

Counter Equi “NP”-trace Pronunciation*

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This article attempts to reformulate Harada’s (1973) classical *Counter Equi* analysis of the Japanese *tokoro*-relative clause (TRC) construction with recourse to the copy theory of movement (Chomsky 1993). It addresses some empirical deficits of Fujii (2004), a predecessor of the movement approach to TRCs, and propose that this construction should be characterized as involving Pre-Spell-Out Covert (PSOC) movement.

1. Introductory Remarks

This article deals with the so-called *tokoro*-relative clause (TRC) construction in Japanese. For the illustration of this construction, look at (1).

- (1) a. Isao-wa [dorobō-ga nigeteiku tokoro]-o tsukamaeta.
Isao-TOP burglar-NOM escape.go TOKORO -ACC arrested
lit. “Isao arrested [the moment a burglar tried to escape].”
“Isao arrested a burglar_i the moment he_i tried to escape.”
- b. Isao-wa [dorobō-ga terebi-o katsugidashiteiku tokoro]-ni
Isao-TOP burglar-NOM TV-ACC is.carrying.out TOKORO -DAT
kumitsuita
tackled
lit. “Isao tackled [the moment a burglar was carrying out the TV].”
“Isao tackled a burglar_i the moment he_i was carrying out a TV.”

Observe the exceptional θ -role assignment: both (1a) and (1b) involve transitive verbs that select a [+Animate] NP object, but as far as the phonetic forms of these sentences are concerned, the direct object position is apparently occupied by a *tokoro*-headed clause (TRC), as evidenced by the fact that it manifests objective Case.¹ Nonetheless, the TRC is semantically interpreted not as the object, but rather as an adverbial clause approximately corresponding to ‘the moment . . .’ in English. Instead, the matrix predicate is somehow allowed to relate its object θ -role to an NP inside the TRC (*dorobō-ga* ‘a burglar’ in (1)). Such “exceptional θ -marking” is one of the defining properties of this curious construction.

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¹*Tsukamaer-u* ‘arrest’ (in (1a)) Accusative-marks and *kumituk-u* ‘tackle’ (in (1b)) Dative-marks its direct object, respectively, and this case morphology is realized on the TRC (Kuroda 1976–77). As Kuroda (1999) noticed, this state of affairs constitutes a serious problem for Mihara 1994, who claimed that the *tokoro*-clause in the TRC construction should be analyzed as a pure adverbial adjunct clause dissociated from the object NP.

Let us introduce a tentative terminology: we refer to the TRC-internal argument NP that is somehow related to the θ -role of the matrix predicate as the *Tokoro-pivot* (*T-pivot*). For expository convenience, the T-pivot is marked by underlining. This article is dedicated to analyzing the structural properties of the T-pivot. §2 will briefly introduce Harada (1973), which is one of the most influential classics on TRCs. §3 will overview Fujii’s (2004) covert θ -feature attraction analysis, while pointing out that it has many empirical difficulties in capturing the properties of TRCs. §4 and §5 will introduce two alternative hypotheses that overcome these difficulties, while maintaining the insight of Harada and Fujii. It will be proposed that this construction involves an *overt* but phonologically inaudible movement of the T-pivot to the edge of the TRC. §6 concludes the article.

2. Harada (1973) and Counter Equi

Harada (1973) is one of the most influential classics on the TRC construction, whose essential idea has been advocated in various ways in the past literature (Kuroda 1976–77, 1999, Fujii 2004). He proposed that though phonologically invisible, there is an unpronounced NP occupying the matrix object position (at D-structure, in his terms). This object is deleted in the course of derivation in identity with the T-pivot by the operation *Counter Equi NP Deletion* (*Counter Equi*). This deletion operation derives the *Backward Control* configuration as schematized in (2), where the “controllee” empty category apparently occupies a position structurally higher than the “controller” NP (see Polinsky and Potsdam 2002 for a crosslinguistic survey of Backward Control constructions).

(2) Harada’s Counter Equi analysis

Isao-wa ~~dorobō-o_i~~ [dorobō-ga_i nigeteiku tokoro]-o tsukamaeta
↑ Counter Equi

Once we posit Counter Equi, V’s θ -marking on the (superficially TRC-internal) T-pivot ceases to be “exceptional.” According to this approach, there underlyingly exists an object NP that receives the θ -role of the matrix V. What is exceptional in this construction is rather that the θ -marked object, which is identical with, or “controlled” by, the TRC-internal T-pivot NP, surfaces null at PF.

