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1   Introduction: Interrogative Words as Verbs

There has been much research on the syntactic derivation of interrogative constructions, but the discussion on the syntactic categories of interrogative words is often neglected. One gap in the literature is the possibility that interrogative words can be used as verbs. Hagège (2008:3) defines an interrogative verb as "a kind of word which both functions as predicates and questions the semantic content of this predicate." His typological study has revealed the morphological, syntactic, and semantic properties that interrogative verbs share crosslinguistically.

   According to Lin (2010), interrogative verbs also exist in Kavalan, an Austronesian language in Taiwan, in that they have the same morphosyntactic distribution as verbs. Interrogative verbs in this language occur in the sentence-initial position, take tense/aspect markers, attract pronominal clitics, and are affixed with voice markers.[1] The following examples are for illustration.[2]

(1)   q<um>uni=isu   tangi
       <AV>do.what=2SG.ABS   just.now
       'What were you doing just now?'

[1] The so-called voice system in Austronesian languages roughly refers to the concord between a verb and an absolutive-marked noun phrase in terms of the thematic role that this noun phrase plays.
[2] Glossing conventions are as follows: ABS – Absolutive; AV – Agent Voice; CLF – Classifier; COMP – Complementizer; ERG – Ergative; FUT – Future; GEN – Genitive; HUM – Human; I – Inclusive; LNK – Linker; NEG – Negation; OBL – Oblique; PFV – Perfective; PL – Plural; PV – Patient Voice; SG – Singular.

(2) tanian-an-su=ti   ya   kelisiw
    where-PV-2SG.ERG=PFV   ABS   money
    'Where did you put the money?'

Note that *quni* 'do what' in (1) takes the agent voice marker and *tanian* 'where' in (2) takes the patient voice marker.

　　Lin (2010) also demonstrates that Kavalan interrogative verbs can occur in three different verbal structures: intransitive, transitive, and serial verb constructions. A verb sequencing structure with an interrogative verb is termed Interrogative Serial Verb Construction (ISVC) by Lin (2010). The interrogative verbs in Kavalan that can occur in an ISVC include *naquni* 'do how,' *tanian* 'where,' and *tani* 'how many/much,' as illustrated by the following sentences.

(3) naquni-an-su   m-kala   ya   sunis a   yau
    do.how-PV-2SG.ERG   AV-find   ABS   child LNK that
    'How do you find that child?'

(4) tanian-an-su   pizi   ya   kelisiw-ta
    where-PV-2SG.ERG   AV.put ABS   money-1IPL.GEN
    'Where do you put our money?'

(5) kin-tani-an-su=pa   p<m>ukun   ya   sunis
    CLF.HUM-how.many-PV-2SG.ERG=FUT   <AV>beat   ABS   child
    'How many (more) children will you beat?'

All these examples contain an interrogative verb that occupies the sentence-initial position and is followed by a lexical verb.

　　The present study will provide justification for the analysis of an ISVC as a true Serial Verb Construction (SVC) and further investigate the syntactic relationship between the interrogative verb and the lexical verb in this construction. What syntactic operations are involved in the derivation of an ISVC will also be discussed. The findings suggest that ISVC sentences in Kavalan do not constitute a homogeneous class in terms of the syntactic relationship between the interrogative verb and the lexical verb. The interrogative verb *naquni* 'do how' behaves like a raising predicate and takes a lexical VP as its complement. By contrast, an ISVC headed by *tanian* 'where' features obligatory control of the theme argument and adjunction of a lexical VP to the interrogative verb.

2　　Interrogative Serial Verb Constructions in Kavalan

This section argues that a Kavalan ISVC is a type of SVC based on the crosslinguistic diagnostics of verb serialization. It will also be demonstrated that the

interrogative verb and the lexical verb in an ISVC are not coordinated. The interrogative verb, not the lexical verb, should be analyzed as the main verb.

