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French Tough-Movement Infinitives as Deverbal Nominals

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Abstract

In this paper, we argue that predicates of the tough-class in French embed not a verbal infinitive but rather, a gerundive verbal noun. This hypothesis allows us to capture a number of unexpected restrictions on French tough-movement discussed by Legendre (1986). We show that these restrictions are best described as the inability of French tough-movement infinitives to be followed by complements that are disallowed in their corresponding argument-taking event nominals. Our analysis of such infinitives as nominalized elements correctly predicts that they should never be selected by auxiliaries, and that they should have suppressed external arguments in the sense of Grimshaw (1990).

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1 Introduction

It has, at times, been claimed in the literature on Romance causatives that *Faire-par* embeds not a verbal infinitive but rather, a gerundive, verbal noun (for example by Guasti, 1990; Travis, 1992; Folli and Harley, 2007). In this paper, we will show that if similar assumptions are made concerning the infinitive embedded under predicates of the *Tough*-class in French, a number of unexpected restrictions on French *Tough*-movement constructions (hereafter FTMs) discussed by Legendre (1986) follow naturally.

2 Evidence for NP Movement

It has been known for some time (see, e.g., Chomsky, 1982) that while English *Tough*-movement constructions license unbounded dependencies and parasitic gaps, as illustrated in (1a) and (1b), FTMs cannot contain more than one infinitive and do not support parasitic gaps, as shown in (1c) and (1d).

(1) a. This book will be easy to tell the children to read.
  b. This panel is impossible to swing ___ without unscrewing PG first.
  c. *Ce livre serait   difficile à empêcher ta   sœur de lire.
    this book would-be difficult to to-prevent your sister of to-read
  d. *Ce climatiseur est emmerdant à   nettoyer ___ sans   démonter   PG d'abord.
    this AC   is annoying   to to-clean   without to-take-apart   first

These properties of FTMs are expected under an A-movement analysis of the construction, an analysis that is, in fact, supported by a substantial body of evidence. First, passives and FTMs pattern alike with respect to object raising from VP idioms. For example, the idiomatic reading of *porter assistance* 'to lend assistance' is preserved in both constructions, as can be seen in (2a) and (2b), but the idiomatic reading of *casser la croûte* 'to eat' is not, as (2c) and (2d) illustrate.

(2) a. Assistance sera   portée aux   victimes d'inondations.
    assistance will-be carried to-the victims of flooding
    'Help will be made available to flood victims.'
  b. Assistance est difficile à porter aux victimes d'inondations.
    'Help is difficult to make available to flood victims.'
  c. La croûte a été cassée par les ouvriers à midi.
    'The crust was broken by the workers at noon.'
    *'A meal was eaten by the workers at noon.'
  d. La croûte est difficile à casser à midi (quand on est serveur).
    'The crust is difficult to break at noon (when you're a waiter).'
    *'Lunch is difficult to eat at noon (when you're a waiter).'

Second, Kayne (1975) observes that predicate NPs cannot undergo raising in passives, as seen in (3b), and that they behave in a similar fashion in FTMs, as (3d) illustrates.

(3) a. Son fils deviendra   ton   meilleur ami.
    his son will-become your best   friend
  b. *Ton meilleur ami   sera   devenu par son fils.
     your best   friend will-be become by his son
  c. Il est facile de devenir ton meilleur ami.
    'It's easy to become your best friend.'

d. *Ton meilleur ami   est   facile à devenir.
    your best   friend is   easy   to to-become

Third, while the impersonal French pronoun *on* is ambiguous between a referential first per-son plural reading and an existential reading when it is not a derived subject, as in (4a), it can only be interpreted referentially when it undergoes object-to-subject raising in passives like (4b) and again, FTMs pattern with passives in this respect, as (4c) shows.

(4) a. On a volé la moto de Cédric.
    'We/someone stole Cedric's bike.'
   b. On sera arrêté par la police.
    'We/*someone will be arrested by the police.'
   c. On sera impossible à satisfaire.
    'We/*someone will be impossible to please.'