What Fujii (2004) calls the “high behavior” of the T-pivot constitutes a piece of evidence for the existence of such an unpronounced object. Fujii provided (3) to illustrate this point (Fujii 2004:(25), to which I added the case with *pro*).

- (3) a. **John-ga_i** [**{kare-ga_{*?i}/pro_{*?i}/zibun-ga_{(?)i}}** ochikondeiru
 John-NOM he-NOM/*pro*(NOM)/self-NOM is.disappointed
 tokoro]-o nagusameta.
 TOKORO -ACC cheered.up
 lit. “John_i cheered up [the moment {he_{*?i}/self_{(?)i}} was disappointed].”
- b. **John-ga_i** {**kare-o_{*?i}/pro_{*?i}/zibun-o_i}** nagusameta.
 John-NOM him-ACC/*pro*(ACC)/self-ACC cheered.up
 lit. “John_i cheered {him_{*?i}/self_i} up.”

Compare (3a) with (3b). (3b) is an illustration of an ordinary Condition B effect, where the pronominal object *kare* cannot be coreferential with the clausemate subject NP *John*. On the other hand, the subject-oriented anaphor *zibun* in that position can be bound by *John*. Fujii observes with (3a) that a similar contrast can be observed with the T-pivot NP within TRCs as well: even if it is embedded in the TRC, the T-pivot pronominal (either lexical (*kare*²) or null (*pro*)) within the TRC (3a) shows a Condition B effect similar to that of (3b). That is, it behaves as if it occupies a position as high as the matrix object position analogous to that of (3b). This state of affairs can be seen as a direct consequence of the existence of the *Counter Equi*-deleted “copy” of the T-pivot.

- (4) John-ga ~~kare-o/pro~~ [~~kare-ga/pro~~ ochikondeiku tokoro]-o nagusameta
↑ Counter Equi

Note that Fujii’s example (3a) alone is insufficient to validate the existence of the unpronounced T-pivot “copy” in the matrix object position, since it seems at least tenable to argue that the *tokoro*-clause itself does not constitute a binding domain for the disjoint reference rule in question. However, consider (5).

- (5) **John-ga_i** [**kare-ga_{(?)i}/pro_i**] tezukuri-no keeki-o kanseisasetta
 John-NOM he-NOM/pro(NOM) homemade cake-ACC completed
tokoro]-o (ayamatte) yuka-ni buchimaketeshimatta.
 TOKORO ACC accidentally floor-to dropped
 lit. “John_i (accidentally) dropped [the moment he_i finished making a homemade cake] to the floor.”

First of all, the legitimacy of (5) shows that not only subject but also object of TRC can be the T-pivot, though the possibility of such “object T-pivot” cases are hitherto unnoticed in the literature (we will return to this matter below).³ Importantly, there is a contrast in the acceptability of a bound reading of the pronominal between (3a) and (5). The non-T-pivot pronominal subject in (5) can be construed as bound by *John* more readily than the T-pivot pronominal in (3a).⁴ Here the T-pivot marking on pronominals apparently alters the binding possibility, as the Counter Equi analysis (4) predicts, together with the assumption that the *tokoro*-clause defines a binding domain (if it does not, then there should be no contrast between (3a) and (5)). The point is further confirmed by the following contrast.

- (6) a. **sono omawari-ga_i** [bōkan-ga {**kare-o_{*i}/pro_{*i}/zibun-o_{(?)i}**}
 that cop-NOM thug-NOM him-ACC/pro(ACC)/self-ACC
 naguritaoshiteshimatta *tokoro*]-ni ōkyūshochi-o shita.
 had.knocked.down TOKORO -DAT first.aid-ACC did
 lit. “That cop_i gave first aid to [the moment a thug had knocked {him_{*i}/self_{(?)i}} down].”

²Here and below, *kare* can be replaced with the other lexical human pronoun *soitsu* to illustrate the relevant contrast.

³I thank Yasutada Sudo (p.c., May 2006) for first bringing the possibility of object T-pivots into my attention.

