Toward a Description of TE-linkage in Japanese

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1. INTRODUCTION

Since the work of Grice (1975), it has been widely accepted that there are two types of meaning for any given utterance: what is asserted and what is implicated. One salient example of the assertion/implication distinction involves the English conjunction and. In and-linked sentences, the and-then reading emerges naturally if the first conjunct can be interpreted as perfective. The same temporal sequentiality also can arise, however, even when the two clauses are co-present paratactically without and. The semantic relation of TEMPORAL SEQUENCE, accordingly, should not be attributed to the conjunction and per se (i.e. asserted), but to such pragmatic principles as the iconicity between clause order and intended temporal order (i.e. implicated). It is commonly accepted that the first type of meaning (assertion) is strictly a property of the sentence and hence is a subject for semantics proper, while the second (implication) should be accounted for by pragmatics. The present study challenges this prevailing view of linguistic meaning by examining TE-linkage in Japanese, a translational equivalent of English and-linkage.[1]

Japanese TE, like and, is used to express a diverse range of semantic relations — e.g. TEMPORAL SEQUENCE, CAUSE-EFFECT, MEANS-END, CONTRAST. When such a relation is understood to be intended by the speaker, it is always inferable solely from the conjuncts themselves. Furthermore, these relations are cancellable and thus can be regarded as implicatures. Most researchers, therefore, have considered that TE-

linkage has no meaning of its own: all semantic relations associated with TE-linked sentences are worked out from the meanings of conjuncts alone.

However, the contrary does not hold: not all semantic relations that can be implicated by two paratactic clauses are possible with clauses linked by TE. For example, if the clauses equivalent to I sat down and The door opened are presented paratactically in Japanese, the interpreter naturally reads in a TEMPORAL SEQUENCE relation, just as in English. But this relation is not an available interpretation when the clauses are linked by TE. That is, among the relations potentially implicated by two co-present clauses, some are filtered out by TE-linkage. This indicates that TE-linkage cannot be a mere syntactic device. It must have some meaning that excludes TEMPORAL SEQUENCE from the range of possible interpretations.

The fact that not all implicated semantic relations are compatible with TE-linkage also indicates that while one can accurately understand the intended semantic relation solely from the meaning of the conjuncts, one cannot accurately predict when to use TE correctly — not without further explicit stipulation. Therefore, the semantic relations compatible with TE-linkage need not be stated as such for decoding, but this information is indispensable for encoding. Fillmore (1979: 67) notes: "It is important to distinguish the decoding, or hearer's point of view, from the encoding, or speaker's point of view. Applying these two perspectives in the case of compositionality, we can talk about semantic transparency in the decoding case, and semantic productivity in the encoding case" (emphasis in original).

The distinction between what is asserted and what is implicated is certainly an important one in the theory of meaning. However, the reductionism inherent in attributing all semantic relations to pragmatic principles in the description of TE-linkage

appears to be a case of what Fillmore (ibid., 63) has called a theory of the language-understanding abilities of the idealized innocent speaker/hearer. He points out that in addition to the ideal speaker/hearer that knows its language perfectly (Chomsky 1965: 3), there is a second idealization — the idealization of innocence — in most traditions of semantics. This idealized innocent language user knows "the morphemes of its language and their meanings, it recognizes the grammatical structures and processes in which these morphemes take part, and it knows the semantic import of each of these. As a decoder, or hearer, the innocent language user calculates the meaning of each sentence from what it knows about the sentence's parts and their organization ... The innocent speaker/hearer is in principle capable of saying anything sayable" (Fillmore op. cit., 64).

However, the innocent speaker/hearer does not know about anything that falls outside a purely compositional semantics. If we teach some pragmatic principles to this language user, it can interpret all TE-linked sentences — but still cannot use TE correctly. It will, for example, wrongly conjoin the Japanese equivalents of I sat down and The door opened with TE to indicate the sequence of the two situations, thinking that because of the congruence between clause order and intended sequence of situations the sentence has indeed been appropriately uttered.

