

Syntax and Semantics of Ergative and Middle Constructions

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1. Introduction

Discussions on ergative and middle constructions are related to the study of transitive vs. intransitive dichotomy. In English, some verbs are used transitively only, some are never used transitively, and others are used both transitively and intransitively.

O'Grady (1980) discusses three different types of intransitives. The first type is the 'pure intransitive' such as *fall, depart, exist, live, go, slip, stumble*, etc. These verbs are used intransitively only.

The second type is the 'alternating intransitive.' These verbs have transitive counterparts and denote events, processes and changes of state which can be regarded as self-originating in the sense that their occurrence is not necessarily dependent on the intervention of an agent (*ibid*: 58). The verbs in (b) in the following examples belong to this type:

- (1) a. John moved a stone.
b. The stone moved.
- (2) a. John opened the door.
b. The door opened.
- (3) a. John boiled the water.
b. The water boiled.

The alternating intransitives are what Jespersen (1933: 116–7) classifies as the verbs of motion and change. He notes that transitive sentences in (a) above allow a causative reading. When the verbs are used intransitively, we can think of a thing or an entity as having moved of itself or through an inward impulse.

The third and last type is the 'derived intransitive.' O'Grady refers to these verbs by this label because he feels they imply that their transitive cognates are more basic. These verbs are typically used to denote events whose occurrence would seem to require the actual participation of an agent. Hence, the participant represented in subject position is, though it is not an agent in fact, responsible for the realization of the ideas expressed by the predicate. O'Grady (1980: 60) refers to this type of participant as 'an agentive actualizer.' Sentences marked (b) in the following examples belong to this type:

- (4) a. He sold the foreign cars quickly.
- b. The foreign cars sell quickly.
- (5) a. He read a bestseller.
- b. Bestsellers read easily.
- (6) a. She washed her sweaters.
- b. Sweaters do not wash well.

Keyser and Roeper (1984, 1992; henceforth K&R) call (7b) and (8b) ergatives and middles, respectively:

- (7) a. I melted the butter.
- b. The butter melted.
- (8) a. He bribed a government official.
- b. Government officials bribe easily.

From the description and examples given so far, we observe that 'ergatives' and 'middles' in K&R's classification fit the characteristics of 'alternating intransitives' and 'derived intransitives,' respectively, in O'Grady's classification.¹ Even though O'Grady's distinction is meaningful, this paper will stick to the labels of 'ergatives' and 'middles' for the sake of convenience.

¹ Same constructions are called differently according to different perspectives. For example, 'middle constructions' are called 'patient-subject constructions' by Van Oosten (1977) and Lakoff (1977). On the other hand, Dixon (1987, 1991) claims that different labels such as 'ergatives' and 'middles' are misconceived since not only an object NP but also other peripheral NPs can be promoted to subject position as in *Softly washed the woollens well in the Hoovermatic* or *The Hoovermatic washed the woollens well with Softly*. However, these sentences (Dixon 1991: 323-4) seem to be problematic for the present discussion: the sentences

2. Ergatives, Middles and Passives

2.1. Ergatives and/or Middles vs. Passives

The term 'ergativity' has traditionally been used to demonstrate a link between the subject of an intransitive sentence and the object of a transitive sentence (Anderson 1968, Lyons 1968, Fillmore 1968). In the same fashion, an ergative construction is thought of as an intransitive construction which has a transitive counterpart in which the transitive object corresponds to the ergative subject.

Middle constructions resemble ergative constructions in that they are originally represented with an object, in contrast to pure intransitive constructions which are not.² Both ergative and middle constructions are often discussed in relation to passive constructions since these three types of constructions share the characteristic of having a nonagentive subject.

There are, however, clear syntactic and semantic differences between ergative/middle constructions and passive constructions. The most obvious syntactic contrast is that the transitive Agent is not allowed to be represented in the former whereas it may be retained in the latter, as contrasted below:

- (9) a. *The ice melted by the sun. (*Ergative*)
 b. *Government officials bribe easily by managers. (*Middle*)
 c. A government official was bribed by a manager. (*Passive*)

Another syntactic difference concerns prepositional objects. In passive constructions, the prepositional object in the active counterparts can be realized as subject, with the original transitive Agent retained through a

do not fit the category 'middle' since they refer to a specific event in time. They cannot be called 'ergative' either since their structures are transitive with the postverbal object represented. Dixon uses the label 'Promotion to Subject' to refer to ergatives, middles, and the sentences mentioned above, without drawing any distinction between them. Ergatives and middles will be discussed in detail in the following section.