2.1 Kavalan ISVC as a Type of SVC

A Serial Verb Construction (SVC) can be informally defined as a syntactic construction where two verbs are juxtaposed without being connected by any marker. There is still no consensus about its formal syntactic definition. However, studies on verb serialization in diverse languages have revealed the following crosslinguistic properties of an SVC (Muysken and Veenstra 2006).

(6)   Crosslinguistic Properties of SVCs
    a.   The two verbs in an SVC are not separated by any overt linker, co-ordinator, or subordinator.
    b.   The two verbs in an SVC are interpreted with the same tense value.
    c.   Only one negator is possible in an SVC.
    d.   The structural relationship between the two verbs or verb phrases in an SVC is subordination instead of coordination.
    e.   The two verbs in an SVC must share an argument.

These crosslinguistic properties of an SVC will serve as the diagnostics to examine whether Kavalan ISVCs belong to an SVC. Our findings suggest that an ISVC in Kavalan conforms to all the properties of an SVC and thus should be construed as a special type of SVC.

(6a) states that there is no overt linker that separates the two verbs in an SVC. Likewise, no overt linker can intervene between the interrogative verb and the lexical verb in a Kavalan ISVC. As exemplified by the following sentences, the interrogative verb and the lexical verb cannot be separated by a linker, coordinator, or complementizer.

(7)   naquni-an-su   (*a/sRi/tu)   m-kala   ya   sunis
    do.how-PV-2SG.ERG   LNK/and/COMP   AV-find   ABS   child
    'nay
    that
    'How do you find that child?'

The second diagnostic characteristic of an SVC concerns the temporal relation between the two verbs (6b). The two verbs in an SVC must be interpreted under the same temporal frame. The interrogative verb and the lexical verb in an ISVC must be interpreted with the same tense value as well. In (8), both the interrogative verb and the lexical verb must receive a past tense interpretation. This is

further confirmed by the ungrammaticality of (9), which shows that the lexical verb cannot host its own tense or aspect markers.

(8) naquni-an-su=ti m-kala ya sunis 'nay
do.how-PV-2SG.ERG=PFV AV-find ABS child that
'How did you find that child?'

(9) *naquni-an-su=ti kala=pa ya sunis 'nay
do.how-PV-2SG.ERG=PFV find=FUT ABS child that
'What did you do (in the past) to find the child (in the future)?'

The third criterion (6c) is that only one negator is possible in an SVC. As illustrated by (10), an ISVC can contain one negator at most and it must precede the interrogative verb.

(10) mai tanian-an-su (*mai) m-nubi ya kelisiw
NEG where-PV-2SG.ERG NEG AV-hide ABS money
'Where don't you hide the money?'

As stated in (6d), another distinguishing property of an SVC is that the syntactic relationship between the two verbs is not coordination, but some form of subordination. In other words, the structure of an SVC is distinct from covert coordination where two constituents are coordinated without an overt linker. The following discussion will delineate the syntactic properties of VP-coordination in Kavalan and then show that a Kavalan ISVC is not derived via coordination.

In Kavalan, two verbs or verb phrases can be conjoined with the optional coordinator *sRi*, as demonstrated in (11).

(11) mu-Rtut (sRi) t<m>ibuq sunis 'nay
AV-frightened and <AV>fall child that
'The child was frightened and fell.'

(12) pukun-an-na (sRi) qaRat-an-na aiku
hit-PV-3ERG and bite-PV-3ERG 1SG.ABS
'He hit and bit me.'

In addition, the coordinated elements can undergo permutation. Reversing the word order of the two verbs in (11) does not lead to ungrammaticality, nor does this affect the truth conditional meaning of the sentence. Finally, as shown in (11) and (12), the second verb can be affixed with either the agent voice marker or the patient voice marker.

