iii) morphological middles are permitted with equal facility. The periphrastic forms here do not require extraneous assumptions about the agent performing the action as in some other cases studied below. We characterize this type of periphrastic middle expression as a "natural" reflexive form. Again, there are not many verbs that display this pattern, the verb *cukur* 'shave' in Ketut Artawa's dialect, and the verb *kuris* 'shave' in I Wayan Arka's dialect being the two we have been able to identify.

Pattern 3. Underived active form; both *ma*-forms and natural reflexive forms equally possible

- (28) a. Wayan nyukur Ketut. [N-cukur] (Active)
 Wayan N-shave Ketut
 'Wayan is shaving Ketut.'
 b. Wayan nyukur awak-ne. (Periphrastic middle)
 Wayan N-shave self-3POSS
 'Wayan is shaving himself.'
 c. Wayan ma-cukur. (Morphological middle)
 Wayan MID-shave
 'Wayan is shaving.'

Pattern 4 involves active forms derived via applicativization, while both *ma*-forms and reflexive forms obtain with equal facility. A fair number of grooming actions are expressed by this pattern. Unlike *cukur* and *kuris*, which are free root verbs, the forms showing the following pattern are either 1) bound-root verbs (the so-called "precatatorial" forms; see Artawa 1994), which cannot occur without some affix being attached, or 2) nouns functioning as a verb with the aid of an affix. *Sugi* 'wash (face)', *baseh* 'wash (limbs)', and *ambuh* 'wash (hair)' are bound-root verbs, while *suah* 'comb', *sikat* 'brush (teeth)', and *pupur* 'powder (face)' are noun-based. The essential difference between Pattern 3 and 4 is that forms belonging to the latter require conversion to a syntactically

viable verb form via applicativization. Otherwise, all grooming actions can be expressed either by *ma*-morphological form or the natural reflexive form.

Pattern 4. Derived active forms; both *ma*- and natural reflexive forms obtain.

- (29) a. Tiang nyuah-**in** panak tiang-e. (Applicative Active)
 I N-comb-APPL child I-POSS
 'I combed my child.'
- b. Tiang nyuah-**in** awak tiang-e. (Periphrastic middle)
 I N-comb-APPL self I-POSS
 'I combed myself.'
- c. Tiang ma-suah. (Morphological middle)
 I MID-comb
 'I combed myself.'

Pattern 5 has active forms derived through causativization, and *ma*-middle forms. Periphrastic middles in the reflexive form are possible, but unlike the natural reflexive forms seen above, their use is associated with extraneous assumptions about the agent; e.g., an invalid trying hard to stand up, lie down, etc. That is, these periphrastic middles express more unusual, deliberately performed middle actions,⁷ indicating that *ma*-forms are preferred middle forms for expressing natural middle actions.

Pattern 5. Derived active forms; both *ma*-forms and deliberate reflexive forms possible (stand up, lie down, walk)

- (30) a. Tiang nyujuk-**ang** Wayan. (Causative active)
 I N-stand up-CAUS Wayan
 'I stood up Wayan.'
- b. Tiang nyujuk-**ang** awak tiang-e. (Periphrastic middle)
 I N-stand up-CAUS self I-POSS
 'I stood up myself.'
- c. Tiang ma-jujuk. (Morphological middle)
 I MID-stand up
 'I stood up.'

The next pattern, Pattern 6, also has causative active forms like Pattern 5, but unlike the latter, it requires a periphrastic causative, rather than the morphological *-ang* causative.⁸ The causative-based periphrastic middles here also convey deliberate middle actions.

Pattern 6. Periphrastic causative active forms; *ma*-middles; periphrastic causative reflexive forms (walk, fly). Those *ma*-marked middles whose protagonists are agentive follow this pattern.

- (31) a. *Tiang ngae Wayan ma-jalan.* (Periphrastic causative)
 I make Wayan MID-walk
 ‘I made Wayan walk.’
 b. *Wayan ma-jalan.* (Morphological middle)
 Wayan MID-walk
 ‘Wayan walked.’
 c. *Wayan ngae awak-ne ma-jalan.* (Periphrastic middle)
 Wayan make self-3POSS MID-walk
 ‘Wayan made himself walk.’

Pattern 7. Morphological causative active forms; lexical middles, and deliberate reflexive forms (sit, bathe). Those lexical middles whose protagonists are simultaneously agent and patient follow this pattern.

