Light verbs and structural case

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Abstract

In this paper, we focus on a group of the Kurdish, Korean and Persian Light Verb Constructions (LVCs); consisting of a semantically light verb (LV) and a verbal noun (VN). It is argued that the LVs, capable of case marking and hosting verbal features, in combination with T function either as nominative and accusative case markers or only as nominative case markers. It is shown that the arguments of VNs can be structurally licensed via T and LV whose case assigning roles are not thematically restricted. Although these LVs as the most thematically bleached natural verbs seem very similar to v in the Minimalist Program, the way they are analyzed in this work indicates that the LVs can not support the notion of v(P) as a head above VP in a clause.
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1. Introduction

Light verbs (LVs), a term used by many researchers (Jespersen, 1954; Cattell, 1984; Grimshaw and Mester, 1988, among others) to refer to a class of verbs which are supposed to be semantically bleached and lacking enough thematic force to function as predicates independently, are extensively used in Persian, Kurdish,[1] and Korean. Several linguists have focused on Korean Light Verb Constructions, henceforth LVCs (Ahn, 1991; Sato, 1993; Kim, 1994; Choi and Wechsler, 2001, etc.), and Persian LVCs have been accounted

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[1] By Kurdish, we mean a dialect of this language spoken in Kermanshah and Ilam provinces in Iran.

for by a number of researchers (Vahedi-Langrudi, 1996; Karimi-Doostan, 1997, 2001a, 2001b; Karimi, 1997; Megerdoomian, 2000, 2001, among others). In this work we try to examine a group of Korean, Persian and Kurdish LVCs in order to tackle some of the issues related to LVCs. In these languages, a LV appears in sentences with different number and types of arguments, ranging from one to four. For instance, in the following the equivalents of the English verb 'to do' in these languages appear as LVs and combine with predicative items, let us call them Verbal Nouns (VN) for now, thus forming complex predicates or LVCs. As shown in (1–5) the LVCs in the aforementioned languages show interesting common characteristics. In all cases, the number and type of arguments as well as their realization with respect to syntactic positions and case marking is similar. Let us consider the data in (1–2). (The LVs are shown in capital letters and the VNs are in bold face.)

(1) a. John ʔaroosak-ra be Mary **ʔehda:** KARD[2]   (Persian)
         John doll-SOM[3] to Mary giving do-past
         ''John gave the doll to Mary.''
     b. John baülekan-aga va Mary **haba** KERD.   (Kurdish)
         John doll- the   to Mar giving do-past
         ''John gave the doll to Mary.''
     c. John-i Mary-eykey inhyung-ul **senmwul-ul**[4] HA-yess-ta.   (Korean, Han and Rambow, 2000)
         John-Nom Mary-to   doll-Acc   giving-Acc   do-past-dec
         ''John gave the doll to Mary.''
(2) a. Columbus ʔamrika-ra   **kašf** KARD.   (Persian)
         Columbus America-SOM discovery do-past
         ''Columbus discovered America.''
     b. Columbus ʔamrika   **kašf**   KERD.   (Kurdish)
         Columbus America discovery do-past
         ''Columbus discovered America.''
     c. Columbus-ka sintaylywuk-ul   **palkyen-ul** HA-yess-ta.   (Korean, Sato, 1993)
         Columbus-Nom new-contitent-Acc discovery-Acc do-Past
         ''Columbus discovered America.''

In (1–2) the agent and theme arguments appear as subjects and direct objects respectively, and the goal arguments appear as PPs in (1). Direct objects are marked with -ra in Persian, -ga in Kurdish and –lul in Korean. In addition to the morphological markers, the fact that only the theme/patient arguments in (1–2) can appear as subjects in passive sentences, e.g. as in (5), leaves no doubt that these arguments are object noun phrases.

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[2] The difference between KARD AN as a LV and KARD AN as a causative is explained in Karimi-Doostan (1997: 95–99).

[3] SOM stands for Specific Object Marker.

[4] Note that Schutze (2001) argues that –lul is not always a case marker and Ahn (1990) claims that –lul on nominal elements of LVCs is not an accusative case marker, but an emphatic delimiter. If they are right, we have only one accusative case in (1c).

Now consider the following intransitive sentences. In (3) the subject arguments are agents while they are patient arguments in (4).[5]

(3) a. John **narmesh** KARD.   (Persian)
         John exercise   do-past
         "John exercised."
     b. John **narmesh** KERD.   (Kurdish)
         John exercise   do-past.
         "John exercised."
     c. John-nun **undong**-HA-ess-ta.   (Korean)
         John-Nom exercise-do-past-dec
         "John exercised."
(4) a. John **fout** KARD/ŠOD.   (Persian)
         John death do-past/become-past
         "John died."
     b. John **fout** KERD.   (Kurdish)
         John death do-past
         "John died."
     c. John-nun/ga samang-HA-ess-ta.   (Korean)
         John-Nom   death-do-past-dec.
         "John died."

In these languages, the 'DO' type LVs in transitive clauses may be replaced with 'BECOME' type LVs and form passive-like clauses. Compare the transitive sentences in (2) with their passive-like equivalents in (5).

(5) a. ?a:mrika: (tavasote Columbus) **kašf** ŠOD.   (Persian)
         America (by Columbus)   discovery BECOME-Past
         "America was/got discovered by Columbus[6]."
     b. ?a:mrika: (wa wasile Columbus) **kašf** BŰ.   (Kurdish)
         America (by Columbus)   discovery BECOME-Past
         "America was/got discovered by Columbus."
     c. sintaylywuk-i Columbus-ey-uyhay **palkyen-**i TOY-essta.   (Korean, Sato, 1993)
         new continent-Nom Columbus-by discovery-Nom BECOME-Past
         "America was/got discovered by Columbus."