Fillmore considers that while the idealization of innocence need not be abandoned, it must be kept pure. He writes, "The nature of the fit between predictions generated by a theory and the phenomena within its domain can sometimes be assessed only when different sources of explanation can be isolated through one or more idealizations" (ibid., 63). However, he cautions, it is important to distinguish real innocence from

pretended innocence. The present study was inspired by this envisaged limitation of the idealized innocent speaker/hearer when it is to use TE-linkage.

The organization of this article is as follows. Section 2 provides a brief survey of semantic relations compatible with TE-linkage. In section 3, I demonstrate that such relations can be analyzed as implicatures. In section 4, I then discuss the constraints on TE-linkage vis-à-vis the TEMPORAL SEQUENCE and CAUSE relations. In section 5, I argue that the notion of grammatical construction (Fillmore 1986; Fillmore et al. 1988), i.e. a pairing of a syntactic pattern with a meaning structure, is needed for an adequate description of TE-linkage because many constraints apply neither to the syntactic structure of the TE-linkage alone nor to the semantic relation between the conjuncts alone, but to the syntax and semantics coupled together. The conclusion follows in section 6.

2. CONVENTIONAL CATEGORIZATION OF TE-CONSTRUCTIONS

Traditionally, TE-constructions have been divided into three categories according to the function of TE: (i) as a non-productive derivational suffix (1a); (ii) as a linker joining a main verb with a so-called auxiliary to form a complex predicate (1b); and (iii) as a linker connecting two phrases or clauses (1c).[2]

(1) a. **hazimete** kyooto ni itta.
for the first time (begin-TE) LOC went
`(I) went to Kyoto for the first time.'

b. hito ga takusan **hasitte** iru.
people NOM many **run-TE** be-NPST

`(There are) many people running.'

c. itami o **koraete** hasiri-tuzuketa.
pain ACC **endure-TE** run-continued
`Enduring pain, (I) kept running.'

In the first category, TE functions as a derivational suffix, forming an adverb from a verb. Hazimete in (1a) could be analyzed as hazime- `begin' (transitive) + TE; however, hazimete in this usage does not have its own valence, i.e., it lacks a subject and/or object. In general, verbs in this category lose part of their verbal nature when TE is attached. Furthermore, the meaning of a derived adverbial is not always predictable from the meaning of the base verb. Therefore, hazimete `for the first time' as expressed in (1a) must be listed as such in the lexicon.[3] (When hazimete takes overt or covert arguments, on the other hand, it belongs to the second or third category.) Because the derivational process associated with TE is semantically irregular and non-productive, and in particular because TE does not function here as a connective per se, this first category will not be considered further in the present study.

In the second category, exemplified by (1b), the verb preceding TE is semantically the main predicate of the clause, and the verb or adjective that follows TE is a so-called auxiliary. For example, `Verb-TE i-' in (1b) is the grammatical means for expressing imperfective aspect. In this second category the semantic relations between the linked constituents are relatively fixed compared with the third category, and are determined in large measure by the second constituent. Syntactically, on the other hand, some TE-constructions in this category raise serious questions. For example, when ar- `be (located)' is the second constituent, the construction as a whole becomes intransitive even if the "main" verb is transitive. The current trend in syntactic theories is to treat

such grammatical-function-changing processes as lexical, i.e. to consider `Verb-TE ar-' as a lexical unit; however, there is no syntactic evidence to support such an analysis (Lee 1989; Matsumoto 1990; Hasegawa 1992). We will not further address these problems here. Although TE does function as a connective suffix, this category too will be excluded from the present investigation.

The semantic relations between the linked constituents in the third category, on the other hand, are so diverse that no single subtype can be considered central. In (1c), the first clause holds a CIRCUMSTANCE relation to the second; however, as shown in (2-8), many other relations can also be expressed by TE-linked constituents, e.g. ADDITIVE, TEMPORAL SEQUENCE, CAUSE-EFFECT, MEANS-END, CONTRAST, and CONCESSION.[4]

(2) ADDITIVE

zyoon wa **akarukute** kinben da.
Joan TOP **be-cheerful-TE** diligent COP-NPST

`Joan is cheerful and diligent.'