- (32) a. *Wayan negak-ang pakak-ne.* (Causative Active)
 Wayan N-sit-CAUS son-3POSS
 ‘Wayan sat his son.’
 b. *Wayan negak-ang awak-ne.* (Periphrastic middle)
 Wayan N-sit-CAUS self-3POSS
 ‘Wayan sat himself.’
 c. **Wayan ma-tegak.* (Morphological middle—not possible)
 Wayan MID-sit
 ‘Wayan sat.’
 d. *Wayan negak.* [N-tegak] (Lexical middle)
 Wayan N-sit
 ‘Wayan sat.’

Pattern 8. Periphrastic causative active forms; lexical middles, periphrastic causative reflexive (swim, etc.). Those lexical middles whose protagonists are agentive follow this pattern.

- (33) a. *Wayan ngae Ketut nglangi.* (Periphrastic causative active)
 Wayan make Ketut swim
 ‘Wayan made Ketut swim.’
 b. *Ketut nglangi.* (Lexical middle)
 Ketut swim
 ‘Ketut swam.’
 c. *Wayan ngae awak-ne nglangi.* (Periphrastic middle)
 Wayan make self-3POSS swim
 ‘Wayan made himself swim.’

The Balinese patterns above indicate that certain actions, e.g., stabbing, hitting, kicking, are clearly treated as extroverted verbs with unmarked active forms and with periphrastic (or “full”, to use Haiman’s characterization) middles. They also show that activities like sitting and swimming are treated as introverted activities in Balinese, where the middle situation receives an unmarked (lexical middle) expression, and where the

active situation requires a marked (causativized) expression. However, between these two polar patterns predicted by Haiman's account, there are activities that are treated differently from these. Especially noteworthy are grooming actions such as shaving and combing (see examples in 28 and 29 above) that require marking only in middle expressions or in both active and middle expressions. The marking pattern here indicates that these activities are categorized as those that can naturally be applied to others as well as to oneself. Notice further that these situations can be naturally expressed by periphrastic middles (cf. 28b and 28c, and 29b and 29c), indicating that they are construable either as a reflexive situation type or a middle situation type, according to Kemmer's classification.

It must be pointed out here that an account based on the markedness pattern like the above has a limitation. Whether or not a particular introverted action is expressed as an unmarked lexical middle form is not entirely predictable. This is easy to see when two languages are compared. In Balinese, while *ma-jujuk* 'stand (up)' has an overt middle marking, *negak* [N-tegak] 'sit (down)' is lexical without any morphological middle marking.⁹ In German, however, the pattern is reversed such that *sich hinsetzen* 'sit down' has a middle marker, while *aufstehen* 'stand up' does not. In Balinese *ma-keber* 'fly' is middle-marked, but *nglangi* [N-langi] 'swim' is not. German marks *sich schütteln* 'shake', but not *zittern* 'tremble'.

What we see here is a limitation of a synchronic account. Perhaps a diachronic explanation, such as the one based on a diachronic spread of middle marking (see Kemmer 1993), is required for these irregular patterns. However, even a diachronic account would have a tough time explaining why the verb for stand up gets the middle marker prior to the verb for sitting down in Balinese, while the order is reversed in German. Perhaps the following discussion may shed some light on this kind of question.

5.1 Beyond Verbs

While the above discussion drawing upon Haiman's (1983) insight has been carried out in terms of individual verbs, actually some data suggest that what is really relevant are situation types and how specific situations are construed. This can be seen from the use of the verb of seeing in Swedish. The following pattern shows that while seeing oneself directly is construed as an extroverted activity applied to oneself requiring a periphrastic expression, seeing oneself in the mirror is construed as a type of grooming action, which is normally expressed by the clitic middle form.

Seeing in Swedish (Sundman 1986, Tohno 1999)

- (34) a. Hon såg ***sig/sig** **själv**.
 'She saw herself.'
 b. Hon såg **sig** (**själv**) **i spegeln**.
 'She saw herself in the mirror.'

In Balinese seeing oneself in the mirror has a special word (*ma-suluh*) distinct from the one (*tingalin*) used for seeing someone/something else.

- (35) a. Tiang ma-suluh di kaca-e.
 I MID-see in mirror-DEF
 'I saw myself in the mirror.'

- b. *?Tiang nyuluh-in Wayan di kaca-e.
 I N-see-APPL Wayan in mirror-DEF
 'I saw Wayan in the mirror.'
- c. Tiang ningal-in Wayan di kaca-e.
 I N-see-APPL Wayan in mirror-DEF
 'I saw Wayan in the mirror.'