The above data raise several questions. What is the role of each of the components of an LVC in a sentence? Are LVs really thematically empty? How are the arguments of LVCs licensed at the sentential level? Why does the change of VNs in (1–4) result in different

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[5] The unaccusativity diagnostics for differentiating sentences like those in (3) from those in (4–5) are provided in Karimi-Doostan (1997: 144–149).

[6] Bear in mind that these types of sentences are not passive, but passive-like unaccusative.

sentence structures? Why does the change of LVs in (2) and (5) lead to change of sentence structures? How are the LVs comparable to the abstract little verb (v) in Hale and Keyser (1993, 2002) and Chomsky (1995, 1999, 2001)? How are alternative pairs in (2) and (5) comparable to the transitive/intransitive alternating verbs and their passive/active counterparts? Do Korean, Kurdish and Persian LVs function identically? We attempt to answer these questions in the following sections. Developing an approach in which case marking has a crucial role, we try to show that structural case marking by LVs is the main motivation for LVC formation and case marking plays an important role in syntactic realization of arguments of VNs. The previous approaches to LVCs are reviewed in Section 2. In Section 3, the LVs and VNs are described in detail and each of the components of LVCs are explained and characterized in order to determine their semantic and syntactic roles in the formation of clauses. In Section 4, we attempt to account for the syntactic structure of the clauses in (1–5). The theoretical implications of this study are discussed in Section 5 and the concluding remarks are presented in Section 6.

2. Previous approaches to LVCs

In Japanese, the verb <u>suru</u> 'to do' functions similarly but not identically to the LVs introduced in (1–4). It is reported that Japanese <u>suru</u> and Korean <u>hata</u>, unlike lexical verbs, have no restriction on the number and type of the arguments of the clauses in which they function as main verbs (Kim, 1994; Grimshaw and Mester, 1988). To Isoda (1991), the fact that VNs in <u>suru</u> constructions cannot participate in linguistic operations such as scrambling, passivization, relativization, topicalization, and forming pseudo-clefts and Wh-questions (Isoda, 1991; Kim, 1991; Ahn, 1991; Grimshaw and Mester, 1988) eliminates the possibility of considering <u>suru</u> in VN-o <u>suru</u> constructions as a lexical verb as there are no such constraints in clauses with heavy lexical <u>suru</u>. However, Terada (1990) and Isoda (1991) are of the opinion that <u>suru</u> in LVCs with case-marked VNs has an agentive argument requirement.

Researchers have provided different analyses to account for LVC formation. Han (1988) considers <u>VN-suru</u> as a lexical item like a lexical simple verb that raises to I. In order to resolve the problem of a-structure in complex predicates, Jayaseelan (1988) postulates a mechanism called 'Argument promotion' which rests on the claim that the a-structure of a phrasal node is determined by the promotion of unassigned theta-roles from its daughter nodes. To account for the a(rgument)-structure of Korean LVCs, O'Grady (1992), quoted in Sato (1993), develops a view similar to Jayaseelan's (1988) 'argument promotion'. Kim (1990) and Ahn (1988) adopt Baker's (1988) type of syntactic Noun Incorporation to explain Korean LVCs and suggest that in the incorporation version the VN moves up to merge with <u>hata</u>. In Sato (1993), Korean <u>hata</u> has an a-structure like (x, Theme) in which the internal (or Theme) argument is specified, while the external argument is unspecified. When an LV takes a VN as its Theme argument, the VN's a-structure is incorporated into the LV's a-structure. At the same time, x inherits the VN's logical subject and becomes specified by the external argument of VN. In this approach, LVs such as Korean <u>toy</u> 'BECOME', the passive or unaccusative counterpart of <u>hata</u>, have an a-structure of

(Theme). If this type of verb combines with a VN with an external argument, the external argument of VN cannot be activated and the LVC is realized as passive. It is not clear how Sato can account for the unergative LVCs that don't have a theme argument. This is because according to this approach, the existence of a Theme argument in LV's a-structure is necessary in order to incorporate the a-structure of the VN into that of LV.

Grimshaw and Mester assume that suru is a verb with only a skeletonic a-structure. In order to project into syntax, it must obtain a-structure and theta-marking ability from another item. According to Grimshaw and Mester suru inherits a-structure through an operation called 'Argument Transfer'. This is a process through which the arguments and theta-marking ability of a theta-transparent noun, usually the direct object of an LV, are transferred to the LV. Then the LV becomes a theta-marking and argument-bearing verb with various number of arguments depending on the nominal which is impoverished by the LV. Park (1992), referring to LVCs in Korean, states: first, the internal arguments are the arguments of VN rather than hata, and the theta roles and syntactic cases are directly assigned by the VN to the internal arguments generated as the sisters to the VN. Second, the VN is the head of a maximal projection and it is not an argument of LV. Third, there is no relationship between the internal arguments and the LV. The LV does not have any influence on the number and types of arguments. There is not even a functional relationship such as Grimshaw and Mester's 'Argument Transfer' which makes the LVs assign thematic roles to the arguments. To support the Minimalist Program and the idea that theta assignment takes place at the level of LF, Saito and Hoshi (2000) provide a considerable amount of data to indicate that Argument Transfer, as implemented by Grimshaw and Mester, cannot fully account for LVCs in Japanese. They assume a version of Argument Transfer in which the VNs are raised and incorporated into suru at the level of LF and (some of) the theta roles of VNs are discharged at this level. They suggest two tentative ways to account for unaccusative LVCs and propose that further research is needed in this area. What is important is the fact that when they find it difficult to explain the unaccusative LVCs, they are led to assume that the subject (nominative) arguments must be generated directly in [Spec, IP]; a similar position is assumed in the present work.