A Kavalan ISVC does not exhibit any of these syntactic properties of a coordinate structure. As already shown in (7), the optional coordinator, *sRi*, is not allowed in an ISVC. Secondly, the interrogative verb and the lexical verb cannot undergo permutation. The interrogative verb occurs in the sentence-initial position and must precede the lexical verb. A sentence where the lexical verb precedes the interrogative verb is ungrammatical, e.g., (13).

(13) *m-kala   naquni-an-su   ya   sunis a   yau
      AV-find   do.how-PV-2SG.ERG   ABS   child LNK   that
      'How do you find that child?'

Finally, unlike the second verb in VP-coordination, the lexical verb in an ISVC can only take the agent voice marker, but not the patient voice marker, as illustrated below.

(14) *tanian-an-su   nubi-an   ya   kelisiw-ta
      where-PV-2SG.ERG   hide-PV   ABS   money-1IPL.GEN
      'Where did you hide our money?'

This requirement, the AV-restriction on the lexical verb, indicates that the lexical verb in such sentences is defective and does not act like a full-fledged independent verb. In other words, the two verbs in an ISVC are not coordinated, but involve some form of subordination.

Finally, as stated in (6e), the two verbs in an SVC share at least one argument. This is also true of Kavalan ISVCs. In (3), the interrogative verb *naquni* 'do how' has an agent argument, *su* '2SG.ERG,' which is also interpreted as the agent of the embedded lexical verb. The interrogative verbs in (4) and (5) share a theme argument with the lexical verbs. The interrogative scope of *tanian* 'where' in (4) only covers the theme argument as the intended meaning of the question concerns the location of this theme argument. This theme argument is also interpreted as the theme argument of the lexical ditransitive verb, *pizi* 'AV.put.' Likewise, the absolutive noun phrase in (5) is the theme argument of both *tani* 'how many' and *pukun* 'beat.' The shared arguments in these sentences are all expressed only once.

In conclusion, a Kavalan ISVC exhibits all the crosslinguistic properties of an SVC listed in (6). Therefore, an ISVC in Kavalan should be construed as a special type of SVC.

2.2   Interrogative Verb as the Main Verb in ISVC

As argued in 2.1, the fixed linear order and the AV-restriction on the lexical verb in an ISVC suggest that this construction is not derived via VP-coordination. The

irreversibility of the word order of the two verbs and the AV-restriction on the lexical verb instead indicate that the lexical verb is subordinate to the interrogative main verb.

In a verb sequencing sentence with a main verb and a secondary, subordinate, or embedded verb, the linear order of the two verbs is fixed in that the main verb must precede the secondary verb. For example, in a *try*-type control sentence like (15), the main verb, *paska* 'try,' must precede its verbal complement, *qapaR* 'catch.' When their word order is reversed, the sentence becomes ungrammatical. Moreover, the secondary verb can only be affixed with the agent voice marker. It observes the AV-restriction and cannot take the patient voice marker, as illustrated by the ungrammaticality of (16).

(15) paska-an-ku   q<m>apaR   ya   saku
      try-PV-1SG.ERG   <AV>catch   ABS   cat
      'I try to catch the cat.'

(16) *paska-an-ku   qapaR-an   ya   saku
      try-PV-1SG.ERG   catch-an   ABS   cat
      'I try to catch the cat.'

The second verb in a Kavalan SVC also conforms to the AV-restriction.

The AV-restriction is thus an indication of a non-finite reduced subordinate clause. A Kavalan ISVC is parallel to verb sequencing sentences that contain a subordinate verb phrase in terms of word order properties and the AV-restriction. The interrogative verb in an ISVC behaves like a main verb because it must precede the lexical verb and can take the patient voice marker. By contrast, the lexical verb, which must follow the interrogative verb and observes the AV-restriction, is secondary to the interrogative verb. Please see (13) and (14) in the previous section.