5.2 Different Language, Different Logic

Speakers of different languages (or even speakers of a single language) may construe the same situation differently, depending on the different logic they use. In Balinese and English, committing suicide by hanging is construed as a case of extroverted action applied to oneself, for, presumably, one normally hangs other things (including people!?) than oneself.

- (36) a. Ketut ngantung I Made. (Active)
 N-hang
 'Ketut hanged I Made.'
- b. Ketut ngantung awak-ne. (Periphrastic middle)
 N-hang self-3POSS
 'Ketut hanged himself.'
- c. Ketut ma-gantung. (Resultative)
 'Ketut is hanged.'

The *ma*-form above is interpreted as a resultative and does not allow a middle interpretation.

- (37) a. John hanged Bill. (Active)
 b. John hanged himself. (Periphrastic middle)
 c. * John hanged. (Lexical)

In Swedish and Japanese, however, committing suicide is construed as something one normally does to oneself, i.e., like grooming actions. The likely logic here is that people do not in fact typically go out and hang other people; if hanging is ever done, it is likely to be done to oneself. Thus, it is the short clitic forms that are used in Swedish, the pattern seen for grooming actions.

Swedish

- (38) a. Han hängde sig.
 he hanged MID
 'He hanged himself.'
- b. Han sköt sig i huvudet.
 he shot MID in head
 'He shot himself in the head.'

In Japanese those activities that one typically applies to oneself are expressed without the use of the reflexive possessive form, as in (39b) below, while such a form is usable for activities usually applied to others, as in (39a).

Japanese

- (39) a. Taroo-wa zibun-no atama-o tatai-ta.
 Taro-TOP self-of head-ACC hit-PAST
 'Taro hit his own head.'
 b. Taroo-wa ([?]zibun-no) ha-o migai-ta.
 Taro-TOP self-of teeth-ACC polish-PAST
 'Taro brushed (his) teeth.'

(39b), with the reflexive possessive form, is usable only in a context where Taro's teeth are contrasted with other's; e.g., Taro brushed his own teeth after brushing Fido's. Now, hanging oneself in Japanese, like Swedish, is construed similarly to grooming actions, like brushing one's teeth.

- (40) Taroo-wa ([?]zibun-no) kubi-o tut-te sin-da.
 Taro-TOP self-of neck-ACC hang-CONJ die-PAST
 '(lit.) Taro died hanging (his) neck.'

5.3 Circumscribing One's Personal Sphere

Finally, languages differ with regard to the correlation of middle marking and circumscribing one's personal sphere. In many languages body parts, possessed objects, and sometimes one's own relatives or even an entity temporarily located in one's vicinity are construed as belonging to one's sphere, and one's action affecting them is construed similarly to affecting oneself triggering morphological middle marking.

Spanish

- (41) a. María lavó su blusa. (Active)
 'Maria washed her blouse.'
 b. María **se** lavó **la cara**. (Middle)
 'Maria washed her face.'
 c. María **se** lavó la blusa. (Middle)
 'Maria washed the blouse for herself.'

Classical Greek

- (42) loúomai khitôna (Morphological middle)
 wash.1SG.MID shirt
 'I wash my shirt/I wash a shirt for myself.'

Sanxiang Dulong/Rawang

- (43) aŋ⁵³ a³¹dzuɿ³¹ a³¹beŋ⁵⁵-ɕu³¹ (Middle)
 3SG mosquito hit-MID
 'S/he is hitting the mosquito (on her/his body).'

Sanskrit (Klaiman 1988)

- (44) Devadatto bhārāym upayaccha-te. (Middle)
 Devadatta wife have relations-3SG.MID
 ‘Devadatta has relations with his (own) wife.’

Notice the difference between Spanish and Classical Greek. In the former, (41b), while washing one’s face triggers middle marking, washing one’s shirt, (41a), does not. The middle form in (41c) is a self-benefactive middle expression. In Classical Greek, on the other hand, washing one’s shirt triggers the middle inflection. Both Sanxiang Dulong/Rawang and Sanskrit extend those entities triggering middle marking to a greater extent than many other languages.

In Balinese *ma*-marked middle constructions are all syntactically intransitive, and affecting those entities belonging to one’s sphere does not trigger *ma*-marking as long as they are overtly expressed as an object.