(3) TEMPORAL SEQUENCE

gogo wa tegami o **kaite**, ronbun o yonda.
afternoon TOP letter ACC **write-TE** thesis ACC read-PST

`In the afternoon, (I) wrote letters and read the thesis.'

(4) CAUSE-EFFECT

taihuu ga **kite**, ie ga hakai-sareta.
typhoon NOM **come-TE** houses NOM destroy-PASS-PST

`A typhoon came, and houses were destroyed.'

(5) MEANS-END

okane o **karite**, atarasii kuruma o kau.
money ACC **borrow-TE** new car ACC buy-NPST
`(I) will borrow money and buy a car.'

(6) CONTRAST
zyoon wa **syuusyoku-site**, tomu wa kekkon-sita.
Joan TOP **get-a-job-TE** Tom TOP marry-PST
`Joan got a job, and Tom got married.'

(7) CONCESSION
kare wa okane ga **atte**, kasanai.
he TOP money NOM **there-be-TE** lend-NEG-NPST
`Although he has money, (he) won't lend (it to anyone).'

The prevailing view is that because of this diversity of semantic relations, TE-linkage has no intrinsic meaning, and that the interpreter must rather infer the intended semantic relationship based on extralinguistic knowledge (Alfonso 1966; Teramura 1981; Endo 1982; Himeno 1984; Ogoshi 1988; inter alia). I discuss the validity of this claim in the next section.

3. MEANING OF CONNECTIVES

Most, if not all, linguistic expressions are semantically underspecified, but potential ambiguities rarely emerge if an expression is embedded in a larger context — for example, if a word appears in a sentence and the sentence is uttered/written in discourse. The word and the intrasentential, intersentential, and/or extrasentential context contribute jointly to the final interpretation.

Although TE-linkage exhibits an extreme degree of semantic nonspecificity, it is nonetheless very common in actual usage[5] and does not cause problems in communication. This leads to questions about how much of the meaning is attributable to the TE-linkage itself, how much to the properties of the conjuncts, and how much to the interpreter's extralinguistic knowledge of the described situation. Before proceeding, let me clarify the notion of meaning as utilized in this study.

INDEPENDENT AND DEPENDENT SEMANTIC ASPECTS. Following Reichling's methodology, Dik (1968: 257-58) divides linguistic information into semantic information and grammatical (i.e. syntactic/morphological) information. All expressions have grammatical information associated with them by virtue of being usable in larger syntagms.

Semantic information is further divided into independent and dependent semantic aspects. The independent semantic aspects are immediately obtainable from the expression with no further linguistic context. By contrast, the dependent semantic aspects of the expression are obtained only within a larger whole of which the expression is a part. For example, speakers of English know the semantics of table without any further context, whereas they need some context, e.g. table__, to conceptualize the semantics of the plural suffix -s; plurality, as a relational notion, cannot be defined without essential reference to some noun. Thus table is said to have an independent semantic aspect of its own, whereas -s has only a dependent one. Not surprisingly, grammatical morphemes in general have only dependent semantic aspects.

Henceforth I will use the expression meaning of the connective X to refer to X's dependent semantic aspects. Connectives have grammatical information associated

with them; they also indicate certain relationships between the semantic information of the conjuncts. Crucially, however, connectives do not carry independent semantic aspects of their own. Even with a "semantically loaded" connective, such as before, it is necessary to mention the clauses that before links in order to describe the semantic information it conveys — namely, that the occurrence of the referent of the clause to which before is attached temporally follows the occurrence of the referent of the other clause.

Viewed in this light, the common claim that TE does not have its own meaning is justified only if meaning is restricted to independent semantic aspects, since indeed no semantic description of TE is possible without recourse to the larger constituent of which TE is a part. However, advocates of this claim appear to contend that TE lacks even dependent semantic aspects: they assert that the contingent semantic relations associated with TE-linkage are so diverse that the interpreter only infers the specific sense intended by the speaker. In order to discuss this issue, it is necessary to clarify the distinction between what is asserted and what is implicated.

