Investigating the Shona Reflexive *zvi*

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1. The Issue

Reflexivity in Shona (S.10) is expressed by the morpheme *zvi*:[1]

(1)   a.   Mbudzi ya-ka-zvi-pis-a.
               goat.9 SUBJ.9-PST-REFL-burn-FV
               'The goat burned itself.'

        b.   Ka-rume   ka-ka-zvi-pis-a
               NC12-man SUBJ.12-PST-REFL-burn-FV
               'The bad man burned himself.'

        c.   Mwana   a-ka-zvi-pis-a.
               NC1.baby SUBJ.1-PST-REFL-burn-FV
               'The baby burned itself.'[2]

As shown by the sentences in (1), *zvi* appears in the verb complex immediately preceding the verbal root. Though this is the position canonically reserved for object markers, *zvi* does not show any noun-class agreement, which suggests that this morpheme could be a detransitiviser, operating upon the argument structure of the verb. However, such valence operators in Shona generally appear after the verb root, rather than before. Thus, the first question addressed in this paper will be the issue of object marker versus valence operator. After concluding that *zvi* belongs to the set of object markers in the language, the second issue to address is the unique status of *zvi* among the set of object markers. Ultimately, I argue that reflexivity in Shona is best-treated under a bound-variable analysis.

The structure of this paper is as follows. In Section Two, I present a general discussion of Shona object marking, highlighting the problems involved in placing *zvi* among that set. Section Three contains a brief survey of reflexivity in other Bantu languages, including discussions of Tswana and Kikamba, where the same question has been addressed, leading to opposing conclusions. In Section Four, I present my exporation into the status of *zvi*, using tests from other Bantu languages, as well as general literature on verbal reflexives. Section Five presents more data on *zvi*, showing restrictions upon its use which suggest a bound variable analysis. Finally, contains a brief summary and conclusion.

2. Shona Object Markers and *zvi*

As remarked above, *zvi* occupies the position immediately before the root in the inflected verb, in the position reserved for object markers. As long as there is at least one object of the verb, there can be an object marker. However, there is a restriction in Shona that there can only be one object marker for a given predicate, even if the verb has two or more objects:

(2)   a.   * Mufaro a-ka-ya-mu-bik-ir-a.
             Mufaro SUBJ.1-PST-OBJ.9-OBJ.1-cook-APPL-FV
             'Mufaro cooked it for her.'

        b.   * Mufaro a-ka-mu-ya-bik-ir-a.
             Mufaro SUBJ.1-PST-OBJ.1-OBJ.9-cook-APPL-FV
             'Mufaro cooked it for her.'

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[1]Unless otherwise noted, all Shona data are collected from the author's original fieldwork with a native speaker of the Karanga dialect. All errors are my own.

[2]For a key to glosses, see Appendix I

The examples in (2) are judged to be ungrammatical due to the presence of an extra object marker; re-ordering the markers has no impact on the judgement, despite the fact that the applicative licenses a second object for this verb. Respecting the constraint that limits the number of markers to one, there is no apparent restriction on which object can be replaced by the preverbal object marker:

(3)　a.　Shingi a-ka-yi-bik-ir-a　　　　　　iye.
　　　　　Shingi SUBJ.1-PST-OBJ.9-cook-APPL-FV him
　　　　　'Shingi cooked it for him.'

　　　b.　Shingi a-ka-mu-bik-ir-a　　　　　　iyo.
　　　　　Shingi SUBJ.1-PST-OBJ.1-cook-APPL-FV it
　　　　　'Shingi cooked it for him.'

Here again, the verb has been extended using the applicative morpheme, adding a beneficiary. In (3a), the theme has been replaced by the object marker, whereas in (3b) it is the applicative object. Pronominalisation of the non-marked objects can only be achieved with a full pronoun. Furthermore, these markers are optional, and it is completely grammatical for neither object to be marked on the verb:

(4)　　Shingi a-ka-bik-ir-a　　　　　Mufaro mbudzi.
　　　　Shingi SUBJ.1-PST-cook-APPL-FV Mufaro goat.9
　　　　'Shingi cooked the goat for Mufaro.'

Given that the object marking is optional, and that the marking does not seem to be keyed to a syntactic relationship between the verb (or some other functional head) and a particular argument position, these object markers do not appear to be purely markers of agreement. One should rather expect that if this was purely an agreement phenomenon, the marking would be obligatory, and always keyed to a specific position in the syntax.

Two alternative positions on the status of the object markers can be taken. Firstly, there is the possibility that the object markers are a set of clitic pronouns, referring to an object of the verb. This is borne out by the fact that the markers can totally replace their relevant objects, similar to a *pro*-drop subject, illustrated in (3).

The second possibility is that the object markers serve an information-structural purpose in Shona. This can be seen in the following example from Fortune (1973):

(5)　a.　Ndi-no-tem-a　　　　　huni.
　　　　　SUBJ.1st-HAB-chop-FV firewood.NC10
　　　　　'I chop firewood.'

　　　b.　Ndi-no-dzi-tem-a　　　　huni.
　　　　　SUBJ.1st-HAB-OBJ.10-chop-FV firewood.NC10
　　　　　'I chop firewood.'