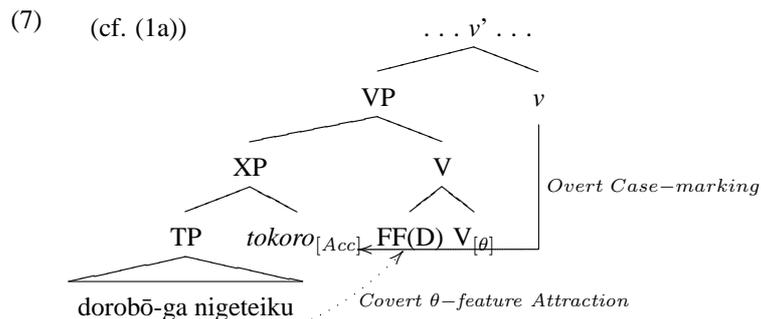
⁴For some reason I don’t know, the non-T-pivot lexical pronominal *kare* in the TRC-subject position as in (5) is still marginal to some speakers. However, they can still see the relevant contrast between (3a) and (5). Moreover, the null pronominal counterpart (*pro*) is quite acceptable even to them.

- b. **sono omawari-ga_i** [bōkan-ga {**kare-o_i/pro_i/zibun-o_i**}
 that cop-NOM thug-NOM him-ACC/pro(ACC)/self-ACC
 naguritaoshiteshimatta *tokoro*]-ni tejō-o kaketa.
 had.knocked.down TOKORO -DAT handcuff-ACC put
 lit. “That cop_i put handcuff on [the moment a thug had knocked
 {him_i/self_i} down].”

Here, the TRC in (6a) is minimally differentiated from the one in (6b) in the positioning of the T-pivot. In (6a) and (6b) the T-pivot role is assigned to the object and the subject of the TRC, respectively, in the salient natural reading. Crucially, the object pronominals in (6b) can be readily bound by the matrix subject, unlike those in (6a). The relevant generalization is thus that the TRC-internal pronominal shows the “high behavior” subject to the Condition B (disjoint reference) effect only if it is construed as the T-pivot. This is again a straightforward consequence of Harada’s Counter Equi analysis, because in this approach the matrix object position is occupied exactly by the “copy” of the T-pivot. Thus, Fujii’s (2004) observation on the “high behavior” of T-pivot provide evidence for the existence of the unpronounced T-pivot copy in the matrix clause.⁵

3. Fujii’s (2004) Covert Theta-feature Attraction Analysis

Fujii (2004) analyzed the TRC construction adopting Hornstein’s (1999) feature analysis of θ -roles, which postulates that the θ -role is a kind of formal feature that needs to be checked by attracting an NP to its checking domain (see also Polinsky and Potsdam 2002). According to Fujii, θ -features are weak in Japanese (Bošković and Takahashi 1998), and the TRC construction involves covert movement induced by the checking requirement of the matrix V’s weak θ -feature, where the featural sub-copy of the T-pivot NP is attracted covertly.⁶ Fujii postulated that this covert movement obligatorily pied-pipes the bundle of features relevant for binding ([\pm pronominal], etc.). The “high behavior” of the T-pivot is induced by this feature bundle, which is covertly adjoined to the matrix V.



Fujii attempted to incorporate the basic tenet of Harada’s Counter Equi analysis into the current minimalist framework (Chomsky 1995). Compare (7) with

⁵See Harada (1973) and Kuroda (1999) for some further argument for the existence of the *Counter Equi*-deleted object in terms of passivization and cleft of the T-pivot. However, Narita (2007) expresses some doubt on the validity of their argument.

⁶Fujii proposed a somewhat different conception of weak feature and covert movement, but this technical detail is largely inessential to the present discussion.

Harada's original analysis (2). What Harada (1973) originally proposed as the *Counter Equi*-deleted matrix object is an unpronounced movement (sub-)copy of the T-pivot in Fujii's terms. Fujii tried to eliminate Counter Equi as a primitive operation, and attribute its effect to covert movement of the T-pivot, with recourse to the copy theory of movement (Chomsky 1993). I will suggest that Fujii's reformulation of Counter Equi as an instance of covert movement is essentially on the right track. However, in the rest of this section I will argue against Fujii's (2004) specific analysis by pointing out that it faces a number of empirical problems.