² Lees (1968) and Quirk et al. (1985) label as 'middle verbs' a small group of apparently transitive verbs which are complemented by a direct object but normally occur only in active sentences. In such sentences, however, the verbs are all stative relational verbs, like *have*, and hence do not occur in the progressive (**Jack is possessing a life insurance policy. *Dennis is lacking confidence.*).

by phrase, only if there is no direct object, as in (10). In middle constructions, however, the original prepositional object can be realized as subject even with the original direct object retained, as in (11).³

- (10) a. The knife has been cut with by John. (*Passive*)
 b. *The knife has been cut veal with by John. (*Passive*)
 (11) This knife cuts (veal) easily. (*Middle*)

The semantic difference between ergative/middle constructions and passive constructions concerns the change of focus. Passivization certainly focuses on the active object by preposing it into the preverbal subject, but it does not change the relation between the participants and the verb. Ergative/middle constructions, however, do change the relation between the participants and the verb, as contrasted below:

- (12) The custard wasn't poured properly. (*Passive*)
 (13) The ice didn't melt completely. (*Ergative*)
 (14) The custard doesn't pour properly. (*Middle*)

In passive construction (12), *properly* still modifies the unrepresented Agent, not the subject of the sentence, whereas in ergative and middle constructions (13) and (14), respectively, *completely* and *properly* are understood to refer to certain qualities of the Theme subject, not the implied Agent if any.

On the other hand, middles resemble passives but differ from ergatives in that in middles and passives Agent is either stated or implied whereas there is absolutely no implied Agent in ergatives.

2.2. Ergatives and Middles

As is pointed out in the preceding section, both ergatives and middles pairs are represented with an object in the underlying structure, but these two constructions differ from each other in many obvious ways.

The most significant difference is that middles have generic reading

³The data (10a) and (11) also involve the so-called 'preposition stranding'. Passive Formation as a syntactic rule allows preposition stranding, as shown in (10a), as a result of the reanalysis of preposition. However, it is not clear if Middle Formation allows such a reanalysis.

whereas ergatives do not. Fagan (1988: 196) points out that middles differ from other generic propositions in that they involve generic quantification over the underlying subject (the ‘implicit Agent’ in K&R’s terms), not the surface subject. According to her, the middle construction in (15), for example, can be paraphrased as in (16):

(15) This novel reads easily.

(16) People, in general, can read this novel easily.

Precisely speaking, however, sentence (15) is not synonymous with (16) in that the easiness implied in (15) is obviously due to the content or the quality of ‘this novel’ whereas sentence (16) is still ambiguous as to the scope of the adverb; the easiness implied may refer either to ‘people’ or ‘this novel.’ In this respect, sentence (15) can better be paraphrased as in (17):

(17) In general, this book is easy to read.

From the above discussed generic and non-generic nature of middles and ergatives, respectively, it follows that middles are typically stative and thus do not allow an eventive or temporary state reading whereas ergatives are eventive, describing specific events in time. Therefore, middles in general cannot appear in imperative/progressive aspect or in the non-present temporal frame whereas ergatives do not have such restrictions⁴:

(18) *Middles*

- a. *Bribe easily, bureaucrats!
- b. *The walls are painting easily.
- c. ?Yesterday, the floor waxed quickly.

(19) *Ergatives*

- a. Boil the water.⁵
- b. The stone is rolling down.
- c. Yesterday, a vase broke.

⁴ In addition to the imperative/progressive and non-present temporal frame tests, Class I adverbs (Roberts 1986: 72), pseudoclefts and iterative expressions, which typically do not co-occur with noneventive predicates, tell middles from ergatives.

⁵ The unmarked counterpart in mind for this sentence is *The water boils*, not *You boil the water*.

A second difference between ergatives and middles concerns causativity. Ergatives generally take on a causative reading and hence can be paraphrased by a sentence with *cause* as shown in (20a) and (20b)⁶ whereas middles do not have such a causative reading as shown (21a) and (21b).

(20) *Ergative*

- a. The door opened.
- b. John caused the door to open.

(21) *Middle*

- a. The foreign cars sell quickly.
- b. *Tom caused the foreign cars to sell quickly.

Fagan (1988: 193) accounts for the causativity difference between ergatives and middles in terms of the feature [\pm causative] inherent to the predicates. Ergatives can only be derived from verbs with the feature [+causative]. It is impossible to derive an ergative *sell*, for example, since transitive *sell*, unlike transitive *open*, does not have the feature [+causative], as is contrasted below:

- (22) a. Tom is selling the foreign cars easily.

[-causative]

- b. *The foreign cars are selling easily. (**Ergative*/**Middle*)

- (23) a. John opened the door.

[+causative]

- b. The door opened. (*Ergative*)

Sentence (22b) is not acceptable as an ergative reading nor as a middle reading. The predicate *sell* does not have the feature [+causative], hence cannot derive an ergative construction like (22b). The sentence cannot be interpreted as a middle construction, either, since it occurs in the progressive aspect.

