
Voice Shifts: A Lexico-Syntactic Account of the Berber Syncretic Morpheme [n-]

Tarik Lahyany

Doctoral student

Ibn Zohr University - Agadir, Morocco

ABSTRACT: This article is a lexico-syntactic account of the syncretic morpheme [n-] in Berber, specifically in the Tarifit variety spoken in northern Morocco (TB, henceforth). I argue that the bound morpheme [n-] has diachronically developed a capacity to encode reflexive and inchoative voices, a situation that gave birth to what I call *voice shifts* in this variety under internal lexico-syntactic factors of grammaticalization. I provide empirical data as evidence for the syncretic nature of this bound morpheme; these data are discussed within the framework of minimalism (Chomsky, 2000, 2001, 2008).

KEYWORDS: voice shifts, syncretism, grammatical voice, reflexive, inchoative, Berber, grammaticalization.

Introduction¹

In general, syncretism is informally defined as a “situation where the morphology ‘lets down’ the syntax” (Baerman et al., 2005, p. 1). In contexts of grammatical voice, sometimes morphological distinctions let down syntax when the computational system expects distinctive morphology from the lexicon, so that a voice morpheme may differently establish links to the logical arguments of the verb, but no such distinctive morphology is supplied, hence a situation of voice syncretism. To exemplify, consider the following sentences:

- (1) a. Reflexive
 y-**n**-uffa(r) u.ayaz
 3s.m-**REF**-hide.PRF CS.man
 ‘The man hid himself.’
 b. Inchoative
 y-**n**-ufsr u.yis
 3s.m-**INCH**-break fee.PRF CS.horse
 ‘The horse broke free.’

1 The following abbreviations (as appearing in order) are used in this article: TB=Tarifit Berber, 3=third person, s=singular, m=male, REF=reflexive, PRF=perfective, CS=construct state, INCH=inchoative, LF= Logical Form, PASS=passive, DAT=dative, CL=clitic, RECIP=reciprocal, f=feminine, p=plural, CAUS=causative, E.A= external argument, I.A= internal argument, iFFval=valued interpretable formal feature, uF=uninterpretable formal feature, TP=tense phrase, T=tense, DP=determiner phrase, AspP=aspect phrase, Asp=aspect, VoiceP=voice phrase, VP=verb phrase, V=verb, ACC=accusative, NOM=nominative, Φ=phi/agreement features, P&P=principles and parameters theory, A'=non-argument, A=argument.

The situation in (1) is what I call voice syncretism. The morpheme [n-] is syncretic in these examples since it can encode both a reflexive reading in (1a), with the verb stem *far* ‘to hide’, and an inchoative² reading in (1b), with the verb stem *fr* ‘to break free’.

Note that unlike the I.A *yis* ‘horse’ in (1b), which is assigned a distinct internal theta role, the I.A *ayaz* ‘man’ in (1a) shares the same theta role with a previous deleted reflexive pronoun. Simply put, once the reflexive [n-] is inserted, the objective alignment of a previous transitive member, from which (1a) is derived, is reduced. This reduction reflects a lexico-syntactic intransitivization. Given this asymmetry in the argument structure, in the normal course, we expect the verb stems in (1) to be inflected either for two distinct morphological diathetic bound morphemes, i.e., [n-] vs. [x-]³, because the argument structure in (1a) drastically differs from (1b), or, instead, let the same morpheme to project in the core syntax with a phonological distinction such as stress, vowel epenthesis, etc.

The logical question that emerges with respect to voice syncretism in (1) is the following: what are the motives for the voice shift among the reflexive and the inchoative with [n-]? I believe that the main reason has to do with internal lexico-syntactic factors of grammaticalization. In typological studies, it is acknowledged that voice morphemes are not very productive, in comparison to periphrastic elements that might affect the argument structure of sentences (Haspelmath, 2008, 2021). It is true that the voice morpheme [n-] marks reflexivity in TB (Cadi, 2005/1990), but due to its unproductivity, it developed a capacity to mark inchoativity.