The case-marking pattern in an ISVC further corroborates this argument. In a sentence with a control main verb and its verbal complement like (15), it is the voice marker on the main verb that determines the case of the nominal arguments. In (15), the agent argument receives ergative case and the theme argument absolutive case. This conforms to the case-marking pattern of a patient voice sentence. When the agent argument is marked absolutive and the theme argument is marked oblique as in (17) below, the sentence becomes ungrammatical.

(17) *paska-an   k<m>apaR   aiku   tu   saku
      try-PV   <AV>catch   1SG.ABS   OBL   cat
      'I try to catch a cat.'

This shows that the agent voice marker on the secondary verb does not determine how the nominal arguments are case-marked.

As for ISVCs, the case-marking pattern is contingent on the patient voice marker on the interrogative verb. Consider the following sentences.

(18) tanian-an-su   m-nubi   ya   kelisiw
     where-PV-2SG.ERG   AV-hide   ABS   money
     'Where do you hide the money?'

(19) *tanian-an   m-nubi   aisu   tu   kelisiw
      where-PV   AV-hide   2SG.ABS   OBL   money
      'Where do you hide the money?'

(18) exhibits the case-marking pattern of a patient voice sentence in that the agent argument receives ergative case and the theme argument receives absolutive case. If *m-nubi* 'AV-hide' were the main verb of the sentence, we would expect the agent to receive absolutive case and the theme oblique case, contrary to fact, as demonstrated by the ungrammaticality of (19).

To summarize, the following syntactic properties of Kavalan ISVCs suggest that they are derived via subordination of the lexical verb to the interrogative main verb.

(20) a.   The interrogative verb must precede the lexical verb.
      b.   The lexical verb must obey the AV-restriction.
      c.   The case-marking pattern of the nominal arguments is contingent on the voice marker affixed to the interrogative verb.

3   The Syntactic Relationship Between the Two Verbs in an ISVC

3.1   Complementation or Adjunction

The discussion so far has revealed that a Kavalan ISVC is not derived via coordination of an interrogative verb and a lexical verb. Having excluded the possibilities of coordination, we investigate whether a Kavalan ISVC involves complementation or adjunction in this section. Our findings suggest that an ISVC headed by *naquni* 'do how' is derived via complementation of a lexical verb phrase to the interrogative verb, whereas the syntactic relationship between *tanian* 'where' and its following lexical verb is adjunction.

The following two lists summarize the properties of complements and adjuncts respectively on the basis of Bierwisch's (2003) and Dowty's (2003) discussion. The properties mainly consist in the syntactic and semantic relationship between a head and its complement/adjunct. They will serve as the diagnos-

tics for the distinction between complementation and adjunction in the following discussion.

(21) Properties of a complement Y in relation to its head X :
   a.   A head X without its complement Y is not well-formed or X is different from [XY] in terms of category or meaning.
   b.   Without Y, the meaning of X is incomplete or incoherent or Y can still be inferred from the linguistic or situational context.
   c.   Y saturates an argument position of X. In other words, X discharges an argument position to Y.

(22) Properties of an adjunct Y in relation to its head X:
   a.   A head X without its adjunct Y is well-formed and X is the same as [XY] in terms of category or meaning.
   b.   Y merely restricts the meaning or denotation of X.
   c.   Y discharges an argument position to X without determining the morphosyntactic properties of [XY].

(21a), (21b), (22a), and (22b) basically capture our informal intuition about complements and adjuncts. That is, a complement can be obligatory, but an adjunct is always optional. This is motivated by the semantic aspects of a complement and an adjunct in that a complement functions to complete the meaning of its head, whereas an adjunct serves to modify the meaning of its head.