IMPLICATURE. One of the basic requirements for understanding discourse is recognizing how each clause coheres with its predecessor. Our linguistic and pragmatic competence enables us to read in conceivable relation(s) even when two clauses are co-present without any overt cues, i.e. in parataxis. Thus, certain aspects of interpretation are not part of the conventional force of the uttered sentence but rather part of what Grice (1975) has named conversational implicatures. For example, one automatically perceives a CAUSE relation when one hears My cat died last night. I'm sad; it therefore seems superfluous to attribute a CAUSE relation to and in My cat died last night, and I'm sad. Another such example is They had a baby and got married

(Wilson 1975: 151). As Horn (1985: 146-47) points out, a TEMPORAL SEQUENCE relation (as in the and-then reading) is present even when these two clauses are in mere parataxis. Rather than attributing the TEMPORAL SEQUENCE relation to the meaning of and itself, researchers therefore appeal to certain auxiliary theories, such as the iconicity between clause order and intended temporal order (Haiman 1980) and the Gricean maxim of manner that stipulates, `Be orderly.'

In the Gricean theory of linguistic pragmatics, the CAUSE relation observed between conjuncts linked by because and the TEMPORAL SEQUENCE relation between those linked by before are considered conventional (not conversational) implicatures. They involve the lexical meaning of some element and are attached to particular expressions by convention, not by pragmatic principles. Conventional implicatures are non-truth-functional inferences; as such, they cannot have any "meaning" in the logical sense. However, if we do not adhere to the dogma of truth-functional semantics and instead adopt what Fillmore (1985) refers to as the semantics of understanding, there is no obstacle to considering CAUSE and TEMPORAL SEQUENCE as the meaning of because- and before-linkage, respectively.

The difference between and-linked and because- or before-linked sentences emerges sharply in the following pairs.

(8) a. One plus one is two, and I'm sad.

b. Because one plus one is two, I'm sad.

(9) a. John eats apples, and six men can fit in the back seat of a Ford.

b. John eats apples before six men can fit in the back seat of a Ford.

If the b-sentences were uttered, the interpreter would at least try to make sense out of them in such a way that a relation of CAUSE (8b), or of TEMPORAL SEQUENCE (9b), holds between the conjuncts; the connectives because and before force these interpretations. As Lakoff (1971) points out, success or failure in interpreting these sentences depends on one's deductive abilities. One might interpret (9b), for example, as describing John dieting so that he will be thinner and take up less space. With the a-sentences, on the other hand, the word and does not demand some particular interpretation. Indeed the most likely interpretation of and here is simply as a signal that the speaker has something more to say, i.e., intends to keep the floor. Halliday and Hasan (1976: 233), who draw a strict line between structural and cohesive (semantic) relationships, note, "The `and' relation is felt to be structural and not cohesive, at least by mature speakers; this is why we feel a little uncomfortable at finding a sentence in written English beginning with And, and why we tend not to consider that a child's composition having and as its dominant sentence linker can really be said to form a cohesive whole." They contend that and has a syntactic function, but that it provides little information about the semantic relation between the conjuncts.

CANCELLABILITY TEST. Grice proposes several diagnostic tests for conversational implicature, of which the so-called cancellability *test* is the most prominent.[6] Conversational implicatures can be cancelled without yielding contradiction, as with and in (10a). On the other hand, if something is asserted, denying (part of) it will result in contradiction, as with before in (10b).

(10) a. They had a baby and got married, but not necessarily in that order.

b. #They had a baby before they got married, but not necessarily in that order.

(# indicates that the sentence is deviant.)

TE is in this respect similar to and.[7] The CAUSE relation associated with a TE-construction is cancellable and hence can be taken as an implicature.

(11) kaze o hiite atama ga itai. atama ga itai no wa
cold ACC catch-TE head NOM ache head NOM ache NMLZ TOP
itumo no koto dakedo.
always GEN thing though
`(I) caught a cold, and (my) head aches. I always have a headache, though.'

If only the first sentence is supplied, it is naturally implicated that the cold is a cause of the speaker's headache. This implicature is cancelled by the second sentence, indicating that the speaker always has a headache anyway. In a typical such scenario the speaker, after uttering the first sentence, realizes the potential implicature and cancels it explicitly.