1. Intransitive categories & voice shifts

Grammatical voice in TB splits into active, or canonical, and non-active. On the one hand, the active voice comprises transitive and unergative alignments. The non-active voice, on the other, further splits into lexico-syntactic and morphosyntactic. The first category includes any non-active voice category, i.e., intransitive, which is non-marked such that no morphology is inflected to the lexical base of its verb stems. The anticausative and the unaccusative are examples par excellence of this category. The morphosyntactic category includes the voice morphemes [n-], [m-], and [t-]. An example with voice shift with [n-] is given in (1). Consider [t-] and [m-]:

- (2) a. Passive
 y-t-æčə u.qzin
 3s.m-PASS-steal.PRF CS.dog
 ‘The dog was stolen.’
- b. Inchoative
 y-t-əbra (x-as)
 3s.m-INCH-become addict.PRF (DAT-CL.DAT3s)
 ‘He is in love (with her).’

2 The notion of inchoative refers to a verb that denotes a change of state or getting into a state, as Talmy (1985) clarifies.

3 The abstract morpheme [x-] can be any morphological morpheme apart from [n-], to avoid syncretism at LF.

- (3) a. Reciprocal
 m-ərqaə.nt ðəg iɛzɐ
 RECIP-meet.PRF.3p.f in river
 ‘They met (each other) in the river.’
- b. Inchoative
 y-**m-ənz** u.sɛɐ i-Tima
 3s.m-**INCH**-sell.PRF CS.plough DAT-Tima
 ‘The plough was sold to Tima.’

There are two observations to note with data in (2-3). First, we can infer that not only exclusively [n-] in (1) which is syncretic in nature, but [t-] and [m-] add to the inventory of voice syncretism. In (2a), the syncretic morpheme [t-] encodes a passivity, while the same voice morpheme encodes inchoativity in (2b). The same logic carries over to (3a), which is encoded with the reciprocal morpheme [m-] that shifts towards inchoative in (3b). The second observation is that the voice shifts in question are exclusively in the direction of inchoativity.

To avoid massive syncretism with these data, language devised a strategy to slightly distinguish among (2a—b). With the passive in (2a), sometimes native speakers place, on the front of [t-], a rounded vowel, while nothing is observed with the inchoative in (2b). This strategy does not prevent syncretism to permeate down to the core syntax in (3) though, since no vowel epenthesis is observed with the syncretic morpheme [m-]. What is at stake, moreover, is that even with a strategy of vowel epenthesis in (2), this communicates no logic to LF from syntax. At LF, the logical structure of arguments is processed for interpretation; sounds are not relevant there. As such, we should question whether the core syntax allows syncretic structures within its system. The answer Borer (2005, p.1) offers is the following: “words can mean so many different things, but structures cannot”. In this context, this author refers to polysemy that words create on their own, exempting, in all possible ways, the structures built by core syntax from such polysemy. As it turns out, if her hypothesis is on track, we shall expect the same behavior of the core syntax in TB. Hence, syncretism with voice alternations in (1-3) must neither be part of core syntax nor be exported to the LF interface. This implies that there is another strategy through which this syncretism is broken. I develop this strategy from the perspective of head movement in another study (see Lahyany, in preparation).

In the same line, head movement with respect to data in (1-3) relates to a co-occurrence effect when a causative [s-] is projected on *v*. Some syncretic voice alternations allow V to incorporate to this morpheme and be raised as a complex composite to Voice they head, while ungrammaticality follows with others, if such movement has taken place. I summarize these occurrence effects on the following table:

Table 1 [t-] & [n-] voice syncretism with [s-] co-occurrence effects in TB

| | | Co-occurrence effects | |
|-----------------|----------|-----------------------|---------------|
| Alternation | Morpheme | Voice category | [s]-causative |
| Morphosyntactic | [t-] | Passive | ✓ |
| | | Inchoative | ✗ |
| | [m-] | Reciprocal | ✓ |
| | | Inchoative | ✗ |

Table 1 represents a logic that the core syntax communicates to LF, as a strategy to break voice syncretism. In (2a), apart from vowel epenthesis, when the lexical V moves to *v*, headed by the causative morpheme [*s-*], Voice, which is headed by the passive morpheme [*t-*], receives the complex composite constructed by head movement without any effects. The passive with [*t-*] allows [*s-*] although it is agentless in Berber (Bouylmani, 2000). The credits essentially go to the implicit agency this voice category encapsulates. Yet, when such movement takes place when Voice [*t-*] is encoded as inchoative, an effect is expected and, consequently, the sentence is ruled out. The same rationale extends to the reciprocal and the inchoative with [*m-*] in (3). Morphological reciprocity with [*m-*] allows co-occurrence with the causative morpheme [*s-*], while occurring with the inchoative [*m-*] results in ungrammaticality.