Persian LVCs have attracted a number of researchers (Mohammad and Karimi, 1992; Vahedi-Langrudi, 1996; Karimi, 1997; Karimi-Doostan, 1997). Most recently, Megerdoomian (2001) and Folli et al. (2003) have mainly focused on event structure and aspectual properties of Persian LVCs; in Megerdoomian (2001) the LVs while in Folli et al. (2003) the VNs play an important role in determining the aspectual properties of LVCs. Both approaches claim that Persian LVCs can be accounted for syntactically and find it difficult to consider these complex verbs as lexical units. They attempt to show that most of the abstract heads in Hale and Keyser (1993, 2002) l-syntax are morphologically realized in Persian. A considerable number of complex predicates including those focused on in this work are taken into consideration in both papers and they take the position that the LVs are responsible for agentive arguments. Goldberg (2003) argues that in Persian LVC is a simple verb (V0) by default. Its expression as a verb or as a phrasal entity is determined by independently motivated constructions. Default V0 status accounts for the CP's zero level properties, including its resistance to separation and its appearance in derivational constructions. V0 status is a default in the sense that it can be overridden if and only if there is another construction in the grammar that specifically overrides it.

3. The internal structure of LVCs

As attested in the previous section, the main concern of the most of the studies on LVCs is how theta roles are assigned to the syntactic arguments. We will develop a view to show that it is possible to account for the principal issues raised above in the light of case marking properties of LVCs. We suggest that the role of meaning should be reduced to determine the number and types of arguments involved in the events denoted by VNs. To tackle the issues, we first need to elaborate on the components of LVCs and their functions in more detail.

3.1. LVs and Syntactic Locus of arguments

The LVs hata, kardan and kerden in (1–4) appear in clauses containing one to three arguments. The subject arguments in (3) are agents, while those in (4) are theme/patient arguments. We have three arguments in (1) but two in (2). It would be very odd to imagine that we have four kinds of verbs in (1–4). If we have the same verbs in the data from (1) to (4), then what do these LVs look like? Not only the number of arguments (1–4) but also the types of arguments in (3) and (4) strongly suggest that VNs bear thematic properties and are responsible for the number and types of arguments and the LVs are so bleached that they do not play any role in determining the thematic properties of LVCs. (4a) is more interesting as both kardan 'to do' and the inchoative LV Šodan 'to become' (5a) are used interchangeably. This means the LVs are so semantically empty that DO type and BECOME type LVs can be optionally used with some unaccusative VNs as in (4a). This is true in Korean too. The VNs pwungkoy 'collapse', chimmol 'sink' and pyenhwa 'change' can co-occur both with hata 'to do' and toyta 'to become' (Kang, 1996).

(6a) and (6b) below are used to differentiate between agent/actor and patient/undergoer arguments (Chafe, 1970; Jackendoff, 1990). These tests also show that LVs under investigation lack thematic force, since (3) and (4) behave differently when subjected to these tests. The DO type LVs kardan, kerden and hata are used with two groups of VNs, unergatives in (3) but unaccusatives in (4). The LVCs like those in (3) can be used in clauses like (6a) but they can't be used in clauses like (6b) as illustrated in (7). On the other hand the LVCs like those in (4) are ungrammatical in structures like (6a) but grammatical in structures like (6b) as shown in (8).

(6) a. What x did was ...
     b. What happened to x was ...

(7) a. ʔanche ke John ʔanjam   dad in bud ke **narmesh** KARD.   (Persian)
         What that John performing gave this was that exercise did
         ''what John did was he exercised.''
     b. * ʔanche bar sar John ʔmad in bud ke **narmesh** KARD.   (Persian)
         what on head John came this was that exercise did
         ''What happened to John was he exercised.''

(8) a. * ʔanche ke John ʔanjam   dad in bud ke **fout** KARD.   (Persian)
         What that John performing gave this was that death did
         ''what John did was he died.''

b. ʔanche bar sar John ʔmad in bud ke **fout** KARD. (Persian)
   what on head John came this was that death did
   "What happened to John was he died."

Also, the adverbs such as ʔamdan "purposefully" can be used with sentences in (3) but not with those in (4). Consider this contrast in (9a) and (9b).

(9)   a. John ʔamdan **narmesh** KARD. (Persian)
         John purposefully exercise do-past
         "John exercised purposefully."
      b. * John ʔamdan **fout** KARD/ŠOD. (Persian)
         John purposefully death do-past/become-past
         "John died purposefully."

So, the contrasts in (7–9) also indicate that what determines agenthood is the VN but not the LV. As in (3–4) and (7–9), the presence of the DO type LVs with different VNs gives rise to different results. In (1–3), we have agent subjects, but in (4) patient subjects.

Based on this explanation, it is plausible to maintain that the LVs introduced above do not support the general position that LVs determine the agent arguments in LVCs (Terada, 1990; Isoda, 1991; Miyamoto, 1999; Megerdoomian, 2001; Folli et al., 2003); and consequently, they cannot support the Split VP Hypothesis (Kratzer, 1996; Marantz, 1997) in the sense that the external and internal arguments are introduced by different heads. Chomsky (1995), mainly following Hale and Keyser (1993), argues that the configuration for assignment of an external argument is created not by a projection of (transitive) V, but by the projection of an empty verb v dominating VP. He assumes that having an external argument implies having v, and having v implies having accusative case. This means that our LVs are different from Chomsky's (1995) little v. As in (3–5), we do not find a constant correlation between external argument, accusative case and the presence of LVs.

The fact that LVs, as characterized so far, lack a-structure and carry verbal features such as person, number and tense markers, may incline one to suppose that LVs only function to carry these features as they do in (1–5), and they do not have any other morpho-syntactic roles. This position cannot be assumed because there are some cases where the verbal features are carried by elements other than LVs and yet the presence of the LVs is necessary. Let us look at the following Persian example:

(10)   ʔanha **narmesh** khah**and** KARD.
       They exercise will-**3rd Pl.** do
       "They will exercise."