The criteria in (21c) and (22c) deserve a more detailed discussion. (21c) states that a head discharges an argument position to its complement. Couched in traditional syntactic terms, a head assigns a Θ-role to its complement or the complement receives a Θ-role from the head. (22c) is mainly motivated by the semantic analysis of adjuncts. The Neo-Davidsonian analysis of adverbial modifiers advocated by Parsons (1990) treats adverbial modifiers as predicates of underlying events. An adjunct like an adverbial modifier is viewed as a type of semantic predicate that also has argument positions to discharge. For example, the adverb *slowly* in *John runs slowly* takes the verb phrase as its argument. While a head discharges an argument position to its complement, it saturates an argument position of its adjunct. Although both a head and an adjunct can discharge an argument position, an adjunct does not determine the morphosyntactic properties and category of the resultant phrase.

With the diagnostics listed in (21) and (22), we can now probe into the syntactic relationship between the interrogative verb and the lexical verb in an ISVC. Consider *naquni*-ISVC first. First of all, the lexical verb in an ISVC headed by *naquni* 'do how' like (3) is obligatory. The deletion of the lexical verb would result in a sentence that has a totally different interpretation. This is illustrated in (23) below. The sentence in (23) does not contain a lexical verb and its

intended meaning is altered. It does not inquire about the method of how to do something, but questions what one does to the theme argument.[3]

(23) naquni-an-su   ya sunis a yau
   do.what-PV-2SG.ERG ABS child LNK that
   'What do you do to that child?'

The relationship between *naquni* and its following lexical verb thus conforms to the first two criteria of complementation in (21a) and (21b). Without the lexical verb, the meaning of *naquni* is incomplete or incoherent.

 The diagnostic of argument saturation also indicates that the lexical verb in a *naquni*-ISVC is a complement. Along the lines of the Neo-Davidsonian analysis proposed by Parsons (1990), *naquni* should be semantically analyzed as a predicate that selects for an action. It discharges an argument position to a verb phrase. Although both an adjunct and a head can discharge an argument position, an adjunct can never determine the morphosyntactic properties of the resultant phrase. As argued in the previous discussion, *naquni* functions as the main verb in an ISVC and the voice marker on it determines the case-marking pattern of the nominal arguments. This suggests that the argument saturation property that holds between *naquni* and its following lexical verb must emanate from the head-complement configuration instead of the adjunct-head configuration. The interrogative verb *naquni* is a head and it discharges an argument position to its verbal complement. In conclusion, the three properties of complementation listed in (21) are all observed in a *naquni*-ISVC. The lexical verb phrase in a *naquni*-ISVC should be analyzed as a complement to *naquni*.

 The analysis of a *naquni*-ISVC delineated above is not applicable to an ISVC headed by *tanian* 'where,' which exhibits different syntactic and semantic properties concerning the relationship between the interrogative verb and the lexical verb. Unlike the lexical verb in a *naquni*-ISVC, the lexical verb in a *tanian*-ISVC is optional and its deletion does not alter the interpretation of the interrogative verb.

 Consider the following sentence where *tanian* is used alone as a verb without a lexical verb.

(24) tanian-an-su   ya kelisiw-ta
   where-PV-2SG.ERG ABS money-1IPL.GEN
   'Where do you put our money?'

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[3] If both the lexical verb and the theme argument are deleted, the question can still be interpreted as a do-how question. However, in this case, the question must be understood elliptically. That is, there still must be some salient discourse information about an action or event that can be understood as the complement of *naquni* 'do how.'

Lin (2011) argues that when *tanian* is used as a verb, it undergoes head movement to v_{CAUSE} and that the resultant verbal structure denotes a ditransitive event that can be semantically decomposed as 'X causes Y to become where.' This interpretation of verbal *tanian* remains intact regardless of the presence/absence of a lexical verb. Both (4) and (24) denote a ditransitive event and are intended to inquire about the location of the theme argument no matter what action is involved. In other words, without the lexical verb, *tanian* still remains unchanged in terms of its category and logical meaning. This observation corresponds to the first property of adjunction in (22a). The addition of a lexical verb to (24) changes the question to a more specific one, e.g., (4) and (18). In other words, the lexical verb in a *tanian*-ISVC functions like a modifier, specifying the action of the ditransitive event. This further suggests that the lexical verb is an adjunct in accordance with the second criterion of adjunction: an adjunct merely restricts the meaning or denotation of its head.