The TEMPORAL SEQUENCE relation is also cancellable, and hence it, too, can be regarded as an implicature.

(12) maki wa oosaka e itte hiro wa oosaka kara kaette kuru.
TOP ALL go-TE TOP ABL return-TE come
hiro ga kaette kuru no ga saki dakedo.
NOM return-TE come NMLZ NOM first though
`Maki will go to Osaka, and Hiro will return from Osaka. Hiro's return comes first, though.'

To recapitulate, in both and- and TE-linkage, the perceived semantic relation would be present even if the linked constituents were in pure parataxis without and or TE, and it would not be perceived otherwise. Accordingly, many researchers have claimed that TE, like and, does not have a meaning of its own, and that all semantic relations that the hearer perceives are implicated by the conjuncts themselves and the context. Let us call this claim the implicature-only reductionist analysis.

4. IDIOMATICITY OF TE-LINKAGE

The implicature-only reductionist analysis is challenged by the fact that not all semantic relations potentially implicated by parataxis can be expressed by TE-linkage — i.e., TE is NOT absolutely transparent. As already remarked, some conceivable relations are filtered out when constituents are linked by TE, and TE-constructions have many arbitrary (and idiomatic) constraints, both on possible semantic relations and on the semantic nature of the conjuncts, that cannot be attributed to any pragmatic principles. In other words, TE-linkage restricts the universe of possible semantic relations implicated by the conjuncts.

This section elaborates on such constraints imposed by TE-linkage, focusing on the semantic relations of TEMPORAL SEQUENCE and CAUSE. It is demonstrated that the constraints are associated neither with TE-linkage nor with semantic relations in isolation. In order to state such constraints, rather, linguistic descriptions need to employ the notion of grammatical construction — a pairing of a form and a meaning.

TEMPORAL SEQUENCE RELATION AND TE-LINKAGE. Given appropriate pairs of clauses, the TEMPORAL SEQUENCE relation can always be implicated when two clauses are in parataxis, as in (13).

(13) a. watasi wa tatiagatta. mado ga aita.
I TOP stood-up window NOM opened
`I stood up. The window opened.'

b. watasi wa kaizyoo ni tuita. kooen ga hazimatta.
I TOP meeting-place LOC arrived lecture NOM began
`I arrived at the meeting place. The lecture began.'

However, the same TEMPORAL SEQUENCE cannot be implicated when such pairs of clauses are linked by TE, as illustrated in (14).[8]

(14) a. #watasi ga tatiagatte mado ga aita. (Yoshikawa 1980)
stand-up-TE
`I stood up, and the window opened.'

b. #watasi ga kaizyoo ni tuite kooen ga hazimatta.
arrive-TE
`I arrived at the meeting place, and the lecture began.' (Endo 1982, modified)

Significantly, there would be no unnaturalness here if the connective to or -tara were used instead of TE, and the resultant sentences would then permit TEMPORAL SEQUENCE interpretations.[9] There is thus nothing inherently anomalous about conjoining the two

clauses in each pair in (14) — i.e., the anomaly is not purely pragmatic, as it would be in Joan ate sushi, and the tower collapsed.

On the other hand, substituting (15a-b) for (14a-b) enhances the acceptability.

(15) a. watasi ga oogoe o dasite mado ga aita.
I NOM loud-voice ACC emit-TE window NOM opened
`I screamed, and the window opened.'

b. koosi ga kaizyoo ni tuite kooen ga hazimatta.
lecturer NOM meeting-place LOC arrive-TE lecture NOM began
`The lecturer arrived at the meeting place, and the lecture began.'

Changing tatiagar- `stand up' in (14a) to oogoe o das- `scream' in (15a) improves the naturalness somewhat because an extremely loud sound might, in principle, cause a window to open. In (15b), replacement of the subject watasi `I' with koosi `lecturer' makes the sentence perfectly natural because it is precisely the arrival of the lecturer that enables the lecture to begin.[10] The key here is the notion of causation. If native speakers of Japanese are forced to interpret (14), they read in some sort of CAUSE relation, rather than mere TEMPORAL SEQUENCE — e.g., the speaker has the magical power to open windows by standing up (14a).