Balinese

- (45) a. Wayan ma-kuris. (Morphological middle)
 Wayan MID-shave
 ‘Wayan is shaving.’
 b. Wayan nguris kumis awak-ne. (Periphrastic middle)
 Wayan N-shave beard self-3POSS
 ‘Wayan is shaving his own beard.’
 c. *Wayan **ma**-kuris kumis awak-ne.
 d. Wayan nguris kumis panak-ne. (Active)
 Wayan N-shave beard son-3POSS
 ‘Wayan is shaving his son’s beard.’

Ma-forms are possible as long as an affected body part is only lexically implied as in the following examples:

- (46) a. Wayan ma-ambuh.
 Wayan MID-wash (self’s hair)
 ‘Wayan washed his hair.’
 b. Wayan ma-baseh.
 Wayan MID-wash (self’s limbs)
 ‘Wayan washed his limbs.’

While morphological and lexical middles in Balinese are strictly intransitive in form, periphrastic middles are syntactically transitive, just as the lexical and periphrastic middles in English are; *John washed*, *John squatted* vs. *John washed himself*, *John hit him*. In languages like Classical Greek and some others referred to above, middles come in both intransitive and transitive forms.

6 Form or Function?

In this final section we shall examine Haiman's (1983) formulation of economic motivation more critically. As can be seen in the following quote, and as indicated by the earlier quotes from this work, Haiman's explanation makes crucial reference to a formal property, namely "fullness" vs. "reducedness" of the relevant form: "economic motivation establishes a correspondence between a linguistic dimension (transparency/opacity, full/reduced form) and a conceptual dimension (unfamiliar/familiar, unpredictable/predictable)... **Reduction of form** is an ECONOMICALLY motivated index of familiarity." (802; emphasis added)

Haiman's formulation of economic motivation is based on the seminal work on the functional account of form-function correlation by Zipf (1935). As Haiman's quote above implies, Zipf talks about both formal and semantic factors correlating with the familiarity of concept and the frequency of mention, as is clear in the following quotes:

Formal complexity and familiarity of concept

"The magnitude of complexity of speech-configuration which bears an inverse (not necessarily proportionate) relationship to its relative frequency, reflects also in an inverse (not necessarily proportionate) way the extent to which the category is familiar in common usage." (272)

Semantic distinctness and frequency

"The degree of distinctness of meaning seem[s] to bear an inverse relationship to F[requency] and C[rystalization] [of the configuration]." (157)

We consider the semantic factor, namely the distinction between semantically transparent form and opaque form, more important than the property of formal complexity or size. For one thing, form varies from one language to another; accordingly an account based on a formal property is bound to be less viable as a universally applicable explanation than one functionally based. Secondly, functionalists must ask what formal distinctions in complexity or size really mean. Our interpretation of the distribution of middle forms focuses on the factor of semantic transparency. The correlation of periphrastic middle constructions with less familiar or unusual situations, as discovered by Haiman, points to the correlation between semantically transparent forms and unusual situations. A periphrastic construction in which a middle marker (e.g., a reflexive form) is distinctly expressed is more semantically transparent than morphological or lexical constructions, in which a middle marker is either part of a word or non-existent.

A crucial point to be made is that morphological constructions vary in their property of semantic transparency. Semantic transparency of morphological constructions correlates with the productivity of the form. The higher the productivity is, the more transparent the form is semantically. High productivity means a high degree of recurrence of the element in question. The form-meaning correspondence of such a productive pattern is easily discernible, as the practice of elementary morphological analysis reveals. Lexical and irregular morphological forms are semantically opaque in that a regular form-meaning

Our approach makes an important empirical prediction that Haiman’s form-based account fails to make. The case in point is a language in which there are multiple morphological middle forms. For example, Tarascan, a language isolate in Mexico, has the following middle suffixes (Nava and Maldonado 2002, p.c.): *-nharhi* ‘face’, *-kurhi* ‘waist’, *-ts’i* ‘head’, *-mi* ‘liquid’, *-ki*, *-pi*, *rhi-*, *-rha*, *-ra*, etc. Some of these suffixes are still etymologically transparent, while others are not. The question is, which form is “full” and which is “reduced”? We need to know this in order to apply Haiman’s formulation of economic motivation. But it is clear that the answer is not obvious, if answerable at all—they are all suffixes. If the full-reduced distinction were to be made in terms of the number of phonemes involved, *-nharhi* would count as the longest, hence the full form, with the prediction that it would be used for middle situations involving extroverted actions. As it turns out, this prediction is incorrect.