⁶ Some ergative constructions such as the following show that there is no causer.

- (1) The boat sank *all by itself*.

By inserting *all by itself*, the sentence would seem to contradict the otherwise unmarked assumption that there would be a causer. K&R (1984: 405), however, argue that the phrase *all by itself* in (1) means 'totally without external aid,' and the notion 'without aid' is compatible with agentlessness and therefore ergatives allow it.

A third difference between ergatives and middles is that the latter imply an unexpressed Agent (e.g., the 'seller' in (21a)) although they take Theme only on the surface whereas the former take Theme without implying an Agent argument. In other words, Middle Formation does not alter the number of θ -roles since the unexpressed argument is nevertheless understood. Ergatives, on the other hand, differ from their transitive counterparts with respect to the number of θ -roles they assign (i.e., they contain one θ -role fewer than their transitive counterparts) since the ergatives do not contain an understood argument. This difference in the semantic structure accounts for the fact that all middles can be derived from transitive counterparts whereas some ergatives for example those, with *fall*, *lie* or *rise*, are no longer associated with transitive counterparts.

The last difference between ergatives and middles concerns the presence of an adverbial. Middles typically require manner or locative adverbials such as *easily*, *quickly*, etc., whereas ergatives do not require such adverbials:

(24) *Ergatives*

- a. The butter melted (quickly).
- b. The door opens (easily).

(25) *Middles*

- a. This book translates * ϕ /easily.
- b. The foreign cars sell * ϕ /quickly.

This difference is closely related to eventive and noneventive characteristics of ergatives and middles, respectively, discussed earlier. Middles are used not only to describe the fact that a particular activity is carried out with respect to some object implied by the surface subject but also to characterize how that activity is carried out. Ergatives, on the other hand, are used only to report events, and it is not necessary (although possible) to describe how those events are or were (being) carried out.

As is pointed out by Fagan (1988: 201), however, not all middles require the presence of an adverbial expression:

(26) This dress buttons.

This sentence is acceptable without an adverbial when uttered in the context of describing how a particular dress is fastened, (buttoned or zipped,

for example).

Middles in the negative frame are also perfectly acceptable without an adverbial when the proposition represented by the middles contradict common knowledge:

(27) This dress won't fasten. (Fagan 1988: 201)

(28) The foreign cars wouldn't sell.

(29) This novel doesn't read at all.

The acceptability of sentences in (26) to (29) shows that an explanation for the characteristics of ergatives and middles appears to lie in the complex interaction of syntactic, semantic and pragmatic factors.

Despite all the meaningful contrast between ergatives and middles discussed so far, there seem to be cases in which it is difficult to draw a clear-cut distinction between an ergative and a middle. This may be due to the fact that it is not easy to determine how and to what extent the non-agentive subject is responsible for the event described by the predicate. As a result, many verbs (e.g., *open* in *The door opens*) may fall into both categories. In fact, K&R (1984: 383) believe that the verbs in the following examples, which are normally viewed as ergatives, may belong to the middle class of verbs:

(30) a. The door opens easily.

b. The car moves easily.

c. The bottle breaks easily.

d. The clothes hang easily.

Sentence (30d), for instance, belongs to the middle class of verbs since it may imply that it is easy for someone to hang clothes. This sentence is in contrast with the following ergative construction, where there is no such implied Agent as *someone*:

(31) The clothes are hanging on the line.

It seems to be in order to point out that Middle Formation is not unconstrained since not all transitive verbs are equally acceptable in middle constructions:

(32) a. *French acquires easily.

b. *The arguments assume easily.

- c. *The answer knows easily.
- d. *The answer learns easily.

K&R (*ibid*: footnote 3) mention that they have no idea why these sentences are excluded in the middle mode. Dixon (1991: 332) argues that roles which may be realized by a complement clause other than ING may not be promoted to subject. In other words, the unacceptability of the sentences in (32) is due to the fact that the transitive verbs under discussion may take as a complement not only an NP but also a clause other than ING (i.e., NP *acquires/assumes/knows/learns that...*).