Fortune observes that when an object marker appears in conjunction with the full DP that it marks, it adds emphasis or prominence to the object in question. Native speaker judgements have described this construction as marking definiteness or possibly just redundant emphasis on the object. The connection between object markers and definiteness has also been cited for Swahili (Creissels, 2001), along with a reading of topicality. Kunene (1975) also notes for Zulu that object markers in that language are licensed only when the object being marked has been mentioned in previous discourse. Where the marker appears in conjunction with the full nominal, as in (5) above for Shona, Kunene notes a contrastive reading in Zulu.

In this paper, I will remain agnostic on this issue of characterising exactly the nature of the object markers in Shona. I will merely proceed with the assumption that whether these are clitic pronouns, or markers of agreement for some other informational purpose, the object markers can be seen to represent an argument in the original theta-role position of the object. It is through a subsequent operation of agreement or cliticisation that the position at the immediate left of the verb root is derived.

Whatever these markers may be, they do demonstrate agreement with the objects they mark:

(6)   a.   A-ka-ri-won-a.
               SUBJ.1-PST-OBJ.9-see-FV
               'He saw it.' (Referring to a baboon)

       b.   A-ka-mu-won-a.
               SUBJ.1-PST-OBJ.1-see-FV
               'He saw him.' (Referring to a human)

       c.   A-ka-chi-won-a.
               SUBJ.1-PST-OBJ.7-see-FV
               'He saw it.' Referring to a chair)

As shown above in (1), *zvi* does not show this same agreement pattern, and its form remains constant regardless of person, number, or noun class. Given the rich system of agreement displayed in the language in general, and for the object markers in particular, it seems odd that the reflexive would not somehow demonstrate a similar degree of agreement in this position. Because of this lack of agreement, it is tempting to treat *zvi* not as an object marker, but as a verbal valence operator, which have uniform realisations regardless of the noun class of their associated arguments. An example of this can be found in the reciprocal construction:

(7)   a.   Mbudzi va-ka-won-an-a.
               goat.10 SUBJ.10-PST-see-RECIP-FV
               'The goats saw each other.'

       b.   Va-rume   va-ka-won-an-a.
               NC.2-man SUBJ.2-PST-see-RECIP-FV
               'The men saw each other.'

In these cases, the morpheme *an* provides the reciprocal meaning, and it too does not change according to the noun class of the subjects. Given that reflexives and reciprocals tend to pattern together in a given language, and the reciprocal here is more clearly a valence operator (based on position and lack of agreement), the reflexive may be more comfortably anlaysed as a member of that set rather than an object marker.

     However, *zvi* would also be exceptional under this analysis. While Shona does have a well-documented set of verbal valence operators, they are generally suffixed to the verb root, appearing between the root and the final vowel, as in (7). If *zvi* is to be considered one of the valence operators, an explanation would need to be found for the pre-verbal placement.

     In the existing literature, the *zvi* morpheme is usually glossed as a reflexive, with little to no argumentation to support this analysis, nor a full discussion of its range of application. Indeed, Brauner (1995) devotes all of one sentence to the subject, stating that reflexives are "Marked by the infix **-zvì-**, treated as an object" (p.55) followed by three simple examples. However, Bellusci (1991) notes that Shona verbs also take a number of suffixes which alter the valence of the predicate, grouping *zvi* along with these. Thus, the question of whether *zvi* is an object marker or a valence operator appears to be open for debate.

3. Reflexivity in Bantu Languages

     Shona is not alone among Bantu languages in expressing reflexivity using a verbal affix. All the languages below use a similar morpheme, likely derived from a common proto-Bantu root. This could be an important fact, as it opens up the possibility that *zvi*'s behaviour is not unique to Shona, but rather characteristic of the reflexive in the common root language. Here, I will briefly discuss the state of affairs in four other Bantu languages: Zulu (S.41), Xhosa (S.42), Tswana (S.31a) and Kikamba (E.20).

3.1. Zulu

     In Zulu, the reflexive morpheme is *zi*. Like Shona, this morpheme occupies the same position as the object markers in the language. It has been observed by Kunene (1975) that in Zulu, the reflexive may or may not co-occur with the co-referential object of the sentence:

(8) a. Umfana u-ya-zi-shaya.
     boy   he-ASP-REFL-hit
     'The boy hits himself.'

    b. U-ya-zi-shaya.
     he-ASP-REFL-hit
     'He hits himself.'

    c. U-zi-shaya yena umfana.
     he-REFL-hit him boy
     'He hits himsélf, the boy.'

(8a) shows the basic reflexive structure of Zulu, which is parallel to that of Shona. In (8b), the subject is only indicated by the subject marking on the verb, which Kunene claims can only occur when the identity of the subject is discourse-old information. Finally, (8c) shows the same discourse-old subject, but with a redundant mention of the object, in the form of *zi* and *yena umfana*. This is claimed to be a contrastive focus construction, indicated by the accent in the gloss, where the speaker is making the implicit claim that the boy hits himself, not some other person.

The possibility of the structure in (8c) is important in light of the present question for Shona, as there is evidence that the object position remains viable even in the presence of the reflexive. Thus, the reflexive in Zulu cannot be a detransitivising valence operator eliminating the object position. This Zulu data also suggests that the use of the reflexive in Bantu is at least partially conditioned by discourse factors, in much the same way as Fortune has suggested for object markers in general.