First, Fujii's analysis must be supplemented with a dubious assumption that the weak θ -feature in question can sometimes induce *covert sideward movement* of the (featural subpart of the) T-pivot. Note that search domain of the feature-checking operation, be it Attract (Chomsky 1995) or Agree (Chomsky 2000), is limited to the *c-command* domain of the probing category. If a θ -feature is a formal feature on V, as the Hornstein-Fujii theory posits, then the θ -feature must be checked by Attracting/Agreeing with some NP *within* V's c-command domain. However, we have already seen in example (6) that TRCs can occupy not only the direct object position but also the *indirect object* position (as confirmed by the Dative TRC in (6)). This fact constitutes a serious problem for the θ -feature-based analysis of TRCs, because there is cumulating evidence that the base-generation site of the indirect object is out of V's c-command domain (e.g., the Spec of V or that of some functional category higher than V; see Ura 1996, Anagnostopoulou 2003). If an TRC is base-generated out of V's c-command domain, then it is expected to be impossible for V's θ -feature to attract any NP within the TRC. In order to account for the grammaticality of indirect object TRCs (like (6)) while maintaining the covert θ -feature attraction analysis, one must stipulate that the θ -feature in question can attract categories in a covert sideward fashion. Note that whether sideward movement itself is ever allowed as an option of UG is under critical scrutiny. Even though there are advocates of the possibility of sideward movement (e.g., Nunes 2001), no one has ever demonstrated the possibility of *covert sideward movement*, to the best of my knowledge. The burden of empirical justification is on Fujii's side, a quite serious one.

Furthermore, Fujii's analysis must also supply the assumption that the θ -feature attraction is free from the minimality condition on Agree/Attract. This additional assumption is required for this approach to explain the fact that not only the subject but also the *object* of a TRC can be a T-pivot. The fact was already demonstrated by the grammaticality of (5) and (6a). (8) further shows that the indirect object NP within the TRC can also be the T-pivot.

- (8) Isao-ga [Tsubasa-ga Mai-ni hanataba-o watas-ōto shita
 Isao-NOM Tsubasa-NOM Mai-DAT bouquet-ACC give-about.to do
tokoro]-o (te-o hiite) tsuresatta.
 TOKORO -ACC hand-ACC taking took.away
 lit. "Isao took [the moment Tsubasa was about to give Mai a bouquet]
 away, taking her hand."

In order for the probe of V's θ -feature to search down to the direct or indirect object of the TRC, this probing must *skip* the subject of the TRC, which asymmetrically c-commands them and hence should count as a potential goal closer to the probe. Thus, in the face of the legitimacy of object T-pivots as in (6a) and

(8), Fujii’s analysis must be supplemented by some assumption to the effect that covert θ -feature attraction can be minimality-free, even while it is claimed to be an instance of the ordinary feature checking operation Agree/Attract.

Finally, Fujii’s analysis completely fails to explain the fact that scrambling of TRCs can alter the relevant binding possibilities. Consider (9)–(10).

- (9) a. sono omawari -ga [**Isao-no**_{*i*} kyūkyūbako]-de [bōkan-ga
that cop -NOM Isao-NOM first-aid.kit -with thug-NOM
kare-o_{*i*} naguritaoshita *tokoro*]-ni ōkyūshochi-shita.
him-ACC knocked.down TOKORO -DAT first.aid-did
lit. “That cop gave first aid to [the moment the thug knocked
him_{*i*} down] with Isao’s_{*i*} first-aid kit.”
- b. sono omawari-ga [bōkan-ga **kare-o**_{**?*}_{*i*} naguritaoshita
tokoro]-ni [**Isao-no**_{*i*} kyūkyūbako]-de *t* ōkyūshochi-shita.
- (10) a. sono omawari-ga [**Isao-no**_{*i*} kyūkyūbako]-de **kare-ni**_{*i*}
ōkyūshochi-shita.
“That cop gave a first aid to him_{*i*} with Isao’s_{*i*} first-aid kit.”
- b. sono omawari-ga **kare-ni**_{**?*}_{*i*} [**Isao-no**_{*i*} kyūkyūbako]-de *t*
ōkyūshochi-shita.

(10) is an illustration of an ordinary Condition C effect. In (10a) the Dative-marked pronominal object *kare* can be coreferential with the r-expression *Isao*, but if *kare* is scrambled to a position higher than *Isao*, then the coreferential reading disappears due to Condition C. (9) is minimally different from (10) in that the pronominal is further embedded in the TRC, serving as the T-pivot. Interestingly, the pair in (9) shows the same degree of contrast as that of (10). Note that according to Fujii’s proposal, the featural sub-copy of the T-pivot (relevant for binding) finally reside on the matrix V (see (7)). If this is really the case, it is predicted that any further movement of the “remnant” TRC does not matter for the binding behavior of the T-pivot. However, (9) shows that the clause internal scrambling of the TRC induces a Condition C effect: the pronominal T-pivot *kare* cannot bind an r-expression (*Isao*) due to the structural height of the dislocated TRC. The same point is further illustrated by the reciprocal-binding facts in (11), where the binding behavior of the T-pivot is affected by scrambling of the TRC.