Note in passing that without these co-occurrence effects, one should unavoidably expect situations of voice syncretism to permeate down to the core syntax. Even more complicated, it might be the case that without a distinction to be established among the syncretic members in Table 1, LF would allow syncretism at the Semantic interface. Thus, allowing syncretism in the core syntax or at LF is too far away from a perfect faculty of language that Chomsky (1995, 2000) endorses.

2. Lexico-syntactic account of syncretic morpheme [n-]

2.1. Argument structure of [n-]

With respect to thematic structure, we have seen that the reflexive with $[n-]$ is derived from a transitive member, what about the inchoative. Consider these sentences:

- (4) a. s-hwɹ.n i.mxumbær ur inu
CAUS-frighten.3.p.m.PRF 3.p.m.problem heart my
'The problems saddened my heart.'
- b. y-n-hwær ur inu
3s.m-INCH-frighten.PRF heart my
'My heart frightened.'

- (5) a. y-s-n-ufsr u.nza yis
 3s.m-CAUS-INCH-free.PRF CS.rain horse
 ‘The rain made the horse to break free.’
 b. y-n-ufsr u.yis
 3s.m-INCH-break-free.PRF CS.horse
 ‘The horse broke free.’

The inchoative sentences in (4-5) show that this voice category is derived from a transitive counterpart as well. The inchoative [*n-*] demotes the E.A, unlike with the reflexive where the I.A is what gets suppressed. Presumably, this property is what makes the reflexive [*n-*] legible to combine with the causative [*s-*], i.e., the fact that the reflexive is not derived from another category except another configuration of reflexivity. We can determine two differences among the reflexive and the inchoative realized with [*n-*]. The first is the derivation. The reflexive is derived from a transitive member whose E.A is assigned an external agent theta role, but it demotes an I.A to be realized in the core syntax. The inchoative is derived from a transitive member whose E.A is also assigned an agent theta role, but the inchoative [*n-*] demotes this E.A. The second difference is that the inchoative is sensitive to the causative [*s-*], while the reflexive allows it. The reader should keep in mind that in cases where an inchoative verb is observed to tolerate [*s-*], it should immediately be noted that this form is reflexive due to voice shifts.

Let us turn to case. Consider these examples:

- (6) a. * θ-nn-ufer-θnt Tima
3s.f-REF-hide.PRF-ACC3p.f Tima
b. θ-nn-ufer-æsent Tima
3s.f-REF-hide.PRF-DAT3p.f Tima
'Tima hided herself from them.'
- (7) a. * y-nn-ufr-θnt u.yis
3s.m-INCH-free.PRF -ACC3p.f CS.horse
b. y-nn-ufr-æsent u.yis
3s.m-INCHO-hide.PRF-DAT3p.f CS.horse
'The horse broke free from them.'

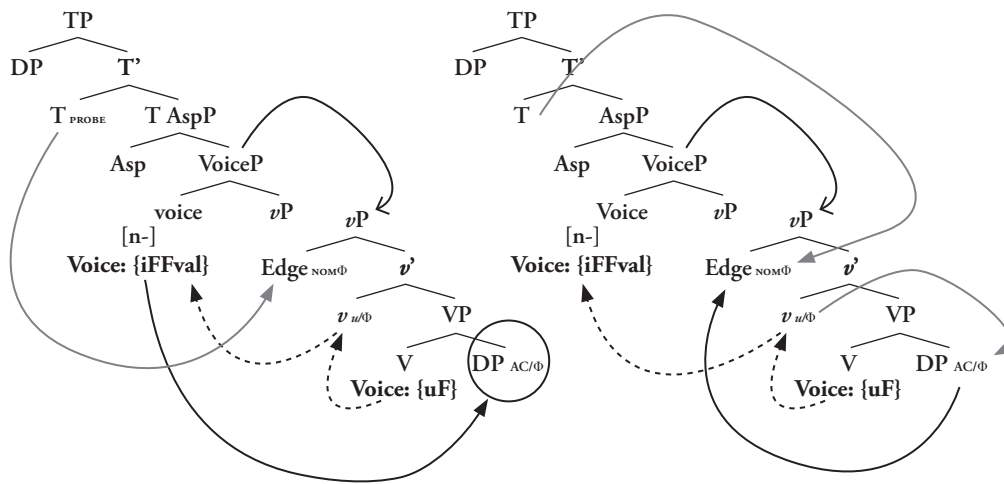
In these sentences, both the reflexive and the inchoative do not combine with accusative clitics, although the dative *-asnt* ‘them’ does not trigger ungrammaticality, as (6b) and (7b) respectively show. The dative is not an issue because Burzio’s Generalization extended in minimalist syntax to the context of *v*P phases, as being defective, relates only to the accusative case.