In (10), the verbal features are carried by the future auxiliary and the LV appears in its root form without any morpho-syntactic features. If so, then what is the function of the LV in (10) and in general what is the main role of LVs in the languages under study? The answer to this question lies in the differences between (1–2) and (5). We noticed that in (1) and (2), when we have DO type LVs, the internal arguments function as direct objects and when the DO types LVs are replaced by BECOME type LVs, as shown in (5), the direct

objects of DO type LVCs (2) function as subjects (5). Therefore, it is reasonable to assume that DO LVs are capable of assigning accusative case, but BECOME LVs lack such an ability. Accordingly, we can present the LVs' properties with respect to a-structure, case marking, and verbal features as in (11) which indicates that both groups of LVs lack argument structure and thematic force and when there is no other verb they may carry verbal features. However, the two groups are different with regard to case marking.

(11)

LV Types	A-structure	Acc Case	Verbal Features
'DO' LVs	no	yes	yes
'BECOME' LVs	no	no	yes

It is convincingly shown in Karimi-Doostan (1997: 110–131, 2001a, 2001b) that 'DO' type LVs may appear in atelic VPs, while 'BECOME' LVs strongly resist occurring in atelic VPs. Whether there is a relationship between aspectual properties and case marking abilities of these verbs (Svenonius, 2002; Karatzer, 2002) and whether (a)telicity follows from case properties or the other way around is beyond the scope of this work and needs to be investigated further.

In Marantz (1991) and Hoekstra (2000) T/I and V are responsible for structural case assignment as a complex. Chomsky (2001), referring to case-agreement and structural case for noun, assumes T for subject agreement and little verb (v) for object agreement. In Chomsky (1999) strong v is supposed to appear in clauses with nominative and accusative cases but weak v can only appear in defective clauses such as passive and unaccusatives. In Sigurdsson (2000, 2003) vP is a case shell containing both Nominative and Accusative case and Nominative and agreement have the same loci. For him too only strong v can assign both Nominative and accusative case. Zeller (2000), based on the syntactic structure of German particle verbs, suggests that due to the syntactic projection of the individual parts of a complex verb (V, Trans(itive) and Voice) the syntax includes positions which are designated for syntactic arguments: Spec Voice for the subject and Spec Trans for the object. According to Zeller, German prefixes are the morphological realization of the functional head Trans and while the functional head Voice merely provides a landing site for the external argument it is not semantically responsible for the agent argument, contra Kratzer (1996). Along the same lines, Collins (2003) claims that the Spec of vP can act as a landing site for direct objects and other arguments of a verb in Khoinsan. McCloskey (2001) proposes a schematic structure (12) with three structural case positions for bare nominal arguments in the space between C and V. As illustrated, each position is a landing site for an argument and position 3 is the Spec of the particle –a as a functional head which licenses accusative case on an object.

(12)
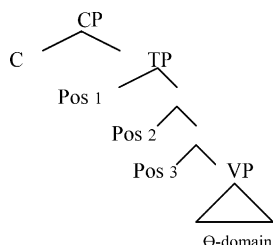
Position 1: where expletives appear

Position 2 : where nominative case is licensed

Position 3 : where accusative case is licensed

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Based on the characteristics of LVs in (11) and inspired by the views introduced in this section, we assume that the merger of T, LVs and VN heads results in a schematic structures as in (13) in which structural case positions are provided where arguments of LVCs are structurally licensed. Note that (13a) and (13b) are the structures for 'DO' type and 'BECOME' type LVs respectively. Also as notated by +/− values in the diagrams, it is possible for DPs to receive Acc(usative) case in (13a) but not in (13b). We have dubbed the VNs as X in (13). The reason for this is the fact that, as explained in the next section, VNs are mixed categories which cannot be labeled as V or N and, in fact, the category of the argument bearing is not important in our approach; what is important is the a-structure of the head in the thematic domain. Also, we will label 'DO' type LVs as Tra(sitive) and 'BECOME' LVs as Intra(nsitive) in the tree diagrams henceforth. Similar to Zeller (2000), we assume that Tra and Intra are functional heads whose specifiers, if projected, are employed as landing sites for arguments. Note that in (13b), as in unaccusatives in Borer (1994), the Spec of IntraP is not projected.

(13)
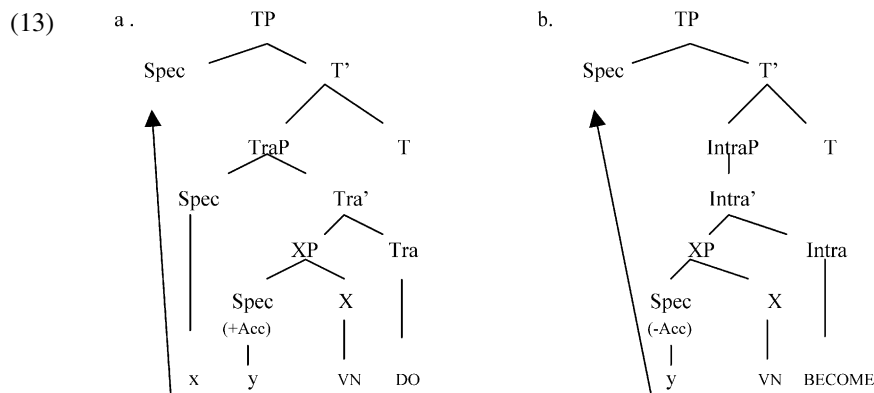
It is assumed that when VN (X) and LVs are merged in (13) the configuration and structural positions are created to license the arguments of the VNs. As shown, the internal argument (y) is generated in Spec XP and the external argument (x) appears in Spec TraP. Assigning Spec positions to arguments in (13) is not pure stipulation. It is generally accepted that internal arguments are closer to V than external arguments. This is true in the case of predicative nouns too. For instance, in 'destruction of the city by the enemy' the NP 'the city' should appear close to the head noun in any combination of the predicative noun with its arguments. So, 'destruction of the city' is fine while 'destruction of the enemy' is not fine, if 'enemy' is supposed to be the agent argument. Also, 'destruction of the enemy to the city' or any similar structure in which the internal argument is stranded from the predicative element is unacceptable cross-linguistically.