- (11) a. ?* Isao-ga [otagai-no_{*i*} sensei]-ni [Mai to Tsubasa -ga_{*i*}
Isao-NOM each.other-GEN teacher -DAT Mai and Tsubasa -NOM
ofisu-ni kakekondekita *tokoro*]-o shōkaishita.
office-to rushed TOKORO -ACC introduced
lit. “Isao introduced [the moment Mai and Tsubasa_{*i*} rushed into
the office] to each other’s_{*i*} teacher.”
- b. Isao-ga [Mai to Tsubasa -ga_{*i*} ofisu-ni kakekondekita *tokoro*]-o_{*j*}
[otagai-no_{*i*} sensei]-ni *t*_{*j*} shōkaishita.

These data ((9), (11)) show that the scrambling of the TRC apparently pied-pipes the (sub-)copy of T-pivot relevant for binding, and moreover that even though the T-pivot is pronounced TRC-internally, it behaves as if it c-commands (binds) out of the entire TRC. Fujii’s analysis completely fails to capture this situation, since it posits that the copy is attracted to the matrix V, being *moved out of the TRC*.

Fujii’s covert θ -feature attraction analysis of TRCs faces these serious empirical problems, which cast a doubt on Fujii’s specific proposal. However, it should be noted that despite these difficulties, Fujii’s analysis has one fundamental appeal that I will argue should be maintained: it is his proposal that Harada’s (1973) Counter Equi be reformulated as a phonologically inaudible “covert” movement (see §2). My proposal, which I will turn to in the next section, basically agrees with Fujii in the movement conception of Counter Equi.

4. Theta-role Assignment at the Point of External Merge

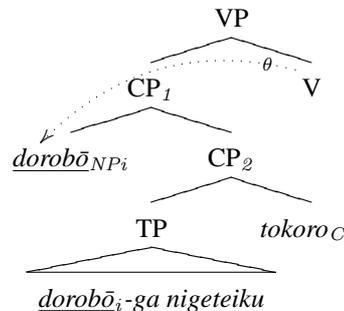
If we examine the empirical issues discussed in §3 carefully, it is rather easy to find that most of the empirical deficits of Fujii’s analysis come from the feature analysis of θ -roles. From the very beginning, this assumption is not well grounded, and is repeatedly criticized (Chomsky 2000). The fact that this assumption is crucial to Fujii casts an initial doubt on Fujii’s specific proposal. Moreover, it is this assumption that led to a parade of *ad hoc* stipulations, such as the strong/weak distinction on θ -features, the possibility of covert sideward movement and that of minimality-free attraction. This state of affairs strongly suggests that the feature analysis of θ -role is empirically inadequate and should be eliminated, at least for the proper analysis of TRCs. An immediate consequence of this move is that we can no longer posit any movement driven by needs of θ -role assignment. This hypothesis is rather one of the most orthodox insights of transformational grammar. In classical terms, θ -theoretic properties are satisfied at D-structure. In the recent framework of bare phrase structure theory (Chomsky 1995), θ -roles are satisfied *at the point of External Merge*, where lexical items, in particular argument NPs, are first introduced into derivations (Chomsky 1995, 2005). This idea can be formulated as (12).

- (12) A θ -role of a lexical category α is assigned to an argument category β only if β is externally merged with a projection of α .

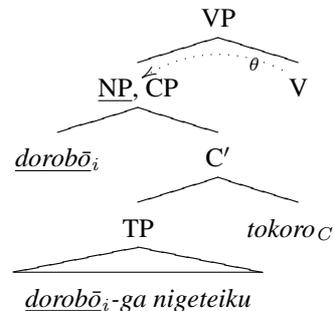
The proposal to be discussed keeps to this conservative view of θ -role assignment.

The gist of my proposal is that the T-pivot in a TRC is “covertly”⁷ dislocated to the edge of the TRC, where it can be eventually θ -marked by a projection of V that will enter into External Merge with the TRC. I would like to suggest two conceivable analyses of TRCs along this line, schematized in (13)–(14).