3.2. Xhosa

The reflexive *zi* is also attested in Xhosa (Dalyedwa, 2002), even appearing in complex sentences involving multiple verb extensions:

(9) Unomyayi u-zi-leq-is-el-a   intshonsho ebaleni.
    black crow SM-REFL-VR-CAUS-APPL-FV chick   in field
    'The black crow causes himself to chase the chick for himself in the field.'

Dalyedwa does not elaborate on how exactly this sentence is doubly-reflexive, though she does note elsewhere that the object marker position can stand for any one of the objects of the verb. So, while it is not surprising that the reflexive could either be the causative object (causee) or the applicative object, the fact that it emerges as both in the same sentence is unexpected. In her discussion of the reflexive itself, Dalyedwa remarks only that it is related to the "action-initiator" of the predicate.

From the Xhosa data, we thus have an initial clue that reflexivity may be somehow related to thematic roles, and the possibility that the Bantu reflexive may be able to encode multiple arguments.

3.3. Tswana

The situation in Tswana is somewhat more complex than Shona. Most notably, Tswana allows multiple object marking (Creissels, 2002):

(10) a. Ki-f-ets-e   bomalome dikgomo letswai.
     SUBJ.1st-give-APPL-FV NC2.uncle NC8.cow NC5.salt
     'I gave salt to the cows for my uncles.'

    b. Ki-li-di-ba-f-ets-e.
     SUBJ.1st-OBJ.5-OBJ.8-OBJ.2-give-APPL-FV
     'I gave it to them for them.'

As shown, the ditransitive verb root *f* can be extended with the applicative, yielding a sentence with three objects. In (10b), all three are replaced with object markers. Creissels also notes that the ordering of the object markers is a mirror image of the order of the arguments when they appear as full NP's after the verb.

The ordering of the object markers becomes relevant under passivisation. When a ditransitive is passivised, either of the two objects may raise to the subject position, but only in one configuration can the other remain as an object marker:

(11) a. Ki-f-il-e   bana   dikwalo.
          SUBJ.1st-give-PERF-FV NC2-.baby NC8.book
          'I gave the books to the children.'

    b. Bana   ba-di-f-il-w-e.
        NC2.baby SUBJ.2-OBJ.8-give-PERF-PASS-FV
        'The children were given the books.'

    c. Dikwalo   di-f-il-w-e   bana.
        NC8.book SUBJ.8-give-PERF-PASS-FV NC2.book
        'The books were given to the children.

    d. * Di-ba-f-il-w-e.

Staring with the active ditransitive in (11a), under passivisation, either of the two objects can be raised into the subject position, as shown in (11b) and (11c). However, while an object marker is permitted when the first object has raised (11b), it is not permitted when the second object has been promoted to the subject position (11d). This suggests an interaction between passivisation and the licensing of object markers in Tswana. If the reflexive is to be considered an object marker, then reflexives may be equally sensitive to passivisation.

Reflexive meanings in Tswana are realised through the *i* morpheme. As in all the previous cases, this morpheme appears in the same position as object markers, and can even co-occur with another object marker if the verb's valence permits multiple objects. However, Creissels argues that this is not an object marker in Tswana, but rather a middle voice operator which blurs the distinction between agent and patient. He notes that there are uses of *i* in Tswana which are not prototypically reflexive, and that there are a number of verb roots in the language which only occur with *i*. To explain the positional and morphological similarity with the object markers, Creissels proposes that *i* is derived from what was historically a reflexive object marker, but has undergone lexicalisation over time and become a valence operator in Tswana.

3.4. Kikamba

Kioko (2005) also tells a story about the grammaticalisation of a reflexive marker, but to the opposite conclusion. In Kikamba, she notes that the reflexive marker *i* is unusual in that it does not reflect any agreement with the noun class system of the language. Kioko uses three tests to determine whether or not *i* should be considered an object marker, or something more akin to a valence operator. Based upon the location of the morpheme, co-occurrence with full nominal objects, and final vowel alternations in imperatives, Kioko concludes that *i* in Kikamba is an object marker. The fact that there are apparent cognates for this marker in various Bantu languages suggests that there is a historical change underlying this morpheme. Kioko speculates that the Kikamba reflexive could be the only surviving member of a full set of reflexive markers which once existed in Bantu, and that grammaticalisation has led to this general form which does not observe noun class agreement conventions.

4. Testing *zvi*

To conduct a parallel investigation of *zvi*, is it an object marker or a valence operator, I begin by replicating Kioko's tests in Shona. Secondly, I test *zvi* against some universal principles of verbal reflexives as advanced in Lidz (1996). Finally, I present constructions along the lines of those shown for Xhosa and Tswana to determine whether there are any environments where object markers can occur, but *zvi* cannot.

4.1. Kioko's Tests

In her discussion of the reflexive marker in Kikamba, Kioko formulates three tests to determine whether *i* in that language is an object marker or a valence operator. Here, I present the results of those tests, as applied to Shona.

Kioko's first test is essentially just one of inspection. Her first proof that the reflexive in Kikamba is an object marker is that it occupies the object marker "slot" between the tense morpheme and the verb root. This has already been shown to be the case for Shona as well, and is indeed one of the primary reasons to suspect that *zvi* should be considered an object marker. More telling are the following ungrammatical sentences:

(12)　a.　* A-ka-mu-zvi-bik-ir-a.

　　　b.　* A-ka-zvi-mu-bik-ir-a.

