1 Introduction

This paper examines the syntactic properties of P+DP strings in Marshallese passive sentences, with the purpose of proposing an analysis of the Marshallese passive construction. I will show that the two types of Marshallese P+DP strings, ippān+DP and in+DP, have different syntactic properties and, therefore, different syntactic structures. Drawing on ideas proposed by Collins (2005), as well as by Watanabe (1993) and Mahajan (1994), I argue that in+DP strings consist of a Voice head and a determiner phrase merged as the specifier of vP, while ippān+DP strings consist of a preposition and a DP that combine to form a PP that is merged as the specifier of vP.

This paper proceeds as follows. Section 2 introduces Marshallese passive sentences and includes an examination of the syntactic properties of both types of P+DP strings. Section 3 begins with a discussion of the traditional analysis of the passive construction and shows how it cannot explain the syntactic properties of in+DP strings. Following this discussion, an alternative approach to passives—Collins’ (2005) smuggling approach—is introduced, and a case is made for adopting this analysis based on the fact that it can explain the syntactic differences between the two types of Marshallese P+DP strings.

2 Marshallese Passives

Marshallese passives have three important characteristics. First, there is no overt passive morphology. Instead, passive verbs are morphologically identical to their intransitive active counterparts (Bender, 1969; Hale, 1998). For example, the intransitive verb lem~lem ‘fold’ may be used in a passive sentence (1) or in an active intransitive sentence (2). For this reason, I gloss this form of the verb as INTR (intransitive) in both active and passive intransitives.

(1)  
Jaki eo e=ar lem~lem. 
mat the.SG 3SG.AGR=PST fold–INTR
‘The mat was folded.’

(2)  
Kōrā eoe=ar lem~lem. 
woman the.SG 3SG.AGR=PST fold–INTR
‘The woman did some folding.’

The intransitive form of this verb is derived from the transitive one, lim, through reduplication.

Abbreviations used in this paper are as follows: h, human; NH, nonhuman.

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1 Marshallese (Austronesian, Oceanic, Micronesian) is spoken in the Republic of the Marshall Islands (RMI) and has around 60,000 native speakers. The RMI consists of two island chains, the Ratak (or eastern chain) and the Rālik (or western chain). Each chain has a distinct dialect, although the two are mutually intelligible. This paper examines the dialect spoken on Majuro, which, while part of the Ratak island chain, includes many lexical elements of the Ralik dialect.

2 In Marshallese orthography, the following letters represent the following sounds: <a> = [a]; <e> = [æ]; <i> = [ɪ]; <o> = [ʊ] or [ɨ]; <u> = [u]; <m> = [m]; <n> = [n]; <ŋ> = [ŋ]; <p> = [p] or [p̚]; <t> = [t]; <k> = [k]; <l> = [l]; <s> = [s]; <θ> = [θ]; <ə> = [ə] or [ɜ]; <V> = [v]; <∅> = [u]; and <Vo> = [uo] (Abo et al., 1976).

3 Abbreviations used in this paper are as follows: h, human; NH, nonhuman.
(3) Kōrā eo e=ar lim jaki eo.
woman the.SG 3SG.AGR=PST fold.TR mat the.SG
‘The woman folded the mat.’

However, reduplication is just one of the morphological processes used to derive a Marshallese intransitive verb from its transitive counterpart or vice versa. Table 1 lists some of the other processes used in the formation of Marshallese verbs.

<table>
<thead>
<tr>
<th>Process</th>
<th>Intransitive</th>
<th>Passive</th>
<th>Transitive</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suppletion</td>
<td>mōnā</td>
<td>NA</td>
<td>kaŋ</td>
<td>eat</td>
</tr>
<tr>
<td>Transitive suffix -ik or -uk</td>
<td>wia</td>
<td>wia</td>
<td>Wiaik</td>
<td>buy</td>
</tr>
<tr>
<td>Object marker -e or -i</td>
<td>āj</td>
<td>āj</td>
<td>āji</td>
<td>weave</td>
</tr>
</tbody>
</table>

Table 1: Marshallese verb formation

Note that the passive verb form, if there is one, is always morphologically identical to its active intransitive counterpart, regardless of how the active verb is formed. So there is no uniform morphological process used to form passive verbs. For a complete discussion of Marshallese transitive and intransitive verb forms, see Harrison (1978), Bender (1984), and Willson (2008).