In our approach, similar to Marantz (1991) and Hoekstra (2000) two heads, as a complex, are responsible for structural case marking. In spite of the differences between the LVs and Chomsky (1999, 2001) and Sigurdsson's (2000, 2003) strong and weak little

verbs discussed in Section 5, the LVs and little verbs have some characteristics in common. This is because both 'DO' type LVs (13a) and strong v can appear in transitive sentences while 'BECOME' LVs and weak v can only occur in unaccusative and passive structures. The 'DO' type LVs in (13a) – similar to Zeller (2000), McCloskey (2001) and Collins' (2003) functional heads – license object arguments. Also, Spec Tra and Spec XP (13) function like position 2 and position 3 in (12) respectively. Finally, 'DO' LVs like <u>suru</u> are thematically empty and accusative case markers (Grimshaw and Mester, 1988; Saito and Hoshi, 2000).

3.2. Verbal nouns (VNs) and a-structure

We referred to the non-verbal members of LVCs as VNs without any explanation in the above sections. Now it is time to elaborate on them. They are referred to as VNs because they seem to be intermediate between nouns and verbs. Very similar to English gerunds, VNs do not have all the properties of either verbs or nouns, but seem to fall somewhere between the noun and verb categories (Malouf, 1998). More specifically, one can say that the VNs are abstract nouns that denote an event or action with one or more participants. Although some of the VNs may in some contexts behave like Grimshaw's (1990) simple event or result nominals, every VN can co-occur with a possessive or Genitive marker in noun phrases like those in (14).

(14)   a.   John-uy   Mary-eykey-uy inhyung(-uy) senmwul   (Korean, Han and Rambow, 2000)
             John-Gen Mary-to-Gen   doll(-Gen)   giving
             ''John's giving of a doll to Mary''
        b.   ʔehda-ʔe   ʔarousak-e   John be Mary   (Persian)
             giving-EZAFE[7] doll- EZAFE John to Mary
             ''John's giving of a doll to Mary''

In addition, the Persian phrases in (15) have almost the same meaning and the number of arguments is the same. Note that there is no LV in (15a) and the 'DO' and 'BECOME' LVs appear in (15b) and (15c) in infinitive forms.

(15)   a.   **mosadere**-ye   amval-e   mardom tavasote dowlat
             confiscation-**EZAFE** properties-**EZAFE** people by government
             ''The confiscation of people's properties by the government''
        b.   **mosadere** KARDAN-e   ʔamval-e   mardom   tavasote dowlat
             confiscation doing-**EZAFE** properties-**EZAFE** people by government
             ''The confiscation of people's properties by the government''
        c.   **mosadere** ŠODAN-e   ʔamval-e   mardom tavasote dowlat
             confiscation doing-**EZAFE** properties-**EZAFE** people by government
             ''The confiscation of people's properties by the government''

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[7] The Ezafe particle -*(y/ʔ)e* appears between a noun and its complements, and between a noun and a possessor, between a noun and a modifier, between an adjective and its complements and between a preposition and its complements. The constructs linked by the EZAFE particle are known as 'Ezafe Constructions'.

As we see in (14), the same arguments in (1) are present in NPs headed by the VNs without the presence of the LVs. Also, the presence or absence of 'DO' or 'BECOME' type LVs in (15) does not affect the meaning and the a-structure of the phrases. These indicate that VNs are transparent argument-bearing nouns or complex event nominals that have the same arguments as their verbal equivalents (Grimshaw, 1990; Kiefer, 1996; Laczko, 2000; Cornilescu, 2001; Fu et al. (2001), among others). As shown in the Persian cases in (16–18), VNs identical to argument-bearing complex event nominals but unlike non-eventive nouns cannot be pluralized (16a), and cannot be used with determiners (17a). Also, VNs unlike normal nouns can be modified by aspectual or agentive adverbs (18a).

(16) a. * ʔehda-ha
          giving-Pl
      b. ʔarousak-ha
          doll-Pl
(17) a. * ʔin ʔehda
          this giving
      b. ʔin ʔarousak
          this doll
(18) a. ʔehda-ʔe   mokarar/doutalabane
          giving-EZAFE   repeatedly/voluntarily
      b. * ʔarousak-e   mokarar/doutalabane
          doll-EZAFE   repeatedly/voluntarily

The tests in (16–18) indicate that the VNs like complex event nominal and lexical verbs are predicative and argument-bearing lexemes (Grimshaw, 1990; Laczko, 2000).

Both the argument-bearing nature and the (in)compatibility of VNs with the linguistic elements illustrated in (16–18) make the VNs similar to lexical verbs and different from normal nouns. However, VNs unlike verbs cannot carry verbal agreement markers (e.g. person and number features) and are not able to case mark arguments at sentential level. Although some argue that in Korean VNs can assign accusative case in some circumstances (Sells, 1995), such a phenomenon is not attested in our data (14a) and VNs definitely do not assign structural case at the sentential level in Kurdish and Persian. Therefore, we can say that VNs, as shown in (19), are argument-bearing items that cannot assign structural case and cannot host the verbal agreement markers.

(19)

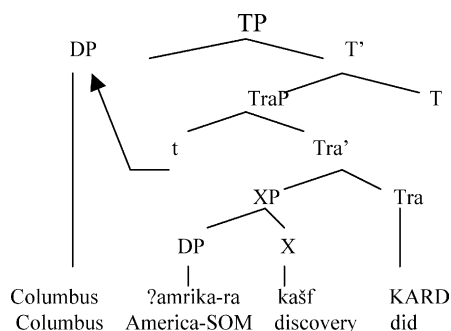| VN Types	A-Structure	Structural Case	Verbal features
'giving'	x, y, z	no	no
'discovery'	x, y	no	no
'exercise'	x	no	no
'death'	y	no	no

In (19), we give the English equivalents of the VNs in (1–4) for the sake of simplification and x stands for external (cause or actor) arguments, y for direct internal (patient or theme) arguments and z for indirect internal (goal, beneficiary) arguments.