The pair in (12) shows that *zvi* and the object marker cannot co-occur, suggesting that they may be in competition for the same position in the structure. More so than simple inspection of *zvi*'s location, I consider this to be positional proof that *zvi* should be analysed as an object marker.

The second test is based on the fact that in Kikamba, it is possible to have a verb's object indicated both by an object marker, and a full NP after the verb. The same patten holds with the reflexive *i*. In her discussion of object marking, Kioko notes that in Shona it is not possible to have both the object marker and a full object nominal referring to the same entity. As such, one would initially expect that this test cannot be applied to Shona; an ungrammatical sentence with *zvi* and full nominal object could be ungrammatical either because of this constraint against coreferential objects, or because the verb's valence would not license an object after reflexivisation. However, as noted before, Fortune (1973) makes the opposite claim about object markers and full nominal objects in Shona, with numerous examples such as the following, repeated from (5) above:

(13)　a.　Ndi-no-tem-a　　　　huni.
　　　　　SUBJ.1st-HAB-chop-FV firewood.NC10
　　　　　'I chop firewood.'

　　　b.　Ndi-no-dzi-tem-a　　　　huni.
　　　　　SUBJ.1st-HAB-OBJ.10-chop-FV firewood.NC10
　　　　　'I chop firewood.'

Again, while this co-occurrence may have an information-structural function, it is not ungrammatical. Thus, as with Zulu, it should be possible to have *zvi* occur with the full object nominal, if *zvi* is an object marker:

(14)　? Shingi a-ka-zvi-bik-a　　　　Shingi.
　　　　Shingi SUBJ.1-PST-REFL-cook-FV Shingi
　　　　'Shingi cooked herself, Shingi.'

This sentence has been judged as "very marginal", but not categorically ungrammatical, and it is possible that embedded in a suitable discourse context, the judgement might improve.

The fact that the sentence in (14) is not categorically ungrammatical can be seen as an argument for treating *zvi* as an object marker for another reason. If it really were a valence operator, decreasing the number of argument positions for the predicate, then a full nominal object should not be licensed whatsoever. The very fact that the object is even possible points to *zvi* being an object marker, rather than a valence operator.

The final test employed by Kioko is based upon the observation that when an imperative in Kikamba takes an object marker, the final vowel on the verb is *-e*, rather than the *-a* found with a full nominal object. Because imperative reflexives in Kikamba have a final *-e* vowel, Kioko takes this as more proof that *i* is an object marker.

Brauner (1995) notes the same alternation in Shona; when object markers are used in the imperative, the final vowel is inflected as *-e*, marking subjunctive mood. The same pattern emerges with *zvi*:

(15) a. Gez-a   mwana!
          wash-FV baby.1
          'Wash the baby!'

      b. Mu-gez-e!
          OBJ.1-wash-FV
          'Wash him/her!'

      c. Zvi-gez-e!
          REFL-wash-FV
          'Wash yourself!'

(15a) shows a transitive imperative sentence with the full nominal object and a final vowel -*a* on the verb. When an object marker is used to refer to the dog (15b), the final vowel does indeed change to -*e*. The reflexive imperative (15c) also has the -*e* final vowel. That this is not some sort of edge effect can be shown with an intransitive imperative:

(16) Sek-a!
      laugh-FV
      'Laugh!'

Here, even though there is no full nominal object, the final vowel is -*a*. From this, it can be reasonably concluded that the -*e* is a result of the imperative having an object marker, and not that the -*a* is a result of having a full nominal object. As such, this is further evidence that *zvi* patterns with the object markers.

Of the three tests proposed by Kioko, this imperative test yields the most clean-cut result, indicating that *zvi* is a member of the set of object markers. As stated at the outset, the observation of the position of *zvi* is not a satisfactory diagnostic test, as elements in this position have been analysed as valence operators for other Bantu languages, and the question of co-occurrence with a full nominal object is confounded by context. As such, while the evidence points more strongly toward *zvi* being an object marker, it would be desirable to have more evidence to support such a claim.

4.2. Universals of Verbal Reflexives

In his discussion of reflexivity, Lidz (1996) makes a set of observations identifying universal behaviours of verbal reflexives (i.e. predicates in which reflexivity is expressed through a valence-changing operation). These centre around the cross-linguistic generalisation that verbal reflexives tend to be broader in function than simple reflexivity. Two non-reflexive functions in particular, he claims, are present in all languages having a verbal reflexive. Testing *zvi* against these universals would thus point to whether or not it should be included in the set of verbal reflexives, essentially testing whether or not *zvi* should be a valence marker.

The first observation is that verbal reflexives are also used in decausative constructions:

(17) a. Imbabura Quechua

          pungu-kuna-ka paska-ri-rka.
          door-PL-TOP   open-REFL-PST.3
          'The doors opened.'

      b. Kannada

          baagil-u   mučč-i-koND-itu.
          door-NOM close-PP-REFL.PST-3.SM
          'The door closed.'