Second, like all active intransitive subjects, the subjects of passive sentences may be noninitial, although there are some restrictions when in+DP strings are present, as will be discussed shortly. In sentence (4), the subject jaki eo ‘the mat’ immediately follows the verb lemlem ‘fold,’ and the resulting passive sentence has V S (PP) order.

(4) E=ar lem–lem jaki eo (ilo ɗweo).
3SG.AGR=PST fold–INTR mat the.SG in the.house
‘The mat was folded (in the house).’

Third, passive sentences may include a P+DP string containing either ippān (5) or in (6) (see Pagotto (1992) for a brief discussion of ippān in Marshallese passive sentences). The term P+DP string refers to what is typically called an actor adjunct or a by phrase. The substitution of a P+DP string is meant to avoid the theoretical assumptions associated with the terms actor adjunct and by phrase. The first implies that these strings are adjuncts; the second, that they are constituent phrases.

(5) Jaki ko re=kar lem–lem ippān kōrā ro.5
mat the.PL.NH 3PL.AGR=PST fold–INTR by woman the.PL.H
‘The mats were folded by the women.’

(6) Jaki ko re=kar lem–lem in kōrā ro.
mat the.PL.NH 3PL.AGR=PST fold–INTR by woman the.PL.H
‘The mats were folded by the women.’

As the English translations of these sentences suggest, these strings correspond roughly to the English by of passive sentences and introduce an agent DP. However, when not included in a P+DP string, ippān and in are prepositions meaning ‘with’ (comitative) (7) and ‘of’ (8).

(7) Kwo=n jab mōnā ippān emŋaaj eo bwe e=naaj
2SG.AGR=should NEG eat.INTR with man the.SG because 3SG.AGR=FUT
kōpāl eok.
curse.TR 2SG.OBJ
‘You shouldn’t eat with that man because he will put a curse on you.’

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5For more information about Marshallese word order, see Willson (2008).

5Kar and ar are both markers of the past tense in Marshallese.
While these two P+DP strings are semantically similar, they have syntactic differences. First, *ippān+DP strings are constituents, but in+DP strings are not. In (9), two *ippān+DP strings, *ippān kōrā ro ‘by the women’ and *ippān leddik ro ‘by the girls,’ are coordinated, and the result is a grammatical sentence.

(9) Jaki ko r=ar lem~lem in kōrā ro in leddik mat the.PL.NH 3PL.AGR=PST fold~INTR by woman the.PL.H and by girl ro. the.PL.H ‘The mats were folded by the women and by the girls.’

However, it is not possible to coordinate two in+DP strings, as illustrated by (10). When in kōrā ro ‘by the women’ is coordinated with in leddik ro ‘by the girls,’ the sentence is ungrammatical.

(10) *Jaki ko r=ar lem~lem in kōrā ro in leddik mat the.PL.NH 3PL.AGR=PST fold~INTR by woman the.PL.H and by girl ro. the.PL.H ‘The mats were folded by the women and by the girls.’

In addition, *ippān+DP may be moved to a sentence initial position (11), whereas in+DP may not (12).

(11) Ippān kōrā ro, jaki ko r=ar lem~lem. by woman the.PL.H mat the.PL.NH 3PL.AGR=PST fold~INTR ‘By the women, the mats were folded.’

(12) *In kōrā ro, jaki ko r=ar lem~lem. by woman the.PL.H mat the.PL.NH 3PL.AGR=PST fold~INTR ‘By the women, the mats were folded.’