- (13) Hypothesis 1 (cf. (1a))



- (14) Hypothesis 2 (cf. (1a))



⁷The characterization of covertness here will be discussed in §5.

I assume that the TRC is a CP headed by *tokoro*.⁸ This CP bears a Case-feature that must be checked in the course of derivation. Moreover, I assume that this CP constitutes its own *phase* (Chomsky 2000, 2005). Every movement targeting within this phase domain applies at this phase level, that is, before the derivation enters into the next phase. Specifically, the movement of the T-pivot, if any, must apply before the *tokoro*-CP enters External Merge with a projection of V.

Hypothesis 1 in (13) postulates that the movement of the T-pivot is an *adjunction* operation: The T-pivot undergoes overt adjunction to the *tokoro*-CP, rendering the CP a two-segmented category. (Here we adopt Chomsky's (1986) theory of adjunction.) Assume with Bošković (2004) that adjunction to arguments interferes with θ -role assignment, an idea that goes back to Chomsky (1986). Due to this adjunction, the entire CP becomes invisible for θ -role assignment, and when V enters External Merge with the two-segmented *tokoro*-CP and discharges its internal θ -role to its sister node, this θ -role can "skip" the upper segment of CP, and can reach the adjunct NP (the T-pivot), due to the transparency/invisibility of segmented-category for θ -role assignment (cf. Kuroda 1999). On the other hand, structural Case can be unproblematically assigned to the entire CP which is associated with an uninterpretable Case-feature.⁹

Note that in the resultant structure (13) the T-pivot is only dominated by a segment of CP. Chomsky (1986) gives the following definition for *c-command*:

- (15) α *c-commands* β iff α does not dominate β and every γ that dominates α dominates β .

where α *dominates* β only if every segment of α dominates β (cf. Kayne 1994). If we assume *c-command* as defined as in (15), the CP-adjunct T-pivot NP in (13) will *c-command* out of the CP, since the *tokoro*-CP does not count as a node dominating the T-pivot, due to the fact that the lower segment of CP does not dominate it. Then, what happens if the CP is further dislocated by scrambling? In this case the adjoined T-pivot will take exactly the same *c-command* domain as that of the entire CP. This readily explains the Condition C effect in (9), where the ostensibly TRC-internal T-pivot behaves as if it *c-commands* an r-expression out of the TRC. The reciprocal-binding fact in (11) can be explained in a similar fashion.

On the other hand, Hypothesis 2 in (14) does not resort to Chomsky's (1986) particular definitions of adjunction and *c-command*, which are crucial in Hypothesis 1. In Hypothesis 2 the landing site of the T-pivot is an ordinary Spec-position. Rather, it postulates that the moved T-pivot *projects*, rendering the TRC labeled both by N and C simultaneously. The dually labeled structure (14) straightforwardly captures the properties of TRCs discussed above. First, as the TRC shares the nominal label with the T-pivot, this clausal category can receive a θ -role from V on behalf of the T-pivot at the point of External Merge with a projection of V, conforming to the orthodox assumption (12). Moreover, the Condition C effect in (9) and reciprocal-binding in (11) are also natural consequences

⁸Or an NP with the weak-phase CP complement or the non-phase TP complement. All we need is the assumption to the effect that there is no (strong) phase-boundary intervening between the head *tokoro* and the T-pivot, as we will see.

⁹See Kuroda (1999) for a somewhat similar analysis of TRCs. Kuroda hypothesizes that rather the *tokoro*-clause adjoins to the object NP that is to be deleted by Counter Equi. Note that Kuroda (1999) still assumes with Harada (1973) the existence of Counter Equi as a primitive deletion operation.

of this approach, because the entire TRC becomes a projection of the T-pivot, so the entire TRC can c-command the r-expressions and reciprocals, again on behalf of the T-pivot NP. Further, the uninterpretable Case-feature of the C *tokoro* is also unproblematically assigned Case by whatever mechanism is responsible for ordinary Case-assignment.¹⁰