4. The merger of LVs and VNs

So far we have answered some of the questions raised in Section 1 by characterizing the LVs as in (11) and VNs as in (19). However, one important unsettled issue is how LVs and VN, as described above, merge to form predicates capable of appearing in clauses like (1–5). We believe it is easily possible to tackle this issue if we reduce the role of theta marking in the syntax. As attested, most of the controversial views on LVCs summarized in Section 2 relate to how the arguments are theta marked in clauses containing a LVC (Grimshaw and Mester, 1988; Park, 1992; Saito and Hoshi, 2000, among others). In Government-Binding Theory, the Projection Principle requires subcategorization properties of lexical heads (e.g. V, N, Adj. and P) be present at all three syntactic levels: D-structure, S-structure and LF. Newmark (2001) criticizes the Projection Principle, theta-criterion (Chomsky, 1981) and Baker's (1988) Uniformity of Theta Assignment Hypothesis which states that identical thematic relationships between items are represented by identical structural relationships between those items at S-structure. Karimi (1997), in the light of the same data, claims that the Projection Principle can no longer be maintained. Chametzky (2003), quoting from Lebeaux (1988), writes that " . . . [T]here are separate representations comprising open class items (lexical categories) and closed class items (functional categories) respectively. Theta relations are represented by the open class objects and case relations are represented by the close class objects; that is, open class items license semantically and close class items create frames into which the theta representation is projected." In Zeller (2000), German prefixes are functional heads whose Spec is a landing site for the internal arguments of the base verbs. McCloskey (2001) believes that case positions (12) are structural and not thematically restricted and suggests segregation between thematic and inflectional layers. In the same spirit, we assume that case positions in (13) provided as the result of the merger of T and Tra/Intra heads with VNs can be used as the landing site for the arguments of the VNs. Moreover, we assume a grammar in which the role of semantic and thematic force in the syntax is reduced to identification of arguments as external argument (x), internal argument (y) and indirect argument (z), compare with (19). For instance, x might be related to an actor role, y to a patient role and z to a goal role in the Lexical Conceptual Structure (LCS) of predicative words (Jackendoff, 1990).

Now, we are able to return to the issue of syntactic structures in (1–5). The transitive sentences in (1) and (2) with a LV capable of forming structures like (13a) and VNs with external and internal arguments can easily be accounted for. When T, LVs and VNs merge, the external arguments are directly base generated in Spec Tra and the internal arguments are directly base generated in Spec XP. The internal argument receives accusative case in situ and the external argument raises to Spec of TP to satisfy EPP, the requirement that every clause must have a subject. As an example, consider (2a) diagramed in (20) identical to (13a).
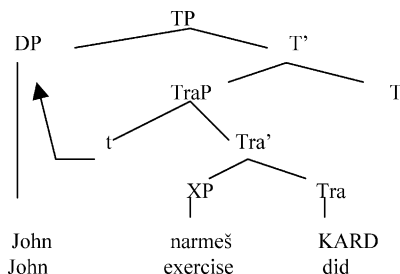
(20)


```
                              TP
         DP ─────────────────────────── T'
          │                    TraP ──────── T
          ↑               t ───────── Tra'
          │                      XP ───────── Tra
          │                  DP ──── X          │
          │                  │       │          │
       Columbus         ?amrika-ra  kašf      KARD
       Columbus        America-SOM discovery   did
```

Of course, since there is no structural case available in (20) for the indirect internal arguments of sentences like (1), these arguments are licensed by P and appear as by-phrase PP's adjoined to TraP.

The unergative sentences in (3) are formed as a result of the combination of a 'DO' type LV (13a) and a VN with a single external argument (19). The tree diagram for (3a) is illustrated in (21). As shown, the single argument of the VN lands directly in the Spec of Tra and raises to fill the Spec TP (Vainikka, 1996), when the LV merges with the VN and T. We assume as in (20) that Spec XP can only function as a direct landing site for internal arguments. So, it is not possible for the single external argument of the VN to be generated in Spec XP in (21).

(21)


```
                           TP
        DP ──────────────────────── T'
         │                 TraP ──────── T
         ↑              t ──────── Tra'
         │                   XP ──────── Tra
         │                   │            │
       John              narmeš         KARD
       John             exercise         did
```

Now, a question might arise here. Why is the Spec of XP empty or unprojected and what happens to the object case marking ability of 'DO' type LVs in instances like (3a–c), as illustrated in (13a)? We believe that 'DO' type LVs case mark DPs when there are DP arguments which require to be case licensed. In the unergative sentences (3), although the LVs are able to assign accusative case to an internal argument, the VNs do not provide the sentences with such arguments. This is very similar to instances like (22b) and (23b) where the verbs are capable of assigning case, but they do not assign any case and their case marking ability remains unassigned. In (22a), the verb "eat" is transitive and assigns accusative case to a DP, but its accusative case is not assigned due to the lack of an explicit argument in (22b). Also, in (23b) the verb 'sing' does not assign accusative case, but it assigns accusative case to the so-called 'fake' or 'unselected' object argument in (23a).

(22)   a.   John ate **his meal**.

        b.   John ate.

(23)   a.   John sang **himself** hoarse.

        b.   John sang.