Based on these coordination and movement tests, it can be concluded that *ippān+DP forms a constituent phrase. No such conclusion can be reached for in+DP.

A second difference between the two types of P+DP strings is that phrasal material may intervene between *ippān and the verb but not in and the verb. For example, a postverbal subject may separate the verb and *ippān (13) but not the verb and in (14).

(13) R=ar lem~lem jaki ko ippān kōrā ro. 3PL.AGR=PST fold~INTR mat the.PL.NH by woman the.PL.H ‘The mats were folded by the women.’

(14) *R=ar lem~lem jaki ko in kōrā ro. 3PL.AGR=PST fold~INTR mat the.PL.NH by woman the.PL.H ‘The mats were folded by the women.’

However, the inclusion of an in+DP string in a sentence does not preclude the possibility of a non-initial subject. This type of sentence is grammatical as long as the subject follows the in+DP string, as in (15).
(15) E=ar āj in ri-āj eo deel ko.\textsuperscript{6}
3SG.AGR=PST weave.INTR by one.who-weave the.SG fan the.PL.NH
‘The fans were woven by the weaver.’

The third and final difference between these two types of strings is that \textit{ippān}+DP strings can occur in nonpassive sentences containing stative (16a) or resultative verbs (17a), but \textit{in}+DP strings cannot (16b & 17b).

(16) a. Likao eo e=abwinmake ippān jine-n.\textsuperscript{7}
young.man the.SG 3SG.AGR=be.afraid.of.demons by mother-3SG.GEN
‘The young man is afraid of demons because of his mother.’
b. *Likao eo e=abwinmake in jine-n.
young.man the.SG 3SG.AGR=be.afraid.of.demons by mother-3SG.GEN
‘The young man is afraid of demons because of his mother.’

(17) a. Bato ko r=ar jepdak ippān wa eo.
bottle the.PL.NH 3PL.AGR=PST be.crushed.RES by car the.SG
‘The bottles were crushed by the car.’
b. *Bato ko r=ar jepdak in wa eo.
bottle the.PL.NH 3PL.AGR=PST be.crushed.RES by car the.SG
‘The bottles were crushed by the car.’

A summary of the properties of P+DP strings is given in Table 2.

<table>
<thead>
<tr>
<th></th>
<th>ippān+DP</th>
<th>in+DP</th>
</tr>
</thead>
<tbody>
<tr>
<td>is a constituent</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>must be adjacent to V</td>
<td>N</td>
<td>Y</td>
</tr>
<tr>
<td>appears only in passives</td>
<td>N</td>
<td>Y</td>
</tr>
</tbody>
</table>

Table 2: Properties of P+DP strings

3 A Theory of Passives: Two Types of P+DP Strings

Given the different syntactic properties of the two types of P+DP strings, my main concern in this will be to establish an analysis of Marshallese passives that can account for the differences shown in Table 2. I will first examine the analysis of passives proposed by Chomsky (1982); Jaeggli (1986); Roberts (1987); Baker (1988); and Baker, Johnson, and Roberts (1989) (to name only a few). In this analysis, the English passive morpheme is taken to be an argument that has two important properties:

(i) The passive suffix -\textit{en} absorbs accusative case.
(ii) The passive suffix -\textit{en} absorbs the external theta role.

Because -\textit{en} absorbs accusative case and the external theta role, the verb can no longer select an external argument, as it has no theta role to assign to this position. Also, because the verb no longer has accusative case to assign (it has been absorbed by -\textit{en}), the DP receiving the theme theta role (the underlying object) raises to spec IP to receive nominative case, becoming the surface subject. If an agent DP is to be included in a passive sentence, it must therefore be merged as part of an adjunct PP headed by \textit{by} and receive case and a theta role from this preposition. The derivation of an English passive sentence is given in (18).