In both hypotheses (13) and (14) the dislocation of the T-pivot cannot be triggered by a θ -feature or any of its correspondents, because the movement must apply before the completion of this *tokoro*-CP phase, that is, before V is merged with the TRC. I propose that the trigger of this movement is an EPP-feature on *tokoro*, which is satisfied by attracting an NP to its edge. This EPP-feature must be able to attract not only a subject but also an object of the TRC, because not only the subject but also the object of a TRC can be the T-pivot, as observed in (6a), (8). I argue that the attraction of object over subject is not problematic, given that object-shift/A-scrambling is possible in Japanese: see (10) for relevant data. Suppose that object-shift is an optional movement of an object to the edge of ν P. Object-shift, as well as External Merge of a subject into ν P-Spec, applies at the ν P-phase. After the completion of the ν P-phase, both the subject and the shifted object occupy Specs of ν . Then, when the next *tokoro*-CP phase starts, the subject and the shifted object are equidistant from the C head, (Chomsky 2000, 2001). If we further assume that the operations of C and T can be simultaneous (Chomsky 2005, Hiraiwa 2005), then either of these equidistant NPs can be successfully attracted by C (*tokoro*) without causing a minimality violation. Accordingly, there is no need to postulate an exceptionally minimality-free feature attraction in this approach, unlike the covert θ -feature attraction analysis discussed in §3.

Note that this line of analysis is viable only if the T-pivot movement in question is an *overt* operation. Specifically, it must be the case that the application of this movement can precede, or be simultaneous with, the canonical A-movement of subject into TP-Spec, since after this movement the subject becomes closer to C than the object. Accordingly, given that the EPP-driven subject A-movement is an overt, *pre-Spell-Out* operation, the “covert” T-pivot movement must apply *before Spell-Out*, too. In the following section, I will claim that the proposed T-pivot movement really applies before Spell-Out, and that the “covert-ness” or inaudibility of the movement is rather a consequence of the PF-decision that the movement chain be pronounced at the *non*-head position.

5. Deriving the Covert Movement from PF Considerations

Recently, several researchers have argued for the existence of *pre-Spell-Out Covert* (PSOC) movement, which is a movement that precedes Spell-Out, but in which the tail of the movement chain is somehow chosen to be pronounced by the phonological component. Advocates of PSOC movement include Bobaljik (2002), Bošković (2002), and Kato (2004), among others. Here I would like to propose that the movement of the T-pivot in question is another instance of PSOC movement.

PSOC movement is often characterized as a “last resort” forced by the phonological “unpronouncability” of the chain head copy. For example, Bošković

¹⁰Chomsky (2005) proposes such a dually labeled structure for English free relatives, borrowing the idea of Donati (2006); cf. Citko (2006). See Narita (2007) for a further analysis of TRCs and head-internal relative clauses in Japanese along this “Project Both” perspective.

(2002) proposes that some instances of PSOC *wh*-movement in multiple *wh*-fronting languages result from respecting a PF-constraint against consecutive homophonous *wh*-phrases ((16a), drawn from Serbo-Croatian). On the other hand, Bobaljik (2002) proposes that object-shift in the Scandinavian languages sometimes takes a form of PSOC movement in order to respect the morphophonological condition that morphological merger/Affix-hopping requires PF adjacency of the merging heads ((16b), drawn from Swedish).

- (16) a. Šta **šta_i** uslovljava **šta_i**?
 what conditions what
- b. Det är troligt [att [_{TP} de -te_T **den_i** [_{VP} läs_V **den_i**]]
 it is probable that they +PST read it
 Det är troligt att de läste **den**.
 “It is probable that they read it.”

The fundamental insight that these authors pursue is that PSOC movement is a “last resort” strategy of Phonology that is undertaken in order to salvage otherwise legitimate syntactic structures from violations of some PF-constraints. This idea supports Chomsky’s recent view that human language is primarily optimized for the LF-interface, while it is “poorly designed” for Phonology (Chomsky 2005). For, if the view is essentially on the right track, it becomes natural to expect that there are some cases where the syntactic component happens to generate objects that are legitimate at LF but pose some difficulties at Phonology, as in (16). I argue that the same consideration is applicable to the proposed T-pivot movement as well: this PSOC movement is a result of circumventing a violation of some PF-condition.

As for Hypothesis 1 in (13), I would like to stipulate that it is the economy principle (17) that lies behind the “PSOC”-ness of the T-pivot movement.

- (17) The Economy Principle of A-chain Pronunciation
 An A-chain is pronounced at the Case-marked position.