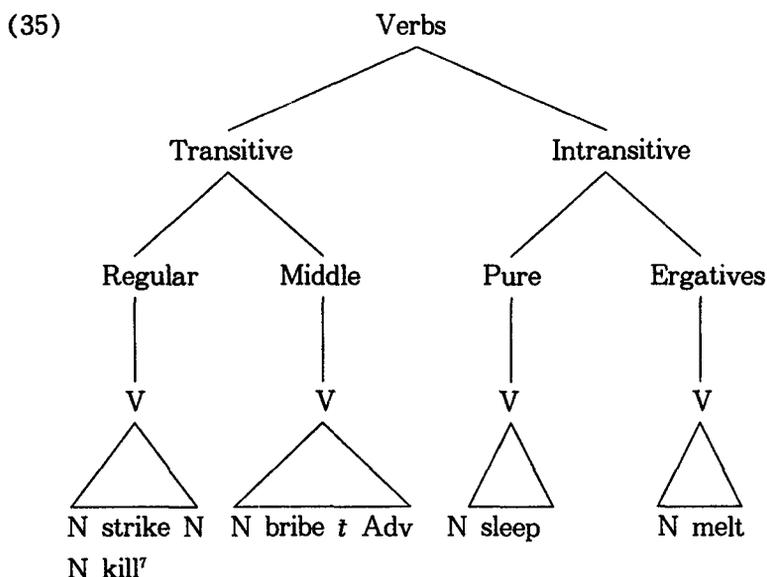
At this point, we need to note that ING obviously behaves differently from other complements in that it resembles an NP in certain syntactic function:

- (33) a. I admire him for his courage.
- b. I admire his winning the game.
- c. *I admire for you to have won the game.
- (34) a. I am sorry for the trouble I caused you.
- b. I am sorry for my being late.
- c. *I am sorry for me to be late.

This observation leads us to the conclusion that Dixon's generalization well reflects the fact that ING complements are the closest of all complements to an NP in some syntactic function and thus may be promoted to subject, like NPs.

3. Ergative and Middle Analysis

K&R (1984: 382) claim that ergative verbs are generated by a lexical rule of Move α and therefore the ergative pairs have both a transitive and an intransitive form in the lexicon. They continue by claiming that the middle verbs are derived by a syntactic rule of Move α and hence middle pairs are transitive while in the lexicon. The view that the middle constructions are the result of a syntactic rule is shared by Marantz (1984), Burzio (1986) and Stroik (1992). This view leads us to the following taxonomy (K&R 1984: 382):



On the other hand, Lakoff (1977), Van Oosten (1977), O'Grady (1980), Roberts (1986), Fagan (1988), and Dixon (1991) claim that middle verbs are lexically generated just as ergative verbs are.

3. 1. Ergative Formation

3. 1. 1. Ergative Rule

As we observed, K&R (1984) argue that ergatives are generated entirely in the lexicon as intransitive whereas middles are derived from their transitive counterparts by means of a lexical rule that absorbs the objective case and the external θ -role. Their argument in support of the syntactic analysis of middles is based on Burzio's generalization (Burzio 1986: 178–9, 184–5). Middles emerge from the lexicon as transitives: their surface subject is generated in object position and must move to subject position in order to receive case and avoid violating the Case Filter.

K&R (*ibid*: 405) propose Ergative Rule (36) as a lexical operation on the thematic structure of the verb, the process represented by this rule being the core of Ergative Formation:

⁷ As for sentences like *John kills*, K&R assume a transitive verb, where some object is implied but none appears on the surface. In such sentences the implied object must be represented at either the thematic or the syntactic level.

(36) Agent $\Rightarrow \phi$

According to K&R (*ibid*: 402), ergatives are generated in three steps within the lexicon. The first step is to remove case from the object and dethematize the subject. This step, in fact, involves the same operations needed for passives and middles.

The second step is to move the object subcategorization to subject position:

(37) sink/[_s NP [_{VP} ____ [NP]]]
 [_s NP_i [_{VP} ____ [_t_i]]]

This second step is just as in middles, but it occurs in the lexicon, leaving a lexical trace behind.

The third step is to delete the Agent role normally assigned to subject position by the VP of the lexical entry. This operation is represented by the Ergative Rule (36), which is supposed to be needed for ergatives only. Then, we would conclude that the Ergative Rule (36) demonstrates that agentlessness, among all the characteristics discussed earlier, is the nature which distinguishes ergatives from middles and/or passives.

However, a careful observation of the Ergative Rule (36) would reveal that Rule (36) is not for ergatives only. K&R argue that the Ergative Rule (36) correctly predicts that (38) is unacceptable:

(38) *The boat sinks by the navy.

This rule does predict correctly that (38) is unacceptable, but it fails to show that it is needed exclusively for ergatives, because middle constructions also prohibit the transitive Agent (realized in *by*-phrases). In other words, Rule (36) also correctly predicts that the following middle construction is unacceptable:

(39) *Bureaucrats bribe easily by managers.

Consequently, the observation that Rule (36), proposed as a lexical rule operating on the thematic structure of the verb, also applies to Middle Formation contradicts K&R's claim that Middle Formation is syntactic whereas Ergative Formation is lexical. Rather, this could be viewed as strong evidence that Middle Formation, just like Ergative Formation, is lexical.⁸

On the other hand, Fagan (1988: 198–9) proposes that Ergative Formation involves the following operation:

(40) Delete the external θ -role.