\textsuperscript{6}The Marshallese subject agreement clitic may be singular with noninitial plural subjects.
\textsuperscript{7}In the English translations for sentences (18a & b), \textit{ippān} is translated as ‘because of’ because the translations of these sentences containing ‘by’ are ungrammatical.
While this analysis works rather well for English (if theoretical objects are set aside), it is problematic for Marshallese because it cannot account for in+DP strings. This analysis gives three possible ways to analyze in: (1) it could be a preposition heading the adjunct PP, (2) it could be a suffix like the English -en, or (3) it could be a Voice head. If the first possibility is correct, then passive sentences with in+DP strings should have a structure similar to (19):

(19) \[ \text{[AgS\,DP}_{\text{theme}} \, T \, ] \, \text{[TP \, t}_{\text{DP}_{\text{theme}}} \, T \, ] \, \text{[VP \, V \, t}_{\text{DP}} \, ] \, \text{[PP \, in \, DP}_{\text{agent}} \, ]} \]

But (19) cannot possibly be the correct structure, since the in+DP string is a constituent phrase in (19), and the data show that Marshallese in+DP strings are not constituent phrases. In addition, this analysis does not predict that in and the verb must be adjacent. In this analysis, both ippān and in would be heads of PP adjuncts and occupy the same position in the sentence. If this is the case, they should behave identically with respect to adjacency to the verb, since sentences containing in and those containing ippān would have the same syntactic structure. As in and ippān do not behave uniformly with respect to adjacency, this cannot be the correct analysis for Marshallese passives.

A second possibility is that in is like the English suffix -en. While this analysis is attractive because it can explain the adjacency between in and the verb (if the verb moves to PartP), it leaves open the question of why in and ippān cannot both appear in a Marshallese passive sentence (20).

(20) *Jaki ko re=kar lem–lem in ippān kōrā ro.
mat the.PL.NH 3PL.AGR=PST fold–INTR by by woman the.PL.H
‘The mats were folded by the women.’

In fact, this analysis seems to presuppose the idea that both should be present if the structure of Marshallese passives is parallel to that of English ones, as illustrated by (21).

(21) *[TP \, DP}_{\text{theme}} \, T \, ] \, \text{[PartP \, V+in \, [VP \, t}_{\text{DP}} \, ] \, \text{[PP \, ippān \, DP}_{\text{agent}} \, ]} \]

Even if an explanation could be found for why these two words could not cooccur, this analysis still leaves open the question of why in should be present in some sentences and absent in others. In the English short passive, which lacks a by phrase, -en is still present (22). However, in the Marshallese short passive, in cannot be present (23).

(22) The car was stolen.
(23) *Jaki ko re=kar lem–lem in.
mat the.PL.NH 3PL.AGR=PST fold–INTR by
‘The mats were folded.’

Finally, it is possible that in is a Voice head. But this analysis suffers from the same pitfall as the one just discussed because it predicts that in and ippān should cooccur, as illustrated by (24):

(24) *[AgS\,DP}_{\text{theme}} \, A\,\text{grS} \, [TP \, t}_{\text{DP}_{\text{theme}}} \, T \, ] \, \text{[Voice \, V+in \, [VP \, t}_{\text{DP}} \, ] \, \text{[PP \, ippān \, DP}_{\text{agent}} \, ]} \]

And these sentences are never possible in Marshallese.

With the exception of the analysis in which in is parallel to -en, these analyses to passives share a crucial flaw, as was pointed out to me by Tomoko Ishizuka. In the traditional approach to English passives, -en plays a crucial role; its inclusion in the structure is the catalyst for the exclusion of the external argument and the promotion of the theme argument to the subject position.
However, there is no corresponding Marshallese morpheme that has the same role. Therefore, the adoption of this analysis for Marshallese does not seem to be warranted.