In the case of the reflexive voice, the action is performed by the agent directed towards itself, as mentioned above. Co-indexation/binding in the transitive member guarantees that this property of the reflexive is recovered. I argue in Lahyany (in preparation) that the [*s*-] merged in *v* is responsible for introducing the E.A. However, when this causative morpheme occurs with the reflexive, an interesting result follows:

- (8) a. θ -nn-uffe Tima
3s.f-REF-hide.PRF Tima
'Tima hid herself.'
b. Tima θ -s-n-uffe ixfi-nəs
Tima 3s.f-REF-hide.PRF herself
'Tima caused herself to hide.'

The additional occurrence of the causative [*s*-] in (8b) introduces, in this case, the reflexive pronoun not the E.A because the agent argument was already available with the reflexive [*n*-] in (8a). In other words, the *v*, whether overtly headed by [*s*-] or an abstract {CAUS} feature, introduces the E.A. If, however, this E.A is already there in the structure, inserting [*s*-] will reinforce circularity of reflexivity. Observe that in semantic terms *Tima* here is acting as an agent and a patient at the same time. Based on the data we have seen so far, I argue that the syncretic morpheme [*n*-] projects in the core syntax as follows:

- (9) a. [*n*-] reflexive derivation b. [*n*-] inchoative derivation



Reflexive pronoun suppression

The reflexive properties shown so far conform to the status established in Marantz (1984) and Embick (1997). Specifically, they are considered unaccusatives, due to their capacity to delete a theta role and become deficient as to accusative case valuation. With the reflexive [*n*-] in (9a), the *v* does not probe the DP object until VoiceP projects. The head Voice is what suppresses the reflexive pronoun, indicated by a dashed arrow. V hosts, in both structures, a uF that needs to be matched with an iFFval of Voice; therefore, V

moves to Voice through *v*. However, in the inchoative, when *v* probes the DP object, since the *v*P is defective as being intransitive, the DP object moves to Spec,*v*P to be valued by another probe, i.e., T.

2.2. Derivation under head movement

The major question we shall seek to answer is: how is the difference between these two structures established at LF? Note that it is obvious to suggest that such a difference exists between these two distinct voice values in terms of the sole DP argument, which is an E.A with reflexives, but an I.A with inchoatives. This is true insofar that one would propose that this argumental distinction suffices for LF to establish a difference. I propose that this difference is only partial for LF under a phase-based analysis. When the morpheme [n-] is inserted, expecting either to establish a reflexive or inchoative reading, the sole DP argument is the same to syntax. It is valued as nominative by T in Spec,*v*P. Thus, case/agreement is not a rescue for LF. What remains is theta. This is the only scant difference to LF. Observe that in binding terms, I proposed a sort of circularity of coreference among the subject in Spec,*v*P and the object position in the complement domain of the lower phase. This makes both elements sharing case values, to an extent that it could be ambiguous that the subject is also a patient. Now, what is at stake is the LF interface and how it would establish a difference.

I review two dominant theories to reflexivity in the P&P theory. The inchoativity should follow as a syncretic member within the same morphological context in TB. To start with, in the argumental theory, the Romance reflexive 'se' is treated as a syntactic argument, thus a clitic. As Alboui et al. (2004) notes, there is an additional schism regarding the status of the sole DP argument of reflexives. The first endorses reflexive clitics as I.As and the superficial sole DPs as E.As. This analysis has its roots in Kayne (1975) and Burzio (1986). According to Kayne (1975), 'se', in Romance reflexive (also reciprocal) constructions, exhibits all the distinguishing properties of clitics. Thus, "the clitic SE appears when a third person pronoun in clitic position is understood as coreferential with the subject of the sentence. This is true of both accusatives and datives" (Kayne, 1975, p. 343). The coreference from the lower position with a subject is always a property of arguments. The main test Kayne (1975) uses in this context is substitution to affect interpretation. Consider the following examples:

(10) Jean se tuera 'Jean will kill himself.'

(11) Jean le tuera 'Jean will kill him/it.'

Kayne (1975, p. 343)

In (10), the clitic 'se' is understood as being coreferential with the subject *Jean*. Note that Kayne (1975) stresses the subjecthood of *Jean* in these examples.