In these sentences, a transitive verb is being used with only the theme present. In Shona, the reflexive does not emerge in these kinds of sentences:

(18) a. Mu-siwo wa-ka-vhar-a.
          NC3-door SUBJ.3-PST-close-FV
          'The door closed.'

      b. Whindo   ra-ka-puts-ik-a.
          window.5 SUBJ.5-PST-break-STAT-FV
          'The window broke.'

In the first sentence, there is no marking on the verb indicating that only one of the arguments is present. The equivalent transitive verb has exactly the same form. In the second case, the stative morpheme *-ik* is added to the verb stem. Thus, while Shona appears to have multiple means of expressing this decausitive function, the reflexive *zvi* does not appear among them.

The second observation made by Lidz is that reflexivity universally shows up on a transitive predicate where the object is possessed by the subject:

(19) a. Fula

          O hett-ike   fedenndu.
          he cut-REFL.PERF finger

          'He cut his finger.'

      b. Kannada

          hari-yu   tann-a   angi-yannu hari-du-koND-a.
          Hari-NOM self-GEN shirt-ACC   tear-PP-REFL.PST-3.SM

          'Hari tore his shirt.'

Again, the evidence is that *zvi* does not have this function:

(20) a. Shingi a-ka-won-a   ruoko wa   Mufaro.
          Shingi SUBJ.1-PST-see-FV hand POSS Mufaro
          'Shingi saw Mufaro's hand.'

      b. Mufaro a-ka-won-a   ruoko wa-ke.
          Mufaro SUBJ.1-PST-see-FV hand POSS-he
          'Mufaro saw his hand.'

      c. * Mufaro a-ka-zvi-won-a   ruoko wa-ke.
          Mufaro SUBJ.1-PST-REFL-see-FV hand POSS-he
          'Mufaro saw his hand.'

The first sentence in (20) shows the basic structure for a possessed object. When the object is possessed by the subject, as in the second sentence, the reflexive does not emerge, and is shown to be ungrammatical in the third sentence. Even without the redundant indication of the possessor in the object noun phrase, sentences attempting to use the reflexive in this way are ungrammatical:

(21) * nda-ka-zvi-won-a   ruoko.
        SUBJ.1ST-PST-REFL-see-FV hand
        'I saw myself the hand.'

As shown in (21), even a simple first person sentence is not permissible in this form.

Based upon these two tests, it appears that *zvi* does not conform to the two universals for verbal reflexives put forth by Lidz. As such, it can be concluded that *zvi* is not a valence operator, lending more strength to the alternative that it must be an object marker. Still, all the tests so far have been searching for positive evidence that *zvi* is an object marker, either directly, or by proving that it cannot be a valence operator. The question can also be approached from the other direction in the search for evidence that *zvi* is not an object marker.

4.3. The Distribution of zvi

Here, I present a set of examples testing whether there are environments where undisputed object markers are acceptable, but where *zvi* cannot occur. If indeed such environments are found, and the distribution of *zvi* is not congruent with the distribution of other object markers, then there would be evidence to support a position that *zvi* is not a member of the set of object markers. My investigation into this has focused on examining verbs which have been extended using either the applicative or causative markers, checking which objects can be replaced by the object markers, and whether *zvi* can replace those same objects.

When the applicative is affixed to a transitive verb, the verb essentially becomes ditransitive, having two objects. As shown in (3), repeated below, either of these two objects can be replaced by an object marker:

(22) a. Shingi a-ka-yi-bik-ir-a   iye.
          Shingi SUBJ.1-PST-OBJ.9-cook-APPL-FV him
          'Shingi cooked it for him.'

      b. Shingi a-ka-mu-bik-ir-a   iyo.
          Shingi SUBJ.1-PST-OBJ.1-cook-APPL-FV it
          'Shingi cooked it for him.'

In this pair, the context was that Shingi had cooked a goat for Mufaro. In (22a), the object marker replaces the goat. In (22b), the object marker replaces Mufaro; the different noun classes of the object markers make it clear that a different argument in the scenario is being replaced by the marker in each case. It has already been established that *zvi* can replace direct objects; it can also replace the applicative object:

(23) Mufaro a-ka-zvi-bik-ir-a   mbudzi.
      Mufaro SUBJ.1-PST-REFL-cook-APPL-FV goat.9
      'Mufaro cooked the goat for himself.'

Though only one gloss is indicated here, it should be possible for the reflexive marker in (23) to be interpreted as the theme as well. While it would be pragmatically odd for Mufaro to cook himself for a goat, there should be nothing within the grammar blocking this reading. This anticipated ambiguity is based upon the following example where both the applicative and the causative are applied to an underlyingly intransitive predicate. The result is also akin to a ditransitive, having a theme, applied object, and causative object, and just as open to the use of object markers:

(24) Shingi a-ka-mu-don-edz-er-a   Mufaro.
      Shingi SUBJ.1-PST-OBJ.1-fall-CAUS-APPL-FV Mufaro
      'Shingi caused Mufaro to fall down for someone.' (Marking Appl)
      'Shingi caused someone to fall on Mufaro.' (Marking Caus)