Fourth, as noted by Kayne (1975), in FTMs, *tous* 'all' can appear in the object position of the infinitive and be understood as modifying the surface subject of the *Tough*-predicate, as shown in (5a). And this is, once again, also possible in passives, as (5b) illustrates.

(5) a. *Ces livres* ne seront pas faciles à mettre *tous* dans un seul   carton.
    these books   will-be not easy to to-put all in   one single box
   b. *Ces   livres* ont été   mis *tous* dans un seul carton.
    these books have been put all   in   one single box
    'These books were all put in the same box.'

Fifth, as first pointed out in Kayne (1975), French verbs of the *obéir* 'to obey' class are excep-tional in having passives in which the derived subject corresponds to a prepositional/dative com-plement, as shown in (6a–b). Given this, it is remarkable that FTMs with *obéir* as their infinitive, such as the one in (7b), allow their objects to raise, just as they do in passives.

(6) a. Les soldats ont   obéi   aux   ordres/*les ordres du   capitaine.
    the soldiers have obeyed to-the orders/*the orders of-the captain
   b. Les ordres du   capitaine seront   obéis.
    the orders of-the captain   will-be obeyed

(7) a. Il est difficile d'obéir   *(à) de   tels ordres.
    it is difficult of to-obey *(to) some such orders
   b. De   tels ordres sont difficiles à obéir.
    some such orders are difficult to to-obey
    'Such orders are difficult to obey.'

Finally, as observed by Déprez (1990), NP movement in passives allows optional reconstruc-tion in French, as shown in (8a), while *wh*-movement does not, as (8b) illustrates. This test, ap-plied to FTMs by Canac Marquis (1996), again shows that they exhibit A-movement properties, as can be seen in (8c).

(8) a. [Cette photo de lui-même$_i$/Jean$_i$] lui$_i$ a   été   transmise.
    this picture of himself/Jean   to-him has been passed-on
   b. *[Quelle promotion de Paul$_i$]$_j$ est-ce que le directeur lui$_i$ a   offert [e]$_j$?
    which promotion of Paul Q-particle the boss   to-him has given
   c. [Cette photo de lui-même$_i$/Jean$_i$] sera   difficile à lui$_i$ transmettre.
    this picture de himself/Jean   will-be difficile to to-him to-pass-on

3 Some Problems for the NP-movement Analysis

Contrasts such as (9) versus (3d), which illustrate the fact that argument nominals but not predi-

cate nominals can undergo *Tough*-movement in French, suggest that the motivation for this type of object-to-subject raising is Case.

(9) [Ton   meilleur ami]$_i$ est facile à berner [e]$_i$.
    your best   friend is   easy to to-con

This, however, raises the question of how the (accusative) Case associated with the infinitival form of the verb *berner* 'to con' in (9) is suspended since similar forms of the same verb retain their Case-assigning properties outside FTM, as (10) illustrates.

(10) Cédric est enclin à berner ses amis.
    Cedric is   prone to to-con his friends

A second potential problem for the NP-movement analysis of FTMs involves some troublesome breakdowns in the nice parallel that otherwise exists between verbs that can passivize and infinitives that partake in *Tough*-movement. This problem, uncovered by Legendre (1986), is illustrated by the paradigm in (11).

(11) a. Le camion a   été   chargé de tomates.
    the truck   has been   loaded of tomatoes
    'The truck was loaded with tomatoes.'
   b. Il sera   facile de charger le camion de tomates.
    it will-be easy of to-load the truck   of tomatoes
    'It will be easy to load the truck with tomatoes.'
   c. *Le camion sera   facile à charger de tomates.
     the truck   will-be   easy to to-load of tomatoes
    'The truck will be easy to load with tomatoes.'