The semantic relationship between *tanian* and its following lexical verb further confirms that the lexical verb functions as an adjunct to the verbal head, *tanian*. The interrogative verb *tanian* does not semantically select for an event or action. Instead, it selects for a theme argument. Lin (2011) has shown that the use of *tanian* as a verb is restricted to a question that inquires about the location of a theme argument in a ditransitive event. In a question that inquires about the location where an event takes place, *tanian* cannot be used as a verb. This is illustrated by the ungrammaticality of (25).

(25) *tanian-an-su   q<m>an   ya   'esi   na   babuy
      where-PV-2SG.ERG   <AV>eat   ABS   meat   GEN   pig
      'Where do you eat pork?'

This restriction on the verbal use of *tanian* suggests that *tanian* discharges an argument position to a theme noun phrase, not to a verb phrase. Therefore, the lexical verb in a *tanian*-ISVC cannot be the complement of *tanian*.

Instead, it is the main interrogative verb *tanian* that saturates an argument position of the VP headed by the ditransitive lexical verb. A ditransitive verb like *pizi* 'put' or *nubi* 'hide' requires both a theme argument and a location argument. In a sentence like (4) or (18), this ditransitive verb shares a theme argument with *tanian*. However, its location argument is syntactically realized as the main verb of the sentence.

Note that *tanian* cannot be the syntactic complement of this ditransitive verb, or otherwise its movement to v would violate the Head Movement Constraint or the Empty Category Principle. On the assumption that the verbal structure of a ditransitive verb contains a VP-shell (Larson 1988), the theme argument of the verb *nubi* 'hide' in (18) is base-generated in the specifier of the lower VP and the location argument in the complement position. The problem of this structure is

that it predicts that *tanian* can never be syntactically realized as a verb if the head of the lower VP is occupied by a lexical verb. The head movement of *tanian* from the lower VP to v has to cross an intervening head, i.e., *nubi* 'hide' under V, and thus will incur a violation of the Head Movement Constraint. This prediction is wrong as *tanian* is still the main verb of an ISVC even if there is a lexical verb.

We are thus faced with a conundrum. The ditransitive verb in a *tanian*-ISVC requires *tanian* to be its location argument, but at the same time, it is impossible for *tanian* to be base-generated as the complement of this ditransitive verb, or otherwise *tanian* cannot undergo head movement to v. This issue can be resolved if we adopt the adjunction analysis of the lexical ditransitive verb. As stated in (22c), an adjunct is able to discharge an argument position to its head although it does not determine the morphosyntactic properties of the phrase. The morpho-syntacitc evidence for the analysis of *tanian* as the main verbal head in an ISVC is quite robust. The only way it can saturate an argument position of the ditransitive verb is to adjoin the ditransitive verb to the verb phrase headed by *tanian*. As an adjunct, the vP headed by *nubi* 'hide' in (18) can discharge an argument position to the head *tanian*, thereby satisfying the requirement that it should have a location argument.

In conclusion, the lexical verb in a *tanian*-ISVC not only functions like a modifier to verbal *tanian*, but it also assigns a Θ-role to verbal *tanian* simultaneously. All the syntactic and semantic evidence converges on the conclusion that the lexical verb in a *tanian*-ISVC is an adjunct to verbal *tanian*.

To summarize, Kavalan ISVCs do not form a homogenous class in terms of the structural relationship between the interrogative verb and the lexical verb. The interrogative verb *naquni* 'do how' takes a verb phrase as its complement, whereas *tanian* 'where' takes a theme noun phrase as its complement and a verb phrase as its adjunct.[4] The following section will present one more piece of evidence for the differentiation between these two types of ISVCs and will argue that they are derived via distinct syntactic operations.