As shown in (24), where there is the possibility that both objects of a ditransitive are the same noun class, ambiguity results. In this case, either the applicative object or the causative object can be interpreted as having been replaced by the object marker. In the first case, the object marker is an individual for whom Shingi tripped Mufaro. In the second case, Mufaro is the applicative object, and becomes a goal of the falling. The object marker in this case refers to the person Shingi caused to fall on Mufaro. The same ambiguity results when *zvi* is used:

(25) Shingi a-ka-zvi-don-edz-er-a   Mufaro.
      Shingi SUBJ.1-PST-REFL-fall-CAUS-APPL-FV Mufaro
      'Shingi tripped Mufaro for herself.' (Marking Appl)
      'Shingi dropped Mufaro.' (Marking Caus)

In the first case again, Shingi trips Mufaro (causes him to fall) for herself. In the second, there is a slight change in the interpretation, as now Shingi has caused herself to make Mufaro fall, and this causation is glossed as intention. Regardless of these minor differences in interpretation, it remains clear that indeed, *zvi* can refer to either object position.

It should also be observed that causatives can appear with *zvi* in straightforward transitives as well:

(26) a. Calisto a-ka-zvi-pis-is-a   Mufaro.
Calisto SUBJ.1-PST-REFL-burn-CAUS-FV Mufaro
'Calisto caused himself to burn Mufaro.'

b. Calisto a-ka-zvi-pis-is-a.
Calisto SUBJ.1-PST-REFL-burn-CAUS-FV
'Calisto caused himself to burn himself.'

From (26a), it is clear that *zvi* can replace the causee in a causative structure. What is more interesting is the case in (26b). This structure is apparently unambiguous, with the meaning as glossed. While the pattern requires further investigation, this has some similarity with the Xhosa example where a reflexive meaning encompassed the causee and the applicative object; here it appears to encompass the causee and the theme. While this could be a result of an interaction between the reflexive and the causative marker, this behaviour would be unexpected of an operator which reduced the verb's valence by one.

Oddities of the causative notwithstanding, the generalisation drawn at this point is that there does not appear to be any constraint on which of the objects of a verb are replaced by an object marker; the use is so unconstrained that ambiguity can even result. Furthermore, it appears that *zvi* can replace any of the objects of a verb. As such, there is no evidence here to say that *zvi* is not an object marker. Taking the earlier evidence supporting the object marker analysis alongside this failure to find counterevidence to that claim, I advance with the conclusion that *zvi* should be considered a member of the set of object markers, interpreted at the theta position of the argument it replaces.

5. A New Analysis of *zvi*

Given all the evidence to this point which suggests that *zvi* patterns with the object markers, the uncovering of an asymmetry is potentially troublesome to that analysis. However, this asymmetry emerges in passive sentences, which is not completely unexpected. Recalling Creissels' discussion of object markers in Tswana, their use was constrained in passive sentences. As such, it is not unreasonable to expect that there is some similar phenomenon in Shona where passivisation has an effect on a verb's ability to take object markers. In this section, I first examine the Shona passive and its interaction with *zvi*, then discuss a possible bound variable analysis of the Shona reflexive.

5.1. Passive and zvi

Passivisation is expressed in Shona through the suffix *-w* which appears as the last verb suffix before the final vowel:

(27) a. Mu-riyo   wa-ka-bik-ir-w-a   Shingi na Mufaro.
NC3-vegetables SUBJ.3-PST-cook-APPL-PASS-FV Shingi by Mufaro
'Vegetables were cooked for Shingi by Mufaro.'

b. Shingi a-ka-bik-ir-w-a   mu-riyo   na Mufaro.
Shingi SUBJ.1-PST-cook-APPL-PASS-FV NC3-vegetables by Mufaro
'For Shingi, vegetables were cooked by Mufaro.'

In the first case, the theme has moved to the subject position, and in the second case, it is the applicative object. Because both sentences would derive from the same underlying active form, it is clear that the passivisation in Shona is not keyed to a specific argument position. From the data in (27), one might initially suspect that this is the same situation as in Tswana, where any of the objects can be passivised. For the most part, this is the case, but there is one combination which is blocked, as shown below:

(28) a. Mufaro a-ka-pis-is-w-a   mu-riyo   na Calisto.
          Mufaro SUBJ.1-PST-burn-CAUS-PASS-FV NC3-vegetables by Calisto
          'Mufaro was caused to burn the vegetables by Calisto.'

     b. * Mu-riyo   wa-ka-pis-is-w-a   Mufaro na Calisto.
          NC3-vegetables SUBJ.3-PST-cook-CAUS-PASS-FV Mufaro by Calisto'
          'The vegetables were caused to be burnt by Mufaro by Calisto.'

     c. Mu-riyo   wa-ka-pis-is-w-a   na Calisto.
          NC.3-vegetables SUBJ.3-PST-cook-CAUS-PASS-FV by Calisto'
          'The vegetables were caused to be burnt by Calisto.'

The causee in (28a) has been raised to the subject position, and the direct object *mu-riyo* remains in object position. However, unlike with the applicative, it is not possible to promote the direct object to the subject position, leaving the causee behind, shown in (28b). If the direct object is in the subject position, the causee does not appear overtly in the sentence. (28c) is judged to be ambiguous though, with the preferred reading being that Calisto caused some other contextually salient individual to burn the vegetables, and a more marginal reading being that Calisto himself did the burning. Finally, in considering the data from (27) and (28), for all sentences where a full object nominal was possible, the equivalent object marker is also possible, though those examples are omitted here for the sake of brevity. There is thus no constraint upon object marking in Shona passives beyond the constraint that the number of object markers be limited to one.