Matsuda (1985) has pointed out that TE links two constituents more "tightly" than does to or -tara. If we interpret tightly as the involvement of some notion of causation, his characterization provides a partial account of the inappropriateness of TE in (14), in which the clause pairs fail to show any obvious CAUSE relations. From the anomalies observed in such sentences as (14), I conclude that mere incidental sequence of events

— i.e. TEMPORAL SEQUENCE proper — cannot be expressed by the use of TE-linkage, and that what makes events non-incidental is our recognition of causation.[11]

AGENTIVITY. This requirement of causation between the referents of the linked clauses does not apply when the subject is shared by both clauses and the subject bears the semantic role of agent vis-à-vis both predicates. For example, zyon is the agentive subject of both oki- `get up' and araw- `wash' in (16), and the sentence is natural even though there is no CAUSE relation. The linked clauses are normally interpreted as having a TEMPORAL SEQUENCE relation. (One may perceive an ENABLEMENT relation between the clauses in (16). This issue will be discussed later in this section.)

(16) zyon wa asa okite kao o aratta.
TOP morning get-up-TE face ACC washed
`John got up in the morning and washed (his) face.'

If the shared subject has two distinct semantic roles in the two clauses, on the other hand, the sentence is awkward. For example, zyon in (17) is the theme subject of me o samas- `wake up', but the agentive subject of araw-.

(17) #zyon wa asa me o samasite kao o aratta. (Kuno 1973)
TOP morning wake-TE face ACC washed
`John woke up in the morning and washed (his) face.'

Kuno (1973: 196-97) contends that in a TE-linkage with the same subject, both clauses must be either self-controllable (agentive) or non-self-controllable (nonagentive).[12] He considers (18) to be anomalous because of the violation of this controllability constraint, since zyon is the theme in the first clause but the agent in the second.

(18) #zyon wa hikoozyoo ni tuite, ie ni denwa sita.
TOP airport LOC arrive-TE home LOC telephone did
`John arrived at the airport and called home.' (Kuno 1973)

As Kuno's theory predicts, when the subject is the theme in both clauses, anomaly does not emerge, e.g. (19) below.

(19) zyon wa hikoozyoo ni tuite, nimotu no kensa o uketa.
luggage GEN inspection ACC underwent
Lit. `John arrived at the airport and underwent the inspection of (his) luggage.'
`John arrived at the airport and had (his) luggage inspected.'

However, note that in (19) some non-incidental relation between the two events is necessarily assumed. The acceptability of (19) cannot, therefore, be attributed purely to agreement in agentivity. Also, contra Kuno, many speakers do consider (17) and (18) natural if they are interpreted with an ENABLEMENT relation, i.e., John's waking up enabled him to wash his face, and his arrival enabled him to call home. Furthermore, as mentioned above, (16) also has an ENABLEMENT interpretation, and hence cannot count as definitive evidence that causation is not required when there is a common agentive subject. One can, however, easily construct an example where a link of causation is all but impossible. In an example like (20), the first event clearly does not enable the second.

(20) zyon wa sinbun o yonde heya o soozi sita.
TOP newspaper ACC read-TE room ACC cleaned
`John read a newspaper and cleaned the room.'

There is no question of cause and effect here; yet the two clauses are certainly not chosen at random. I maintain that what is expressed by TE-linkage in (20) is not the mere fact of TEMPORAL SEQUENCE per se, nor the fact of causation, but that both actions were intentionally performed by the same person. Humans perceive, and in turn describe, sequences of events that involve voluntary actions differently from those that do not (Hart and Honoré 1959; Donnellan 1967; Buss 1978);[13] we do not normally consider a series of actions by a rational being to be mere coincidence. It is not surprising, then, that Japanese should reflect this difference grammatically, in choosing to encode a non-incidental sequence, but not an incidental one, with TE. The non-incidental sequentiality, in effect, "substitutes" for true, prototypical causation. This is all rather abstract, however; at a more "concrete" level of semantics, it can simply be stated that the TEMPORAL SEQUENCE relation is indeed compatible with TE-linkage if the conjuncts share an agentive subject.