The second analysis within the argumental theory treats 'se' clitics as categories that require external theta roles, i.e., E.As. Marantz (1984) clarifies that morphological criteria, for example, the fact that 'se' in French does not fall within derivational or inflectional morphology, yield support to the clitic nature of this constituent in reflexive construc-

tions. He reports that in reflexive constructions, which are affixal in nature, i.e., involve either clitics or affixes, the sole DP argument is a logical object, bearing an internal theta role. The fact that this DP is interpreted as bearing the external theta role implies the existence of a reflexive constituent which, in turn, bears this theta role and takes the DP in question as its antecedent for binding.

In the non-argumental theory, the reflexive 'se' is treated as a voice reducing morpheme. Recall the analysis of Marantz (1984) above that takes 'se' as affixal in nature, this analysis gave birth to the first direction within reflexivity context that treats these constituents as morphemes, more specifically, voice-reducing morphemes. The same thing with the previous approach, there is also a schism within this theory regarding the nature of the sole DP argument in reflexives. This hatched an approach within non-argumental theory that treats derived reflexives with clitics or morphemes as unaccusatives. This direction follows the same logic developed in Pesetsky (1995) and Sportiche (1998). The second direction that emerged against the unaccusative is Reinhart & Siloni's (2004) approach. Their analysis takes reflexivization as a reducing operation of the I.A with a morpheme in the lexicon. Thus, the intransitive reflexive is derived from a transitive counterpart, identical to other approaches. This reminds us of the same situation in TB. The problem with Reinhart & Siloni's (2004) approach is that they take reflexivity as a lexical operation. Not too much space is left to the core narrow syntax in this context of reflexivity, then. If [n-] is a lexical affix, that affects the argument structure, we must sacrifice a lot to accommodate the logic of this theory within Chomsky (2000, 2001, 2008). First, we must assume the lexical rules that pre-date syntactic insertion. Second, we also must perceive the lexicon as a computational component. Still, the valuable aspect in this approach is that it takes the reflexive affix as a morpheme. The second advantage is that, unlike unaccusative directions (whether in the argumental or the non-argumental theory), the sole DP argument is treated as an E.A. The challenge that this theory faces is the binding. If 'se' is a lexical category that does its job of reducing the argument structure, how come that it establishes binding with a DP agent that is introduced in the core syntax? These authors do not say too much about this point, although they acknowledge the fact that this binding could be an LF mechanism.

With respect to our data from TB, the voice morpheme [n-] appears to have only person features. This situation justifies why the reflexive [n-] is less productive in comparison with the inchoative [n-]. Although it appears that this is indeed the case, this point of productivity in language is not relevant to the P&P theory. I argue that the morpheme [n-] is inserted from the lexicon and it is the configuration in the core syntax that determines its properties, either reflexive or inchoative. Once the morpheme is inserted, the objective pronoun which is assigned the accusative case is deleted by a pro emerging there. This pro is co-indexed in terms of binding with the subject in Spec, *v*P, hence reflexivity. Therefore, in terms of meaning, although there is no overt constituent in this position, it is usually understood that the subject agent applies the action to itself. What about syncretism with the inchoative?

In relation to the argument structure, reflexives with [n-] differ from inchoatives in terms of pro. As I have clarified, in inchoative contexts, the sole DP argument is moved from

an object position to Spec, ν P. A copy of this moved element is left there for Spell-Out. However, in reflexives, there is a pro merged in this lower position, and the subject is an E.A. Although this pro is merged in this position and has a distinct case feature, from the higher binder, this will not suffice for LF. The reason relates to the coreference in question. Coreference indicates sharing the same theta/case properties, although they appear different to syntax. At LF, they are the same. There must be, then, another strategy to break this syncretism. As we have seen, the fact that the causative [s-] co-occurs with the reflexive [n-], but not with the inchoative, is a rescue. This is of critical importance to LF. If the structure allows this causative morpheme, the derivation is reflexive; if, otherwise, it does not, the structure must be inchoative. Given that this sensitivity to the causative morpheme can be established after the lexical V moves to ν , then, as a complex composite to Voice, it immediately follows that it is this movement that feeds this logic to the LF interface. What happens if [n-] were treated as a clitic in our approach? This would not be of any issue to reflexives, if we argued that there is no pro merged in the objective position, but for inchoatives, the situation would be different. Assuming that [n-] is a clitic in inchoative contexts has a consequence with respect to case and theta. It must be assigned a theta role and a case feature as well, which is not the case. Note that the accusative object is deleted in the inchoative without the option of merging a pro there.