This does not seem to be the same situation as found in Tswana. There, passivisation blocked certain object markers. Here, object markers which would have been blocked in Tswana are attested in Shona. Without speculating on which movement would obviate which object marker, looking at the pair from (27), Creissels should predict that in one of those sentences, an object marker would not emerge. Instead, what is seen in Shona is that there is no apparent constraint on object markers in the passive, but rather a constraint on having overt objects altogether in the case of (28b). Whatever underlies this phenomenon, there is no evidence that it is the same mechanism underlying Creissels' observation from Tswana.

Returning to *zvi* now, there is an unexpected result:

(29) a. * A-ka-zvi-bik-ir-w-a.
          SUBJ.1-PST-REFL-cook-APPL-PASS-FV
          'She was cooked for herself.'

     b. ? Mufaro a-ka-zvi-pis-is-w-a.
          Mufaro SUBJ.1-PST-REFL-burn-CAUS-PASS-FV
          'Mufaro was caused to burn himself.'

(29a) is analogous to (27b), and (29b) is analogous to (28a). These are both attested passive structures, in which object markers are otherwise acceptable. The judgement for (29a) was categorical according to the consultant, whereas there was some uncertainty around the judgement for (29b). It is interesting to note that the judgements were sharper when parallel *wh* questions were employed:

(30) a. Ndiyani   a-ka-zvi-pis-is-w-a?
          Who was it that SUBJ-1-REM.PST-REFL-burn-CAUS-PASS-FV
          'Who was caused to burn himself?'

     b. * Ndiyani   a-ka-zvi-pis-ir-w-a?
          Who was it that SUBJ-1-REM.PST-REFL-burn-APPL-PASS-FV
          'Who was burnt for himself?'

With these, the patten becomes clearer. A reflexive is acceptable in a passive where the causative object has become the subject, and the reflexive refers to the direct object, but a sentence in which a direct object has passivised over a reflexive applicative object is unacceptable.

While this would appear to satisfy the earlier desire for finding a situation where object markers could appear but *zvi* could not, this pattern is not enough to conclude that *zvi* is not a member of the set of object markers. Rather, it points to the uniqueness of *zvi* within that set: there is some constraint on the usage of *zvi* at play here, making sentences ungrammatical which are fine with other object markers:

(31) a. Mu-riyo   wa-ka-mu-bik-ir-w-a.
          CL3-vegetable SUBJ.3-PST-OBJ.3-cook-APPL-PASS-FV
          'Vegetables were cooked for her.'

      b. Mufaro a-ka-mu-pis-is-w-a.
          Mufaro SUBJ.1-PST-OBJ.3-burn-CAUS-PASS-FV
          'Mufaro was caused to burn them.'

Thus, the focus now turns from the question of 'object marker or valence operator?' to 'why is *zvi* constrained in the passive?'

In the traditional generative framework, passivisation has two effects: the elimination of an external thematic role (the agent), and the lack of accusative case assignment by the verb. This has the knock-on effect of triggering the movement of an object to the subject position for reasons of case assignment and the satisfaction of the EPP. Given that objects remain possible in sentences such as (31), it seems unlikely that *zvi* is reacting to a lack of case assignment. However, the consequent movement of an object to subject could be a part of the reason why *zvi* is unacceptable.

This constraint against *zvi* is not only present in the passive. Where an unaccusative verb has been extended with the applicative, *zvi* can not replace the object:

(32) a. Nda-ka-don-er-a   Shingi.
          SUBJ.1st-PST-fall-APPL-FV Shingi
          'I fell for Shingi.'

      b. * Nda-ka-zvi-don-er-a.

Though it may seem odd, the sentence in (32a) can have the meaning that the speaker's falling was somehow in Shingi's best interest. However, (32b) shows that the speaker can not use a parallel expression when the falling is in his or her own best interest. Again, this ungrammaticality should reduce to *zvi* as there is independent evidence that this verb can take the applicative, and there is independent evidence that *zvi* can replace an applicative object.

What then is constraining *zvi* in (32b)? Upon closer inspection, this is not so dissimilar from the passive examples above. Because *don* is an unaccusative verb, its subject is not typically agentive. Indeed, the underlying syntax of unaccusatives has been argued to be quite similar to passives, wherein an underlying verbal complement moves into the subject position for case reasons. Thus, whatever the constraint on *zvi* is, it is not specifically tied to the passive. It is more likely connected to the movement of objects in general.

5.2. Tying it Together: A Possible Bound Variable

In this section, an answer to the question surrounding the behaviour of *zvi* in the passive is proposed. This solution is based in part upon a typology of reflexives advanced by Déchaine & Wiltschko (2002). There, three broad types of reflexive are identified based upon syntactic characteristics, and matching semantics are presented. In the case of *zvi*, the best classification appears to be a ϕ-level reflexive, in that it is a monomorphemic form lacking in distinct ϕ-features. Semantically, these reflexives are described as falling under a bound variable analysis.