CAUSE RELATION AND TE-LINKAGE. We have referred in passing to causation, which in fact is one of the major semantic relations commonly attributed to TE-linkage. One of the central aspects of causation is temporal sequentiality: cause must precede its effect. As we will soon see, this has interesting implications for the grammar of TE-linkage.

As Sweetser (1990) has shown, some conjunctions (including causal conjunctions) may function in two domains, the content (real-world) domain and the epistemic domain, as illustrated in (21).[14]

(21) a. Since John wasn't there, we decided to leave a note for him.

(His absence caused our decision in the real world.)

b. Since John isn't here, he has (evidently) gone home.

(The knowledge of his absence causes my conclusion that he has gone home.)

When CAUSE applies in the epistemic domain, it is quite possible for the event sequence to be distinct from the temporal sequence. (Of course, we may conceive sequentiality metaphorically; but then the sequence is logical, not temporal.) For example, one may say, My daughter will begin college soon, and I had to quit the gym [to save money for tuition]. Japanese can express equivalent clauses in the same order by using the fully explicit conjunction node or kara (roughly `since/because').

(22) musume ga moo-sugu gakkoo ni hairu node zimu o
daughter NOM soon school LOC enter-NPST because gym ACC
yamenakereba naranakatta.
had-to-quit
`Because my daughter will begin school soon, I had to quit the gym.'

As shown in (23a) below, this epistemic CAUSE relation can also be implicated by parataxis with the same clause order as (22). It cannot, however, be expressed by TE-linkage while maintaining the same clause order, as shown in (23b).

(23) a. musume ga moo-sugu gakkoo ni hairu. zimu o
enter-NPST
yamenakereba naranakatta.
`My daughter will begin school soon. I had to quit the gym.'

b. #musume ga moo-sugu gakkoo nihaitte zimu o
enter-TE
yamenakereba naranakatta.

`My daughter will begin school soon, and I had to quit the gym.' (Intended)

One apparently natural way to account for the phenomenon seen in (23b) would be to propose (contra my own position) that the basic function of TE-linkage is to express a pure TEMPORAL SEQUENCE relation, and that the CAUSE relation is parasitic on this fact. Sentence (23b), then, would be anomalous because (i) morphologically TE does not permit the preceding verb to be tensed, (ii) TE-linkage expresses that the referent of the first conjunct temporally precedes that of the second, (iii) the tense of the second clause in (23b) is in the past, and thus (iv) the event referred to by the first conjunct must also have occurred in the past. In other words, CAUSE relations can be expressed by TE-linkage only when they are in accordance with the TEMPORAL SEQUENCE relation; and in (23b) this does not hold.

However, this seemingly attractive explanation depends crucially on the assumption that TE-linkage does express TEMPORAL SEQUENCE per se; yet, as shown earlier, this is not an adequate characterization. Rather, the anomaly of sentences like (23b) seems to require an explicit statement in the grammar — a point to which we will return.

A second example of a CAUSE relation that is not compatible with TE-linkage involves the notion of modality, i.e. the speaker's attitude toward the proposition. Here TE cannot be used even when the two clauses do maintain an iconic temporal order. For example, the first sentence in (24a) is naturally interpreted as the CAUSE of the speaker's emotion, and this relation can be expressed by the use of node `because', (24b); yet linking these two sentences by TE will result in an anomaly, as shown in (24c).

(24) a. kutu o katta. uresii.
shoe ACC bought am-happy

`(I) bought shoes. I am happy.'

b. kutu o katta node uresii.

because

`Because (I) bought shoes, I am happy.'

c. #kutu okatte uresii.

buy-TE

`I bought shoes, and (so) I'm happy.' (Intended)

The reason for this pattern of anomaly lies in the interaction between the construction and modality, the latter defined as the speaker's mental attitude toward the proposition or speech act at the time of utterance, conceived as the speaker's instantaneous present (Nakau 1979; 1992). Verbals in Japanese such as uresi- `be happy' in (24), which denote human feeling or mental activity, are called psych-predicates and are considered to be modality expressions when occurring in the non-past tense.[15] With psych-predicates, a CAUSE relation can indeed be expressed by TE-linkage when the predicate is in the past tense, cf. (25); here the sentence reports an event which is divorced from the speech situation. As Nakau convincingly argues, when the speaker describes a past event, the sentence can no longer be taken as a modality expression.