The 'external' θ -role here means the θ -role assigned to the external argument of a verb. This rule accounts for the fact that ergatives, unlike middles, do not contain an 'understood' argument. In order to produce ergative constructions, however, we need one more process to demonstrate that the direct θ -role of the verb is realized externally when it is transformed into an ergative. Therefore, Ergative Formation is to undergo the following rule, in addition to (40):

(41) Externalize the direct θ -role.

The 'direct θ -role' here means the θ -role assigned directly by the verb (see also footnote 14). We have observed earlier that the direct θ -role of a verb is realized externally not only in ergative constructions but also in middle constructions, and (41) is consistent with this observation; (41) is needed for both ergatives and middles.⁹

3. 1. 2. Ergatives and *There* Insertion

K&R (1984: 410–1) discuss *There* Insertion to support their account of ergativity in verbs with no transitive counterparts. It seems doubtful, however, whether their discussion on *There* constructions is related to ergativity in any significant way. Consider the following examples¹⁰:

⁸ K&R (1984: 406–7, 1992: 96–7) propose that there exists a clitic, like the Italian *si* but invisible, and that this inexpressible clitic absorbs the external argument which is interpreted as an agent:

(1) Bureaucrats [[v bribe] *Clitic*] easily.

This proposal, however, is unconvincing, given that English does not allow clitics. If we were to admit the existence of this invisible clitic, there must be explanation for the question why this clitic is unable to exercise control over the purpose phrase in the following sentence:

(2) *Bureaucrats bribe *Clitic* easily to keep them happy.

⁹ For Middle Formation, Fagan proposes another rule to account for the fact that middle constructions have a generic interpretation. This rule will be discussed again in 3.2.1.

¹⁰ (Un)grammaticality and marginality are due to K&R (1984: 410).

- (42) a. There goes a man.
 b. There erupted three volcanoes.
- (43) a. ?There sank a ship.
 b. ?There bounced a ball.
- (44) a. *There sang a man.
 b. *There telephoned a man.
- (45) a. **There hit a man.
 b. **There reads a man.

K&R argue that the NP in (42) and (43) originates in object position, whereas the NP in (44) and (45) originates in subject position; hence, in the latter cases *There* cannot be inserted into subject position since it is not empty. On the other hand, *There* can be inserted into the subject position in (42) and (43) since it is left unoccupied.¹¹ According to them, the marginality of (43) is due to the interaction of Ergative Formation and *There* Insertion. Given that lexical rules apply prior to syntactic rules, the NP in (43) might have already moved to subject position as a result of Ergative Formation (a lexical operation) by the time *There* Insertion (a syntactic operation) applies.

K&R's argument, however, appears to have a theoretical problem. They assume 'movement (plus insertion)' for the account of *There* constructions. However, many linguists such as Williams (1984) argue in support of Phrase Structure Analysis, claiming that *There* constructions are not derived but they preserve their own structure like *there-be-NP-X*.¹² If we accept the Phrase Structure Analysis, K&R's argument would be pointless.

Another problem involved with K&R's argument is that they ignore the contrast between (a) and (b) in (42). (42a) differs from (42b) in that the former is typically intransitive in English just like sentences in (44), whereas the latter is ergative like the sentences in (43). This problem seems to emerge from the fact that K&R classify *There* constructions in terms of their Italian counterparts.

The problems discussed so far show that *There* constructions should be

¹¹ Milsark (1974) argues that *There* constructions could be produced as a result of two syntactic operations, NP-postposing and *There* insertion. However, the assumption of NP-postposing cannot account for the contrast between (42) and (44).

¹² For detailed discussion, see the original source and Bak (1986).

studied in terms of semantic and pragmatic features rather than in terms of ergativity. For example, the range of acceptability from (42) to (45) could better be accounted for by means of the semantics of the predicates: Acceptable sentences contain an intransitive verb of ‘existence,’ whereas unacceptable ones do not. Verbs like *sink* and *bounce* in (43) are not existential verbs but somehow still imply ‘existence’ when compared to the verbs in (44) and (45); and therefore the sentences in (43) are marginal.

3. 2. Middle Formation as Lexical Operation

3. 2. 1. K&R (1984) and Fagan (1988) on Middles

K&R (1984) provide several tests to demonstrate that middles are derived syntactically. Fagan (1988) criticizes K&R’s arguments, proposing that middles are lexically generated just as ergatives are. This subsection will briefly discuss both arguments, and then support Fagan’s position with evidence.