(47) a. Dora **chkú-nharhi**-s-0-ti
 Dora sharp-pain-forehead-PERP-PRES-IND.3
 ‘Dora has had sharp pain in the face/eyes.’
 b. itsí **arhu-mi**-s-0-ti
 water divide-LIQ.MID-PERF-PRES-IND.3
 ‘The water separated (the clean from the dirty water).’

(48) a. enanti jeya-**kurhi**-s-0-ti
guayaba squeeze-MID-PERF-PRES-IND.3
'The guayaba got squeezed.'

b. Dora urhu-**kurhi**-s-0-ti tsíri-ni
Dora grind-REFL-PERF-PRES-IND.3 corn-OBJ
'Dora ground the corn for herself (her corn).'

(49) a. Marcosĩ ata-**kurhi**-s-0-ti
 Marcos hit-MID-PERF-PRES-IND.3
 ‘Marcos hit himself.’

- b. Marcosī exe-**kurhi**-s-0-ti
 Marcos see-MID-PERF-PRES-IND.3
 ‘Marcos saw himself.’

Our formulation of the principle governing the relevant form-function correlation takes the following form:

Principle of Functional Transparency

Less familiar or unusual situations require semantically/functionally more explicit coding.

While the functional principle above avoids mention of a formal property, form, in fact, also matters. Form differs in the degree of semantic/functional transparency:

- Periphrastic expression with a clearly distinguishable form is semantically more explicit than morphological expression in terms of affixation or inflection.
- Productive morphology is semantically more transparent than irregular morphology or no morphology.

Our conclusion, then, is that both meaning and form are important. This benign conclusion is only natural as meaning is expressed through form. The question of whether form matters **only** insofar as meaning rides on it requires further study.

Notes

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1. Arka (unpublished) now recognizes some of the *ma*-forms as middle expressions.
2. We consider reciprocals to be a type of middle construction.
3. Kemmer confuses the grammatical notion of semantic roles and event participants. A reflexive construction such as *John hit himself* involves two semantic roles of Agent and Patient, as does a regular transitive clause such as *John hit Bill*. But a simple reflexive construction of this type expresses a situation involving a single participant, who plays the double role of Agent and Patient. On the other hand, a middle construction like Balinese *Ketut ma-jalan* ‘Ketut walked’ involves one semantic role and a single participant. Thus as far as the semantic role configuration is concerned, reflexive constructions are closer to the two-participant event type, but they are closer to the one-participant event type with respect to the number of participants—in fact, much closer to this pole than some middle constructions involving two distinguishable participants examined here.
4. Kruisinga (1925) correctly recognizes a category of reflexive voice (our middle voice category) in English. His characterization of voice and definitions of the voice

categories in English below are a fair representation of the traditional grammar: “Voice is the name for a verbal form according as it primarily expresses the action or state with respect to its subject, which may be represented as acting (*active voice*), or undergoing (*passive voice*), or affected by its own action (*reflexive voice*). (167-168)

5. As is clear from the earlier discussion, the two conceptions do not match perfectly. In particular, we recognize two-participant middle situations and the corresponding transitive middle constructions.
6. The degree of productivity does not match the syntax-morphological distinction. As in the case of morphological causatives, there are highly productive morphological middles. Productivity is a more important parameter than the formal distinction between periphrastic and morphological expressions in both causatives and middles—see below.
7. Periphrastic middles of this type are usable more regularly in the imperative mood, though its use in this context also implies that the addressee was somewhat unwilling to do the specified act.
8. Morphological *-ang* causative forms are possible with this type of agentive intransitive verb. However, they convey what Shibatani and Pardeshi (2002) call “sociative causation.” *Tiang nyalan-ang Wayan* ‘I made Wayan walk’, for example, expresses a situation where the causer made the causee walk by holding the latter’s arm and walking with him. The situation expressed differs from both direct causation expressed by other *-ang* causatives, in which the causee is patientive, and indirect causation expressed by the periphrastic *ngae*-causative discussed here (see 31a), in which the causer does not directly participate in the caused event. See Shibatani and Pardeshi (2002) for a detailed discussion on the distinctions drawn here.
9. Notice that the N-prefix observed in these lexical middles does not mark “middleness,” as it also occurs in an active transitive clause; it instead marks the agentive status of the primary argument.

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