(25) kutu o katte uresikatta.

was-happy

`(I) bought shoes, and (so) I was happy.'

But such a CAUSE relation is not possible in (24c), where the fact of being happy is coterminous with uttering the sentence. The two situations (24c, 25) are fundamentally different.

As was the case with the epistemic type discussed earlier, here too we have an arbitrary constraint which must be imposed on TE-linkage.

5. GRAMMATICAL CONSTRUCTIONS

We have not yet addressed the question of where in the description of a language constraints like those just discussed should be stated. The constraints are neither on syntactic structures alone, nor on semantic relations alone; they apply only when a particular syntagm (the TE-construction) is used to express a certain semantic relation. Such a pairing can be stated through the notion of grammatical construction. As Fillmore (1986: 3) notes, "[Construction Grammar] aims at describing the grammar of a language directly in terms of a collection of grammatical constructions each of which represents a pairing of a syntactic pattern with a meaning structure" (emphasis in original). This notion of grammatical construction, similar to that found in traditional and pedagogical grammars, is indispensable for explaining the subtle constraints on TE-linkage.

If we represent a particular syntactic subtype of TE-linkage as SYN-TE,[16] and a particular semantic relation that TE-linkage can denote as SEM-TE, then the grammatical construction [SYN-TE, SEM-TE] is the appropriate descriptive unit for expressing the constraints on that particular pairing. For example, the grammatical construction [SYN-TE, TEMPORAL SEQUENCE] has the following constraint:

(26) CONSTRAINT ON [SYN-TE, TEMPORAL SEQUENCE]

When two events which are linked solely by temporal sequentiality are expressed via TE-linkage, the conjuncts must share an agentive subject.

This constraint does not apply to SYN-TE alone: TE can also link clauses with distinct subjects, e.g. (12, 15). It does not apply to the TEMPORAL SEQUENCE relation alone either: the connectives to and -tara can denote TEMPORAL SEQUENCE with distinct or nonagentive subjects. On the other hand, the constraint that the first conjunct must be interpreted as perfective in [SYN-TE, TEMPORAL SEQUENCE] need not be stated specifically here, for it applies to the TEMPORAL SEQUENCE relation per se rather than to the particular construction at hand and thus is "inherited" by the construction from the description of the TEMPORAL SEQUENCE relation.

Within this framework, the two constraints (epistemic; modality) discussed in the previous section can be stated as follows:

(27) CONSTRAINT 1 ON [SYN-TE, CAUSE]

The CAUSE relation is compatible with TE-linkage only in the content domain, not in the epistemic domain.

(28) CONSTRAINT 2 ON [SYN-TE, CAUSE]

When two clauses are causally linked by TE, the second conjunct must be in the past tense if it involves a psych-predicate.

6. CONCLUSION

To sum up, the reductionism of the implicature-only analysis — with its over-attribution of semantic relations to pragmatics — is not tenable. As demonstrated in this paper,

TE-linkage cannot be used to express all TEMPORAL SEQUENCE or CAUSE relations that are implicated by the bare juxtaposed conjuncts, but only certain subtypes of them. If a theory claims these semantic relations are to be derived by a pragmatic principle, it will then have to employ some filtering mechanism to eliminate those subtypes of the relations that do not persist through TE-linkage. But such filtering will be impossible unless the theory has attributed potential semantic relations to TE-linkage in the first place,[17] because the constraints apply only to instances where the linkage is understood to have a particular semantic value — e.g. to involve a non-incidental course of events, in the case of TEMPORAL SEQUENCE when the conjuncts do not share an agentive subject. The implicature-only reductionist analysis imagines that the whole problem can be solved through the agency of pragmatic implicature. However, when one seeks to actually articulate such pragmatic principles, there is no way to avoid an explicit statement of TE-compatible semantic relations.

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