K&R’s first argument for the syntactic derivation of middles (K&R 1984: 391–2) involves the so-called ‘First Sister Argument’ based on Roeper and Siegel (1978). According to Roeper and Siegel (*ibid*: 208), the rule governing verbal compounds takes the first sister of the verb as represented in its lexical entry and preposes it to form a compound, making the necessary morphological adjustments. The First Sister Argument accounts for the acceptability contrast in the following sentences:

- (46) a. The boat sinks fast. \Rightarrow the fast–sinking boat
 b. The plane flies low. \Rightarrow the low–flying plane
 (47) a. make the boat fast $\neq >$ *the fast–making
 b. make peace quickly $\neq >$ *the quickly–making
 (48) a. Bureaucrats bribe easily. $\neq >$ *easily–bribing bureaucrats
 b. The wall paints easily. $\neq >$ *the easily–painting wall

According to K&R, the verbs in ergative constructions in (46), whose first sisters are adverbs, can undergo Adjective Compounding. In (47), on the other hand, Adjective Compounding is not permissible because the preposed adverbs are not the first sisters of the verbs. In K&R’s view, the ill-formedness of the compound adjectives (e.g., **easily–bribing*, **easily–painting*) in (48) can serve as strong evidence in support of the claim that

these middle constructions are derived from the transitive counterparts, where the adverb, *easily*, is not the first sister of the verb. In other words, their assumption is that (48a) and (48b) have underlying structures (49) and (50), respectively, as illustrated below:

(49) [_{NP} e] bribe bureaucrats easily

(50) [_{NP} e] paints the wall easily

Adjective Compounding is not permissible in these structures because of the intervening objects; therefore the compound adjectives in (48) are unacceptable, exactly in the same fashion as in (47).

Contrary to K&R's argument, however, Fagan (1988: 184–9) claims that the ill-formedness of the compound adjectives in (48) cannot be used as evidence in support of the syntactic derivation of middle constructions. Following Allen (1978: 181–2), who argues that in English there are only two types of compound adjectives, i.e., noun–adjective compounds (e.g., *color-blind*, *water-soluble*) and adjective–adjective compounds (e.g., *grey-green*, *icy-cold*), Fagan claims that the examples in (46) to (48) are not adverb–adjective adjectival compounds, but can only be analyzed as syntactically generated sequences (in other words, adjectives modified by adverbs like *completely red* and *quite exhausting*). Following Lees (1968: 96–7), Fagan refers to these syntactically generated sequences in (46) to (48) as 'gerundive adjectives,' and notes that only intransitives allow gerundive adjectives. Thus, the transitive predicates in (47) do not allow gerundive adjectives whereas the ergative ones in (46) allow gerundive adjectives as other intransitives do.

Then, the problem to be accounted for at this point is the fact that the middle predicates in (48) show that they do not allow gerundive adjectives, even though they ought to allow such adjectives if they are syntactically intransitive as Fagan argues. In order to account for this problem without giving up the claim for the intransitive nature of middles, Fagan points out that gerundive adjectives do not refer to permanent characteristics of the nouns they modify. In other words, gerundive adjectives are eventive. Consequently, gerundive adjectives formed from middles such as the ones in (48) are unacceptable because middles are noneventive, not because they are transitive as K&R would argue.

Fagan notes that not all intransitives allow gerundive adjectives and correctly predicts the unacceptability of the gerundive adjectives in the follow-

ing intransitive constructions, for which K&R should incorrectly predict the acceptability because they are intransitive:

- (51) a. These rations will suffice. $\neq >$ *the sufficing rations
 b. His support matters. $\neq >$ *his mattering support

Fagan claims that even intransitive predicates do not allow gerundive adjectives unless they are eventive since the noneventive nature of the predicates is not compatible with the eventive reading associated with gerundive adjectives. Then, the unacceptability of gerundive adjectives in (51) should follow from the fact that the predicates (*suffice*, *matter*) are noneventive. K&R, on the other hand, would be unable to account for the unacceptability under discussion.

To sum up, the unacceptability of the gerundive adjectives in (48) is due to the semantic reasons, not to the syntactic reasons associated with the First Sister Argument.

Another argument for the transitive nature of middles proposed by K&R involves the adverbial particle *away*. They note that *away* in the repetitive sense occurs only with intransitives. Thus, according to them, *away* does not occur in passives since they are underlyingly transitive and derived syntactically. Similarly, *away* can occur with ergative predicates as in (52) since they are lexically intransitive but cannot occur with middle predicates as in (53) since middles are underlyingly transitive and the trace (left behind as a result of syntactic movement of the object NP into the empty subject position) blocks the intransitive adverb *away* :

- (52) a. The ships are sinking away.
 b. The leaves are dropping away like flies.
 (53) a. *The bureaucrats bribe *t* away easily.
 b. *The wall paints *t* away easily.

Fagan (1988: 190), however, argues that K&R's argument again cannot be viewed as compelling evidence in support of the transitive nature of middles. According to her, middle predicates describe states, but not specific events, and this noneventive nature of middles is incompatible with the eventive nature of the repetitive adverbial particle *away*.