To support a bound variable treatment of *zvi*, it can first be shown that *zvi* can be bound under *wh* and quantifiers, both typically cases of A$'$ movement:

(33) a. Ndiyani a-ka-zvi-bik-ir-a   mu-riyo.
          Who   SUBJ.1-PST-REFL-cook-APPL-FV NC3-vegetables
          'Who cooked vegetables for himself?'

      b. Pane imbwa ya-ka-zvi-rum-a.
          some dog.9 SUBJ.9-PST-REFL-bite-FV
          'Some dog bit itself.'

Sentences such as those in (33) point to an operator-variable structure in which the *Wh* or quantificational expression binds the reflexive. In fact, *zvi* can be bound by a quantifier from a higher predicate, which is an even stronger motivation for treating it as a bound variable:

(34) a. Mu-rume wogawoga a-ka-t-i   a-ka-zvi-won-a.
          NC.1-man every   SUBJ.1-PST-say-FV SUBJ.1-PST-REFL-see-FV
          'Every man said that every man saw himself.'

      b. * Mu-rume wogawoga a-ka-t-i   mu-rume wogawoga
            NC.1-man every   SUBJ.1-PST-say-FV NC.1-man every
            a-ka-zvi-won-a.
            SUBJ.1-PST-REFL-see-FV
            'Every man said that every man saw himself.'

In the first sentence from (34), the preferred reading is that the same group of men who performed the saying also performed the seeing. In the second sentence, repeating the quantifier in the lower clause is ungrammatical, suggesting that the quantifer in the higher clause must be the one providing the antecedent for *zvi*. Furthermore, this binding from a distance is not restricted to overt quantifiers:

(35) Shingi a-ri   ku-ratidz-a se-a-zvi-bik-ir-a   ma-nhanga
      Shingi SUBJ.1-AUX INF-seem-FV ASSOC-SUBJ.1-REFL-cook-APPL-FV NC.6-pumpkin
      'Shingi seems to have cooked pumpkins for herself.'

In (35), the antecedent for the reflexive in the lower clause is clearly Shingi, again indicating that *zvi* can be bound by an element from a higher predicate, which is predicted of the ϕ-level reflexives. In an effort to keep the treatment of *zvi* as simple as possible, the next question to ask would be whether or not all uses of *zvi* could be similarly analysed as bound variables. A likely avenue to explore here would be the implementation of a generalised quantifier analysis for all nominal expressions in the language. Taking this analytical step would treat all nouns, even proper names, as quantifiers, and bring all uses of *zvi* under one binding analysis.

Returning now to the issue of those unexplained cases of ungrammatical reflexives, a bound-variable analysis may provide an answer. To elucidate this analysis, a clearer picture of the vP-internal structure of Shona is called for. I adopt the following structure for the Shona vP domain from Bliss (2009):

(36)
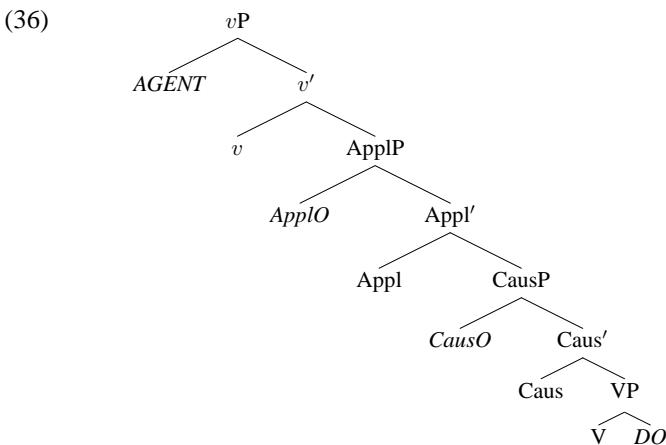
In a passive, the [Spec, vP] position occupied by the agent would be absent, but the other argument positions remain as shown in (36). Recall also that the analysis being adopted for the object markers (*zvi* included) is that they are interpreted at their theta-role positions, those positions marked in the tree above. For *zvi*, this means that it needs to be bound in its original theta position.

All of those ungrammatical cases were sentences where *zvi*'s binder moved up to the subject position from deeper within the verb phrase, and it is not unusual for bound variables to be sensitive to the structural origin of their antecedents. Taking *zvi* to be a bound variable, the ungrammatical sentences have the appearance of a crossover effect. The passives where a causative object raises to the subject position are still acceptable because the causative object binds the direct object before movement takes place.

6. Conclusion

This paper began with the question of establishing whether or not the Shona reflexive *zvi* is an object marker, or a valence operator. The conclusion reached at this point is that *zvi* is indeed an object marker, but it is a unique member of the set of object markers in the language in that it must be bound in its original theta position. Crucially, this analysis hinges upon the claim that object markers are interpreted in their base positions; the derivation of their pre-verbal position in the verbal complex, and their interactions with information structure remain for further research.

Appendix I: Key to Glosses

APPL - Applicative
ASP - Aspect
ASSOC - Associative
CAUS - Causative
FV - Final Vowel
HAB - Habitual
NC.# - Noun Class marker, with class indicated
OBJ.# - Object marker, with person/noun class indicated
PASS - Passive
REFL - Reflexive
SM - Subject Marker
STAT - Stative
SUBJ.# - Subject marker, with person/noun class indicated
VR - Verb Root

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