The basic insight behind proposing (17) as a principle of Phonology is that the Case-position is the most economical choice to pronounce an A-chain at, because the morphological shape of an A-chain is determined by Case assigned there.¹¹ In Hypothesis 1, the T-pivot adjoins to CP, and it receives a θ -role from V at this edge position. Thus, this position eventually becomes an θ -position. Suppose that if the structure is sent to Phonology, this copy is construed (wrongly) as the “tail” of an A-chain, due to its θ -marked but not Case-marked status. Taking the conventional assumption that A-positions are defined as positions relevant for either Case-checking/agreement or θ -role assignment (see Hiraiwa 2005), the whole chain of the T-pivot in (13) is then exceptionally construed as a single A-chain, not as a heterogeneous sequence of A- and A'-chains, because all its members are in A-positions.¹² Then, Phonology respect principle (17) and choose to pronounce the chain at the lower Case-position, rather than at its “overtly” created head position.

¹¹A'-chains are expected to be treated differently, since the morphological shape of an A'-chain is rather determined at the Case-marked tail.

¹²Here I stipulate that the EPP-feature, which is responsible for the movement of a T-pivot, is neutral with respect to the A-/A'-distinction (Chomsky 2005, Hiraiwa 2005).

The same consideration can be straightforwardly applied to Hypothesis 2 in (14) as well. Meanwhile, another possible reasoning along Hypothesis 2 is that the covertness of the T-pivot movement is due to the “unlinearizability” of the dually headed structure (14). Suppose that the structure is sent to Phonology. In (14), the moved NP qualifies both as the “Spec” and as the “head” of the TRC. Here, the strict head-finality of Japanese imposes on Phonology two mutually conflicting requirements: one is that the T-pivot in the “Spec” of CP(/NP) be linearized to the left of C' , and the other is that the very same NP (or “N’”) in the “head” of NP(/CP) be linearized to the right of C' . Thus, such a simultaneously “Spec” and “head” status of the moved NP makes it “unlinearizable” for Phonology. I propose that in order to avoid this linearization problem in (14), Phonology chooses to pronounce the T-pivot not at the “offending” highest chain-head position but at the lower, TRC-internal position.¹³

Notice that these PSOC movement analyses of TRCs capture the basic tenet of Harada’s (1973) classical Counter Equi analysis in a straightforward way, as is easily seen by comparing (13)/(14) with (2). The proposed analyses eliminate Counter Equi as a primitive operation (cf. Harada 1973, Kuroda 1999), but rather they attribute the effect of Counter Equi to the phonologically inaudible movement of the T-pivot, as Fujii (2004) attempts to accomplish by resorting to the notion of weak θ -feature. If these analyses are on the right track, the covertness of the T-pivot movement can be seen as a part of the “good design” of human language, since it is a consequence of respecting some PF-constraints that are otherwise violated by the LF-legitimate structure (13)/(14). Here we are trying to *explain* by some PF-considerations *why* the movement is covert, or *why* Counter Equi exists, unlike the covert θ -attraction analysis, which merely *describes* the covertness of the movement by resorting to the notion of weak feature.

6. Concluding Remarks

In this short article, I proposed that Harada’s (1973) Counter Equi should be reformulated as a result of PSOC movement of the T-pivot. The analysis eliminates Counter Equi as a primitive operation, and attributes its effect to PSOC movement of the T-pivot, resorting to the copy theory of movement (Chomsky 1993). I reviewed Fujii (2004) and evaluated it as the immediate predecessor of the movement approach to Counter Equi, while pointing out that the crucial reliance on the feature analysis of θ -roles leads Fujii’s specific proposal to many empirical difficulties. Alternatively, I proposed that the covertness of the movement is rather derived by a PF-decision to disrespect the otherwise dominant “Pronounce the Highest Copy” disposition of Phonology so as to circumvent violations of some PF-constraints. I hope that this study will shed a new light on the linguistic analysis of Backward Control phenomena in various languages (Polinsky and Potsdam 2002), as well as that of covert movement in general.

¹³Chomsky (2005) proposed that free relatives in languages like English also instantiate multiply labeled structures. In this case the moved *wh* is pronounced at the chain head position (e.g., *John will read [_{what, C} what_i you read ~~what_i]~~*). Note that the moved *wh* is an X^0 category, and that languages that employ free relatives are typically head-initial languages. I speculate that in such cases the “Spec-left” and the “head-initial” requirements does not conflict with each other, unlike cases of head-final languages like Japanese. Hence there is no unlinearizability in this structure, and so the moved *wh* is safely pronounced at the chain head position. See Narita (2007) for a further discussion.

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