3.2   Raising or Control

The preceding section has argued that a *naquni*-ISVC and a *tanian*-ISVC represent two distinct structures. The former exhibits complementation, but the latter adjunction. There is another semantic difference between the two types of ISVC. While *naquni* shares an agent argument with its verbal complement, *tanian* shares a theme argument with its verbal adjunct. In other words, only *tanian*-ISVCs exhibit theme-argument sharing. This semantic difference corresponds to the ways that the theme arguments in the two types of ISVC are case-marked.

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[4] Please refer to Lin (2011) for a discussion on how interrogative verbs in Kavalan are derived and how they should be analyzed syntactically.

Consider the following two ISVC sentences and pay attention to the case marking of the theme arguments.

(26) naquni-an-su   m-kala   ya/tu   sunis
     do.how-PV-2SG.ERG AV-find   ABS/OBL   child
     'How do you find the child?'

(27) tanian-an-su   m-nubi   ya/*tu   kelisiw
     where-PV-2SG.ERG   AV-hide   ABS/OBL   money
     'Where do you hide the money?'

In a *naquni*-ISVC like (26), the theme NP can receive either absolutive case or oblique case. However, the theme NP in a *tanian*-ISVC (27) must be case-marked absolutive. If it receives oblique case, the sentence becomes ungrammatical. This empirical observation on the case-marking of the theme arguments suggests that the theme NP in a *naquni*-ISVC can either stay in the complement clause or move to the matrix clause, whereas the theme NP in a *tanian*-ISVC must be syntactically realized as an argument in the matrix clause.

In (26), when the theme NP is case-marked oblique, it should be analyzed as the object of the embedded verb, which takes the agent voice marker. When it receives absolutive case, it should be syntactically treated as an argument of the matrix verb, which takes the patient voice marker. The following simplified bracketed structures represent the two different syntactic positions that the theme argument in a *naquni*-ISVC can occupy.

(28) [matrix naquni-PV   [complement AV-Lexical.Verb   OBL-Theme]]

(29) [matrix naquni-PV   [complement AV-Lexical.Verb]   ABS-Theme]

Regardless of its syntactic position, the absolutive/oblique NP is interpreted as the theme argument of the lexical verb and it does not belong to the argument structure of *naquni*. This thematic feature suggests that *naquni* is a raising verb. The raising analysis can resolve the issue of the syntax-semantics mismatch of (29). Semantically, the theme NP is not an argument of the matrix verb, *naquni*, but it receives absolutive case, which is normally assigned to the theme argument of a PV-marked verb.

We assume that the theme NP in a *naquni*-ISVC can enter the derivation without any Case features or with an absolutive Case feature. In the former situation, it remains in the embedded clause as the complement of the lexical verb and is assigned the default inherent oblique Case in the embedded agent voice clause. This leads to the derivation of (28). Note that it is not necessary for a

patient voice sentence to have an absolutive NP. Kavalan does not have an expletive either.

When the theme NP in a *naquni*-ISVC enters the derivation with an absolutive Case feature, it must move to the matrix clause to check Case. This is because a non-finite clause cannot license absolutive Case in Kavalan. Only a finite T can check absolutive Case. As shown in 2.1, the lexical verb in an ISVC is defective and is not allowed to take any tense or aspect markers. This suggests that the embedded clause in an ISVC is not TP or is not headed by a finite T. In either case, there is no absolutive Case feature in the embedded clause. The theme NP thus has to move to the matrix clause to check absolutive Case against the finite T. The analysis of *naquni* as a raising predicate can be represented by the following bracketed structure.

(30) [$_{matrix}$ naquni-PV   ERG=Agent   [$_{complement}$ AV-lexical verb t_i]
       ABS=Theme$_i$]

This raising analysis explains why the theme argument, which is thematically part of the embedded lexical verb, structurally belongs to the matrix interrogative predicate phrase. It is also compatible with the complement analysis of the lexical VP in the preceding section. Extraction out of a complement is allowed, whereas extraction out of an adjunct is forbidden due to the Condition on Extraction Domain.