Fagan correctly predicts the unacceptability of *away* even with intransitive predicates, which K&R would fail to account for.

- (54) a. *He stank away.
 b. *That matters away.

The unacceptability of the sentences in (54) has nothing to do with the syntactic characteristics of their verbs, but follows from the semantic reason: the incompatibility between the stative nature of the predicates and the eventive nature of repetitive *away*.

In addition to the First Sister Argument and the repetitive *away* discussed above, K&R provide some other tests such as *Out* Prefixation, Deletion, and Stranding of Prepositions to support their claim that middles are derived syntactically. Fagan, in the same fashion as above, shows that all those tests are unconvincing since the phenomena under discussion are clearly sensitive to the semantic status of middle verbs rather than to syntactic considerations.¹³

The observations so far lead us to the conclusion that K&R's arguments for lexical ergatives and syntactic middles are not tenable and that the major difference between ergatives and middles are semantic, not syntactic.

Claiming that middles are syntactically intransitive like ergatives, Fagan (1988: 197) proposes that Middle Formation is another example of the general process of genericization. Assuming that this genericization process does not alter the number of θ -roles in a verb's lexical entry but rather assigns a generic interpretation to a θ -role that is subsequently left unrealized in the syntax, Fagan proposes the following rule:

- (55) Assign *arb* to the external θ -role.

The term *arb* here stands for 'arbitrary interpretation' ([+human, +generic], and so on). This rule is to account for the fact that what is implied as Agent in middles is interpreted generically (but not realized in the syntax). Applying in the lexicon, this rule has the effect of saturating the external θ -role in the lexicon. The bearer of this θ -role is interpreted as having the properties that define *arb*.¹⁴ Following Rizzi (1986: 509), who

¹³ For detailed discussion, see K&R (1984: 393-400) and Fagan (1988: 190-195).

¹⁴ Rule (55) is based on Rizzi's (1986: 509) rule:

- (1) Assign *arb* to the direct θ -role.

In this rule, the term *arb* means the features that identify the properties referred to as arbitrary interpretation such as [+human, +generic], and so on; and the 'direct θ -role' means the θ -role assigned directly by the verb.

claims that the Projection Principle operates exclusively on unsaturated θ -roles, Fagan argues that the external (Agent) θ -roles in middles are not required by the Projection Principle to be structurally discharged because they are already lexically saturated by Rule (55). Thus, the Agent θ -role in middles is understood generically, though it is not realized in the syntax.

Rule (55), however, is not enough for the account of the process of Middle Formation. What remains to be accounted for is the fact that the direct θ -role assigned by the verb is realized externally when that verb undergoes Middle Formation. This process is, in fact, represented by means of Rule (41) discussed in 3.1.1 with respect to Ergative Formation. The rule will be repeated:

(56) (=41) Externalize the direct θ -role.

We observed earlier that the direct θ -role of a verb is realized externally not only in ergative constructions but also in middle constructions; hence, Rule (41) is needed for both ergatives and middles.

By formulating the processes of Ergative Formation and Middle Formation in terms of two rules each, Fagan succeeds in capturing the similarity of ergatives and middles (i.e., by means of Rule (41)) and the difference in terms of different rules (i.e., by means of Rules (40) and (55) for Ergative Formation and Middle Formation, respectively).

3.2.2. Middles and External θ -Role

In his response to Fagan (1988) and Roberts (1986), Stroik (1992) argues that Middle Formation does not involve lexical operation, but two interrelated syntactic processes: external θ -role demotion and Theme promotion. He contends that middles have not one, but two structural arguments: the overt Theme, which manifests itself as the surface subject, and some external θ -role, which can be lexically overt or nonovert. He continues by claiming that if the external argument is nonovert, then it is expressed as PRO in an A-bar position (i.e., an adjunct position.)

Stroik gives two types of evidence which suggest that the external θ -role is structurally present in middles. In the following, however, it will be argued that neither sets of his evidence is tenable.

The first type of evidence comes from the following sentences which have subject-contained anaphors (*ibid*: 129):

- (57) a. Books about oneself never read poorly.
 b. Letters to oneself compose quickly.
 c. Arguments with oneself generally end abruptly.

Stroik assumes that the subject NP in (57a), for example, means ‘any (one’s) books about oneself.’ The subject of the NP (the possessor of the book or Agent/the writer of the book) has an arbitrary referent that can be independent of the referent of *oneself*.

Following Binding Theory, Stroik assumes that anaphors must be bound in their governing categories. Thus, if each anaphor in (57) is to be properly bound, it must be coindexed with a nonovert NP argument that c-commands the anaphor at some syntactic level.¹⁵ He argues that this nonovert NP must be PRO in an A-bar position based on the following examples (*ibid*: 130–2)¹⁶:

- (58) It seems that [today’s news about oneself] always reads better than yesterday’s.
 (59) The poets admired one another so much that even [each other’s worst work] actually seemed to read well.