One of the crucial differences between the unaccusative LVCs in (4) and the transitive (1–2) and unergative (3) LVCs is the fact that the transitive and unergative LVCs are formed only with DO type LVs, while unaccusative LVCs may be formed with DO or BECOME type LVs. How can this be handled in our framework? To elaborate on this in (24a, b) we show two diagrams for the sentences in (4a), as examples. As shown, we assume that the single internal argument of this type of sentence is base generated in Spec XP and raised to Spec T, when LVs merge with VNs and T. The movement of the internal argument from object position to subject position to receive nominative case in clauses like (24b) has been argued for by many researchers (Perlmutter, 1978; Burzio, 1986; Levin and Rappaport, 1995; Borer, 1998, among others). However, there seems to be a problem with (24a) where there is an accusative case available to be assigned to the base generated DP. In fact there is a conflict between two case assigners: nominative and accusative. If the internal argument receives accusative case in object position, there would not remain any motivation for the argument to raise to Spec T. In the spirit of Burzio (2000), we assume that in cases like (24a) where we have a conflict between two case assigning possibilities, the nominative case has priority and wins over the accusative case to satisfy the Extended Projection Principle (EPP). Harley (1995) also believes that EPP forces the first argument of every clause to be raised to subject position. Therefore, in both instances in (24) we have a predicate which lacks an external argument and the movement is triggered by EPP (Burzio, 2000).

(24)   a.
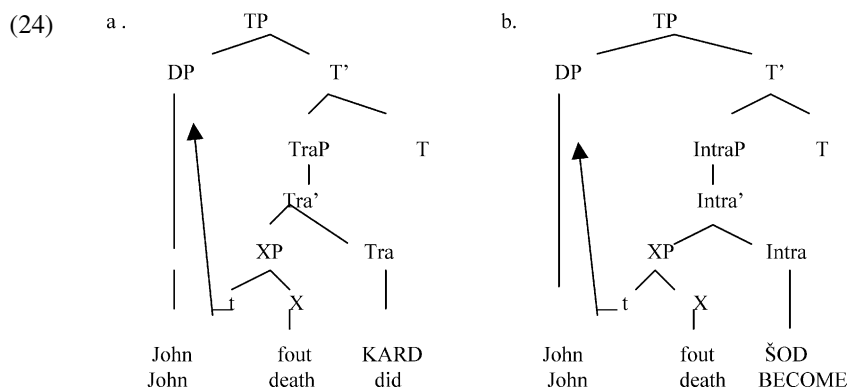
Finally, let us find out how the passive-like sentences in (5) can be accounted for in our proposed framework. The LVs in these clauses are not accusative case assigners (13b) so similar to (24b) the internal arguments of the VNs after landing in Spec XP is raised to subject position for same reasons in (21). But note that the VNs in these clauses, unlike unaccusative sentences (4, 24b), have both an external and an internal argument, as indicated in (19). So, although there is no structural position for the external arguments,

they may be licensed by a P and adjoined to the IntraPs as in normal passive sentences. We have diagramed (5a) as an example of the passive-like clauses under study. In fact, apart from the adjoined PP these clauses are not structurally different from the unaccusative sentences. Compare (24b) with (25).

(25)
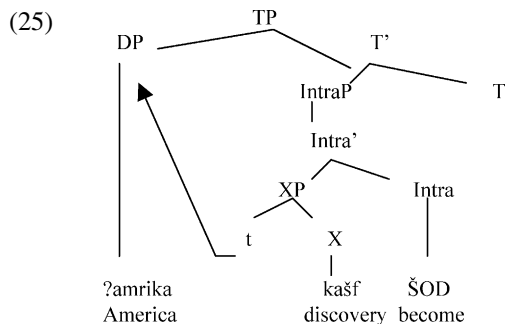
Here, we should mention that the approach adopted in this work is capable of accounting for all syntactic structures presented in (1–5). However, we have only focused on the Persian sentences in (20–21) and (24–25) for the sake of brevity. The Kurdish and Korean clauses (1–5) are so identical to their Persian equivalents that one can easily provide the same tree diagrams for the Kurdish and Korean data too.

## 5. Discussion and theoretical implications

After Chomsky (1995) adopted Hale and Keyser's (1993) idea of 'abstract light verb' and dubbed it as v heading a phrase above VP, many researchers attempted to introduce some verbs as the instantiations of v in some languages. Vahedi-Langrudi (1996) considers Persian LVs such as <u>kardan</u> 'to do' and <u>Šodan</u> 'to become' as the morphological realization of v. Megerdoomian (2001: 109–113) argues that <u>kardan</u> is an outer v that contributes an external argument and <u>Šodan</u> is an inner v which adds an internal argument. In Folli et al. (2003: 8–9) <u>kardan</u> is regarded as a v that forms transitive and unergative LVCs and <u>Šodan</u> is viewed as a v that forms unaccusative LVCs. Stroik (2001) claims that the English helping verb *do* in the *do so* constructions is the phonetically and semantically realization of null v in the Minimalist Program. In Radford (2004), v plays a significant role in transitivity and the sentences in (26), for instance, are different due to the existence of different null LVs as illustrated in (27) and (28).

(26) a. They rolled the ball down the hill.
      b. The ball rolled down the hill.

Radford (2004) provides (27) and (28) as the tree diagrams for sentences in (26) respectively. (27) is transitive since the v has a theta-marked external argument, but (28) is intransitive since the v in this clause lacks an external argument. In both clauses, the lexical

verb *roll* raises to merge with the null v,[8] represented as ø. In Radford (2004) the v in (27) is a transitive LV, while the v in (28) is an intransitive LV.

(27)

(28)
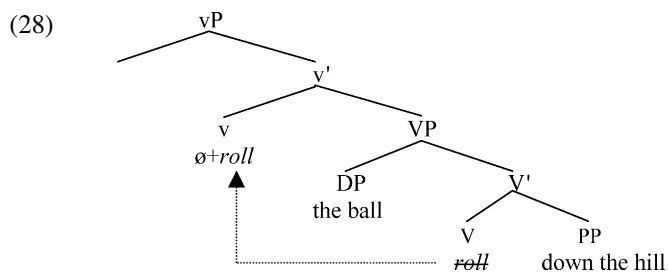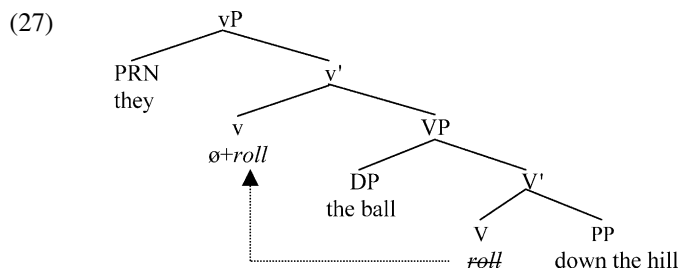
Note that in the approach proposed in the present work, (26a) may have tree diagram similar to (20) and (26b) one similar to (25).