By contrast, the theme argument in a *tanian*-ISVC is shared by the interrogative verb and the lexical verb, but it can only be syntactically realized as the absolutive NP of the matrix interrogative verb, which is affixed with the patient voice marker. The raising analysis of *naquni*-ISVCs cannot be extended to *tanian*-ISVCs. The lexical verb phrase in a *tanian*-ISVC is an adjunct clause, which is a syntactic island. If the theme NP in (4) were base-generated in the lexical verb phrase and then were extracted out of this phrase, the Condition on Extraction Domain would be violated. The grammaticality of (4) suggests that the theme NP does not undergo this illicit movement.

Moreover, on the Government and Binding approach, the Θ-Criterion stipulates that the relationship between Θ-roles and argument NPs must be bi-unique. Therefore, the only way that the matrix interrogative verb and the lexical verb in (4) or (27) can share an argument is to resort to PRO. In the VP headed by the lexical verb, there is a PRO controlled by the absolutive NP. In other words, a *tanian*-ISVC exhibits adjunct control, i.e., control into an adjunct clause. The postulation of a PRO in a *tanian*-ISVC can account for its semantic property of theme-argument-sharing and also the syntactic distribution of the theme argument.[5] The following bracketed structure portrays adjunct control in a *tanian*-ISVC.

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[5] The PRO analysis of a *tanian*-ISVC is faced with a theoretical problem regarding the syntactic

(31) [tanian-PV   ERG=Agent   [$_{adjunct}$ AV-lexical.verb PRO$_i$]   ABS=Theme$_i$]

4   Conclusion and Implications

This paper has argued that a Kavalan ISVC should be analyzed as a special type of SVC with an interrogative word as the main verb. The analysis has also revealed that a *naquni*-ISVC and a *tanian*-ISVC exhibit two different subordinate structures and are derived via distinct syntactic operations. The lexical verb in a *naquni*-ISVC is a complement to the interrogative verb and the theme argument of the lexical verb can undergo raising to the matrix clause. By contrast, the lexical verb in a *tanian*-ISVC is an adjunct and the theme argument of *tanian* controls the PRO in the adjoined lexical verb phrase.

This study has both empirical and theoretical implications. Empirically, we have demonstrated that not only can interrogative words be used as verbs but they can also function as the main verb in an SVC (cf. Hagège 2008). It is thus worthwhile to investigate whether interrogative words can also be used as the main verb in an SVC in other languages or this syntactic phenomenon is unique to Kavalan or other Austronesian languages in Taiwan.

The analysis on the structure of ISVCs has significant implications to the theory of argument structure and the syntactic representations of heads, complements, and adjuncts. The syntactic structure of a *naquni*-ISVC is a transparent realization of its semantic structure as per Parsons (1990) in that a modifier is a head and a modifiee is a complement both syntactically and semantically in this particular construction. However, none of the current proposals on the structure of ditransitive sentences can account for the syntactic structure of a *tanian*-ISVC where a location argument is syntactically realized as a verbal head with a ditransitive verb as an adjunct modifier. This suggests that there is no perfect one-to-one correspondence between the syntax and semantics of argument structure. A full discussion on how the current theories of argument structure and syntactic headedness can be modified to accommodate the Kavalan data presented here, especially ISVCs headed by *tanian*, is beyond the scope of the present study, but this research direction is definitely worth pursuing.

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position where PRO can occur. On standard analysis, PRO can only occur in the subject position of a non-finite clause. Although the PRO in a *tanian*-ISVC is in a non-finite clause, it does not occupy the subject position, but the object position. Our analysis, however, does not constitute a problem for Movement Theory of Control as adjunct control can be treated as an instance of sideward movement (Hornstein 2003). The discussion on this theoretical issue is beyond the scope of the present paper.

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