On Legendre's RG account, the ungrammaticality (11c) results from a violation of a constraint on *Tough*-movement whereby only a nominal that bears a **2**-grammatical relation (i.e., direct object) on both the initial and the final strata can raise (strata being syntactic levels). Specifically, *le camion* 'the truck' in (11c) is taken to head an initial LOCATIVE arc (due to the fact that it appears as a LOCATIVE in the related structure in (12)) and to subsequently head a final **2**-arc (due to the fact that it can undergo Personal Passive, as in (11a)). This nominal is therefore ineligible for *Tough*-movement, hence the illicitness of (11c).

(12) Il a   chargé les tomates   sur le camion.
    he has loaded the tomatoes onto the truck

This account, it seems to us, is cast into doubt when one considers the grammaticality of (13) since, by the same reasoning, *cette vieille péniche* 'this old barge' also undergoes LOCATIVE to 2 Advancement and should therefore be unable to undergo *Tough*-movement, contrary to fact.

(13) Cette vieille péniche serait   impossible à charger **avec** du   minerai de plomb
    this   old   barge would-be impossible to to-load with some ore   of lead
    (sans   la faire   couler).
    without it to-make to-sink
    'This old barge would be impossible to load with lead ore (without sinking it).'

What has gone unnoticed until now, however, is that the *Tough*-movement infinitive in (11c) is ungrammatical only when it is followed by those complements that are disallowed in their corresponding argument-taking event nominals, as the paradigm in (14) illustrates.

(14) a. Cette péniche serait   impossible à charger ***de/avec** du   minerai de plomb.
    this barge   would-be impossible to to-load *of/with   some ore   of lead
   b. Le chargement de la péniche ***de/avec** du minerai de plomb va commencer.
    'The loading of the barge with lead ore is going to begin.'

What these facts suggest is that French *Tough*-movement infinitives have some nominal prop-erties. A well-known difference between active verbal forms and nominal elements is that only the argument structure of the former requires a subject. As observed by Grimshaw (1990), while com-plex event nominals do take obligatory objects, they never require a subject and they function, in that respect, like passive verbal forms: In both cases the argument of a passive verb or a nominal that corresponds to the external argument of the active verbal base is suppressed in the argument structure and therefore not required when it comes to satisfying argument structure in the syntax. Thus, the argument corresponding to the external argument of an active verb may occur optionally in nominals and passives as a *by*-phrase (or a possessive in English) as illustrated in (15).

(15) a. The (enemy's) destruction of the city (by the enemy).
     b. The city was destroyed (by the enemy).

At least three pieces of evidence suggest that Romance *Tough*-movement infinitives are like nominals and passives (and unlike active verbs) in this respect. First, as reported in Montalbetti and Saito (1983), Spanish *Tough*-movement constructions can, in somewhat stilted written styles, be morphologically identical to passive infinitivals (cf. (16)). The existence of such *Tough*-passives establishes an intriguing parallel between Romance *Tough*-movement constructions and passives.

(16) a. Esta vocal es facil de ser   nasalizada.
         this vowel is easy of to-be nasalized
         'This vowel is easy to nasalize.'
     b. Esta enfermedad es facil de ser   curada.
         this sickness   is easy of to-be cured
         'This illness is easy to cure.'

Second, as noted in Kayne (1975) and Canac Marquis (1996), the understood subject of French *Tough*-movement infinitives cannot be quantified by *tous* 'all,' as shown in (17b). Since this type of modification is normally available in other infinitives, as (17a) illustrates, it appears that French *Tough*-movement infinitives do not have a canonical, syntactically realized (and pho-nologically null) subject, a conclusion that accords with the hypothesis that they are, in fact, nominal in nature and therefore have a suppressed external argument.

(17) a. Il serait   facile de (tous) contenter (tous) Jean-Jacques.
         it would-be easy of (all)   to-please (all)   Jean-Jacques
     b. Paul serait   facile à (*tous) contenter (*tous).
         Paul would-be easy   to (*all) to-please (*all)

Finally, while French *Tough*-movement constructions do not easily license *by*-phrases, we have been able to find examples like (18), which are judged grammatical by a significant number of native speakers and show that *by*-phrases are not, in fact, incompatible with French *Tough*-movement constructions, as has often been assumed in the literature (see, e.g., Kayne, 1975, 337 n.73).