Conclusion

In this article, I briefly provided a lexico-syntactic account of the syncretic voice morpheme [n-] in the context of voice shifts. I argued that the morpheme [n-] has diachronically developed a capacity to mark inchoativity besides reflexivity in TB. I provided empirical arguments analyzed within the framework of minimalism (Chomsky, 2000, 2001, 2008). Besides [n-], we have seen that [t-], which marks passivity and inchoativity, and [m-], which marks reciprocity and inchoativity, add to the inventory of syncretic voice morphemes. Only a detailed lexico-syntactic account of [n-] was provided. I relied on phasal analysis in the context of head movement to argue that the core syntax does not allow syncretism to permeate down to its system. Nor that there is an LF predating component to treat such syncretism, or let LF itself to deal with it, only the core syntax was vouched for to take care of this syncretism by breaking it in terms of head movement. Thus, this movement is allowed to roll up a ν that hosts the causative [s-] in reflexive, passive, and reciprocal situations, while ruled out in inchoative ones. This is the logic that syntax communicates to LF to avoid voice syncretism in TB.

References

- Albouy, G., Barrie, M., & Frigeni, C. (2004). *SE and the unaccusative-unergative paradox*. In Coene, M., de Cuyper, G., & D'Hulst, Y. (eds.). *Antwerp Papers in Linguistics*, pp. 109-129.
- Baerman, M., Brown, D., & Corbett, G. (2005). *The Syntax-Morphology Interface. A Study of Syncretism*. Cambridge: Cambridge University Press.
- Borer, H. (2005a). *In Name Only. Structuring Sense*, Vol. I. Oxford: Oxford University Press.
- Bouylmani, A. (2000). La Diathèse berbère : le cas des verbes transitifs directs, transitifs indirects et réversibles. *Revue de la Faculté des lettres et des sciences Humaines d'El Jadida*, N° 5, pp. 47-63.
- Cadi, K. (2005). *Transitivité et Diathèse en Tarifite. Analyse de Quelques Relations de Dépendances Lexicale et Syntaxique*. IRCAM. (Original work published 1990).
- Chomsky, N. (2008). On phases. In Freidin, R., Otero, C-P., and Zubizarreta, M. (eds.). *Foundational Issues in Linguistics Theory: Essays in Help of Jean-Roger Vergnaud*. Cambridge, Mass.: MIT Press, pp. 133-166.
- Chomsky, N. (2001). Derivation by phase. In Kenstowicz, M. (ed.). *Ken Hale: A life in Language*. Cambridge, Mass.: MIT Press, pp. 1-52.
- Chomsky, N. (2000). Minimalist inquiries: The framework. In Martin, R., Michaels, D., and Uriagereka, J. (eds.). *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, Mass.: MIT Press, pp. 89-155.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, Mass.: MIT Press.
- Haspelmath, M. (2021). Comparing reflexive constructions in the world's languages. In Katarzyna, J., Puddu, N., & Haspelmath, M. (eds.). *Reflexive Constructions in the World's Languages*. Berlin: Language Science Press.
- Haspelmath, M. (2008). A frequentist explanation of some universals of reflexive marking. *Linguistic Discovery*, Vol. 6, N° 1, pp. 40-63.
- Kayne, R. (1975). *French Syntax: The Transformational Cycle*. Cambridge, Mass.: MIT Press.
- Lahyany, T. (In preparation). *Berber V-incorporation to Causative: a Core Syntactic Head Movement with Semantic Effects at LF*. Doctoral Thesis, University of Ibn Zohr.

- Marantz, A. (1984). *On the Nature of Grammatical Relations*. Cambridge, Mass.: MIT Press.
- Pesetsky, D. (1995). *Zero Syntax. Experiencers and Cascades*. Cambridge, Mass.: MIT Press.
- Reinhart, T., & Silono, T. (2004). Against an unaccusative analysis of reflexives. In Alexiadou, A., Anagnostopoulou, E., & Everaert, M. (eds.). *The Unaccusative Puzzle* (pp. 159-180). Oxford: Oxford University Press.
- Sportiche, D. (1998). *Partitions and Atoms of Clause Structure: Subjects, Agreement, Case and Clitics*. New York: Routledge.
- Talmy, L. (1985). Lexicalization patterns: semantic structure in lexical forms. In Shopen, T. (ed.). *Language Typology and Syntactic Description, Vol I: Clause Structure*. Cambridge: Cambridge University Press, pp. 225-82.