As explained in Section 3.1 and illustrated in (20–22) and (24–25), the LVs in the languages under consideration may assign accusative case but they do not have any role in determining the type and number of the arguments in the clauses. This means that, contra what is argued for in Vahedi-Langrudi (1996), Megerdoomian (2001), and Folli et al. (2003), the LVs as pictured in this work do not support the existence of v in the Minimalist Program as a head which is responsible for the presence or absence of the external argument (27) and (28). In short, the LVs focused on in this work cannot be used to support the existence of v as a transitive/causal verb introducing cause/agent arguments (Chomsky, 1995; Adger, 2003; Radford, 2004).

We have convincingly shown that the LVs under study can case-mark arguments and host verbal features, but they lack semantic content and argument structure. So, it is plausible to say that LVs are semantically beached Vs which have lost their meaning and a-structure during the history the languages. This position is supported by the fact that all of the LVs have lexical counterparts that function as full predicates and they seem to be the origins of LVs. Ritter and Rosen (1996) place the LVs between the lexical verbs and auxiliaries on the semantic strength continuum as in (29).

(29)   Strong ←---→ Weak
              Lexical verbs   Light Verbs   Auxiliaries

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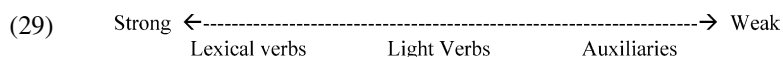
[8] Radford (2004) considers v as the null equivalent of the English light verbs like *have, take, make* and *do* in complex verbs such as *have fun, take heed of, make an attempt* and *do a dance*.

Karimi-Doostan (2001b) reports that Modern Persian uses more LVCs in comparison to Middle Persian and some of the lexical words in Middle Persian are archaic and replaced by LVCs in Modern Persian. Roberts and Roussou (2003) confirm Hopper and Traughott's (1993) proposal in (30) and suggest that inflectional affixes, clitics and grammatical words are obtained from content words as a result of grammaticalization. Therefore, it is reasonable to maintain that LVs are linguistic elements in the process of becoming grammaticalized

(30)   full Verbs > Vector > Auxiliary > clitics > Affix

The diachronic view that LVs develop from lexical verbs and they loose their lexical semantic force to become semantically light creates some problems for the notion of v as a head above VP in the Minimalist Program (27–28). For instance, it is not clear how one can deal with the following questions in the Minimalist Program framework. Why do we need LVs or v as the defective forms of lexical verbs that contain the same information which already exists in lexical verbs heading VPs? If there are lexical verbs with external arguments, what happens to their external arguments when they merge with a transitive v with an external argument (27)? If null verbs are developed from lexical verbs and there are not lexical verbs with external arguments, where do the external arguments of null verbs come from? How can the Iranian and Korean DO type and BECOME type LVs which lack thematic force and arguments (1–5) be explained in the Minimalist Program?

Thus, it can be concluded that both historical development of LVs and their thematic and functional roles as characterized in this work indicate that the LVs studied in this work as the semantically lightest and morphologically realized natural LVs undermine the idea of v as a causal/agentive head above VP (Chomsky, 1995; Adger, 2003, Radford, 2004). However, it is possible to account for both LVCs under consideration and the transitive/ intransitive alternating pairs (26) in our framework in which we have two heads, i.e. Intra/ Tra and X, instead of VP in the sense used in the Government-Binding Theory. The functional head Intra/Tra heads a phrase that determines whether we can have an accusative case-marked DP in a clause or not, and the X head determines the type and number of participants in a clause.

Another assumption or perhaps implied conclusion in this work is the fact that the native speakers of a language learn whether a lexical verb is either transitive or intransitive. But this classification does not match with the traditional view on transitivity. It seems a classification in which transitive verbs with two arguments (real transitives) might be considered as 'unmarked' transitives and the unergative verbs with an external arguments as 'marked' transitives and unaccusatives and passive BECOME type LVs as intransitives is closer to the linguistic knowledge of native speakers of a language.[9]

6. Conclusion

The so called LVCs, a class of complex predicates consisting of a VN and LVs with lexical verbs meaning 'to do' or 'to become', appear in clauses with different number and

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[9] See Section 9.6 in Radford (2004) for the same idea expressed in a different way.

types of argument and form various identical transitive, unergative and unaccusative sentences in Kurdish, Persian and Korean. The LVs are characterized as lacking a-structure but capable of case marking and hosting verbal features and the VNs are described as predicative nominals with the same a-structure as their lexical verb equivalents. It is argued that LVs fall into two classes with respect to case marking. One class can assign both nominative and accusative case and another class can only assign nominative case. The LVs in combination with T are a case marking complex whose structural case marking abilities are not semantically restricted. We show that case properties of LVs, functioning as structural heads licensing arguments of VNs at sentential level, play a significant role in determining various syntactic structures.

The way that LVs are diachronically developed and their behavior as case marking functional heads suggests that LVs are more like V rather than v. This fact and the analysis of the LVs as the most thematically bleached natural light verbs indicate that the LVs cannot be used to support the notion of v(P) in the Minimalist Program. It is also proposed that verbs can be classified into intransitives and marked and unmarked transitive verbs.

Uncited references

Jespersen (1965), Zeller (2001), Newmeyer (2001).

Acknowledgement

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