According to Stroik, for the anaphors in (57) to (59) to be properly bound in a consistent fashion, they must be bound by PRO not within the matrix sentence, nor in the anaphor-containing NP, but within the VP.

Thus, Stroik proposes (60) and (61) as D-Structure and S-Structure, respectively, for (57a).

- (60) [_{IP} e [_{I'} I [_{VP} [_{VP} never read books about oneself poorly] PRO]]]
 (D-Structure of (57a))
 (61) [_{IP} books about oneself]_k [_{I'} I [_{VP} [_{VP} never read t_k poorly] PRO]]]
 (S-Structure of (57a))

If we look carefully at the examples above, however, we will notice that they all contain *oneself* (or *each other*). It is clear that *oneself*, like *myself* or *yourselves*, differs from *himself* or *herself* in that the former is highly sensitive to the Speech Act whereas the latter is syntactically controlled, as contrasted in the following:

¹⁵ Following Belletti and Rizzi (1988), Stroik assumes that the c-command relation can be obtained at any syntactic level of representation.

¹⁶ For a detailed discussion of PRO and its position, see Stroik (1992: 132–135).

- (62) a. Books about oneself never read poorly.
 b. ?Books about myself never read poorly.
 c. ?Books about yourself never read poorly.
 d. **Books about himself never read poorly.
 e. **Books about herself never read poorly.

The acceptability difference between (a) and (b–c) in (62) is due to the fact that *oneself*, like *zibun* in Japanese and *caki* in Korean, has acquired additional meaning that differs somewhat from its referential interpretation. This difference accounts for the fact that sentences (b) and (c) are clearly better than (d) and (e). Thus, sentences in (57) cannot be counted as evidence supporting the syntactic presence of the external θ -role in middles.

Stroik's other evidence for his claim that the external θ -role is structurally present in middles comes from the following sentences (*ibid*: 131–2):

- (63) a. That book reads quickly for Mary.
 b. No Latin text translates easily for Bill.

In Stroik's view, the external θ -role is in fact syntactically expressed. For him, the only interpretations possible for the above sentences must read the prepositional objects (e.g., *Mary* in (63a) and *Bill* in (63b)) as Agent.

However, Stroik's analysis associated with the sentences in (63) is not compelling either, since the prepositional arguments in (63) must be arguments of the adverb, not of the agentive arguments. Consider the following example:

- (64) Books about oneself_k read quickly for Mary_r.

If the prepositional argument, *Mary*, is the external argument, as Stroik argues, then (64) must be unacceptable, because the anaphor, *oneself*, is not bound by the external argument (at D-Structure, before the Theme argument is promoted to subject position).¹⁷ However, (64) is perfectly acceptable. Then, we argue that the prepositional argument must be an argument of the adverb, not the external (Agent) argument, analogous to the prepositional arguments in the following:

¹⁷ See footnote 15.

- (65) a. The question is [_{AP} easy for Mary].
 b. The music is [_{AP} slow for Tom].

From these observations, we are drawn to the conclusion that Stroik's arguments in support of the presence of the external θ -role in middles are not tenable. In other words, our position that middles have only one argument with the external argument syntactically suppressed is not affected.

4. Summary

In this paper, we assumed both ergatives and middles to be intransitive. We observed that many of the differences between ergative and middle constructions are semantic rather than syntactic. We also saw that the ergative/middle taxonomy emerges mainly from the eventive nature of ergatives and the generic, noneventive nature of middles. We critically discussed arguments contending that middles are derived syntactically and demonstrated that those arguments are unconvincing. In the discussion of middles containing anaphors, we found that the Speech Act interacts with semantic and syntactic features that underlie the given constructions. Supporting the claim that middles are lexically derived with the external argument syntactically suppressed, we conclude that we should give due consideration should be given to all aspects of grammar (syntax, semantics, pragmatics, and so on) for better understanding of linguistic phenomena including ergative and middle constructions.

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ABSTRACT

Syntax and Semantics of Ergative and Middle Constructions

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The purpose of this paper is to support Fagan's (1988) claim that middle constructions, like ergative constructions, are lexically generated rather than syntactically derived. Many types of evidence will show that the differences between ergatives and middles are semantic in nature. The first half of this paper will discuss syntactic and semantic characteristics of ergatives and middles, and the remaining half will critically discuss the syntactic approach to middles proposed by Keyser & Roeper (1984, 1992) and Stroik (1992), leading to the conclusion that middle constructions should be approached in terms of semantic distinctions such as genericity and eventiveness.

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