(18) Bien que ce saut soit difficile à exécuter   par un débutant ...
     although this jump is   difficult to to-execute by a   beginner...

4 FTM Infinitivals as Verbal Nouns

The hypothesis that French *Tough*-movement infinitivals are verbal nouns immediately provides an answer to the question of why French *Tough*-movement constructions have derived subjects, namely because gerundive, verbal nouns, like regular nominals, do not have Case-marking abili-ties, hence their direct object is attracted by the nominative-inducing tensed T. There is no Mini-mality or Minimal Link Condition violation because there is no PRO subject of the verbal noun as

shown in (17b), hence we are dealing with a movement akin to that found in passives, the only difference being that passive past participles are verbal while French *Tough*-movement infinitivals are nominal. It thus appears that in French, what is commonly referred to as an infinitive suffix (e.g., *-er*, *-re*, *-ir* etc.) can sometimes be nominalizing, as was proposed by Guasti (1990) in the context of *Faire-par* causatives in Italian. If a nominalizing suffix needs to attach to a lexical verbal root for it to acquire nominal properties then we predict that untensed perfective compounds of the form *avoir* 'have' + past participle should never occur in FTMs. This prediction is indeed correct, as (19) illustrates. *Tough*-movement is impossible in (19) because non-passive past participles like *battu* 'beaten' are verbs that bear an accusative Case feature, hence the raising of their direct object to the checking domain of tensed T is prohibited by the Last Resort Condition.

(19) *Ce record aurait   été impossible à **avoir battu** sur une piste mouillée.
     this record would-have been impossible to to-have beaten on a   track wet

Still, some data appear to indicate that French *Tough*-movement infinitives behave more like verbs than nouns. Chief among those is the fact that they can host pronominal clitics as (20) shows.

(20) Cette bague serait   difficile à lui   voler sans   qu'elle s'en aperçoive.
     this ring   would-be difficult to to-her to-steal without that-she of-it notice
     'This ring would be difficult to steal from her without her noticing.'

However, as noted in Haïk (1985), who attributes the observation to Luigi Rizzi, there exists an unexpected difference between subcategorized and non-subcategorized clitics: Only subcategorized clitics can attach to *Tough*-movement infinitives, as the contrast between (20) and (21) shows.

(21) *Ce manuscrit sera facile à y obtenir.
     'This manuscript will be easy to obtain there.'

A possible explanation for such contrasts is that the subcategorized dative clitic in (20) is an agreement marker affixed to the gerundive, verbal noun in the lexicon rather than an independent functional head that amalgamates with a verb in the course of the syntactic derivation. On a movement analysis of Clitic Climbing in restructuring contexts, we then expect clitics subcategorized by *Tough*-movement infinitives in, say, Italian to be unable to climb to the tensed verb. This is, in fact, what happens, as shown in (22).

(22) *Il libro gli   fu difficile da offrire.
     the book to-him was difficult of to-give
     'The book was difficult to give to him (as a present).'
     (example attributed to Luigi Rizzi by Haïk (1985:408))

Also consistent with the view that French *Tough*-movement infinitives are gerundive verbal nouns is the fact that, unlike verbs, they cannot co-occur with adverbs of quantification such as *always*, as illustrated by the contrast in (23). And finally, as shown in (24b), French *Tough*-movement infinitives are incompatible with floated quantifiers that correspond to their raised object, again contrasting with their verbal counterparts, as illustrated by the passive in (24a).

(23) a. Il est impossible de **toujours** gagner cette course.
        it is impossible of always   to-win this race
    b. *Cette course est impossible à **toujours** gagner.
        this   race is impossible to always   to-win
(24) a. Ces livres ont été **tous** mis dans un seul tiroir.
        these books have been all put in   a   single drawer
    b. *?Ces   livres seraient   faciles à **tous** mettre dans un seul   tiroir.
        these books would-be easy   to all   to-put in   a single drawer

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