Instead, I propose an alternative approach to passives, one similar to Collins’ (2005) smuggling approach to English passives. This analysis differs from the traditional analysis in that it rejects the notion that -en is an argument that absorbs accusative case and the agent theta role. Rather, Collins proposes that both accusative case and the agent theta role may be assigned in passive sentences in a way similar to accusative case and agent theta role assignment in transitive sentences. First, a DP is merged as the specifier of vP, where it receives the agent theta role, and is therefore still the external argument. Second, accusative case is checked by a Voice head to the DP specifier of vP after it is “dissociated” from v. This Voice head is the English by. Therefore, there is no PP adjunct in Collins’ analysis.

This manner of accusative case checking would seem to prohibit the theme DP from moving to spec TP and receiving nominative case because the presence of the intervening external argument should cause a relativized minimality violation. To overcome this problem, Collins suggests that the DP theme is smuggled past the agent DP when PartP moves to spec VoiceP, as illustrated by (26):

Because PartP moves to spec VoiceP, the DP theme is therefore free to raise and become the surface subject.

The structure I propose for Marshallese passives is similar to that of the English smuggling structure but has a few important differences that explain the syntactic behaviors of both types of P+DP strings. If in, like the English by, is a Voice head marking passive voice, then it is correctly predicted to appear only in passive sentences. However, unlike English by, in has a feature requiring the Marshallese verb to raise and left adjoin to this overt Voice head. So rather than remain in the VP, the Marshallese verb raises to left adjoin to the Voice head, followed by subsequent movement of VP to spec VoiceP, as illustrated by (27), the derivation of (6). Just as in English passives, the DP agent is still merged as the specifier of vP, and the theme DP is still smuggled past the DP agent. As a result, the theme DP is then free to raise to spec AgrSP.

This analysis also has two other virtues. First, it explains why the verb must be adjacent to in. These two elements (the verb and in) form a complex head. Therefore, it is predicted that they should not be separated by phrasal material. Second, it predicts that in and the DP agent do not form a constituent to the exclusion of the verb.
Passive sentences containing ippān+DP strings have a similar structure, with a few important differences. First, sentences containing ippān have a nonovert Voice head. This conclusion is based on the fact that there is no morpheme in this type of passive sentence that could be a marker of passive voice. Since ippān can appear in nonpassive sentences, this morpheme cannot be a Voice head marking the passive voice. Additionally, if it were a passive Voice head, it would occur in the same syntactic position as in and should therefore have the same syntactic behavior as in+DP. Therefore, these sentences must have a nonovert Voice head. However, this head differs from in in that the non-overt head does not require V to move and left adjoin to it. Rather, in sentences with a non-overt head, the verb remains in the VP and therefore moves with the VP to spec VoiceP.

Given the syntactic behavior of ippān+DP strings, I conclude that these strings are adjunct prepositional phrases based on the fact that ippān+DP strings behave like adjuncts with respect to extraction. In Marshallese, it is possible to extract out of an adjunct, as illustrated by (28):
correct, we would expect, with respect to extraction, ippān+DP strings to behave like subjects.

(30)

However, they do not. In Marshallese, it is impossible to extract out of a subject, regardless of whether the subject occupies a preverbal (31b) or postverbal (31c) position:

(31) a. ḿe=ot lipā’n wōn e=ar torōŋ?
   man with who 3SG.AGR=PST spearfish
   ‘Whose husband went spearfishing?’

b. *Wōn eo ǚe=ot lipā’n e=ar torōŋ?
   who the.SG man with 3SG.AGR=PST spearfish
   ‘Whose husband went spearfishing?’

c. *Wōn eo e=ar torōŋ ḿe=ot lipā’n iar?
   who the.SG 3SG.AGR=PST spearfish man with lagoon
   ‘Whose husband went spearfishing in the lagoon?’

Note that the prohibition against extraction illustrated by (30b–c) cannot be related to the type of phrase occupying the subject position, as extraction from the same type of phrase is grammatical when this phrase is an object (32):

(32) Wōn eo John e=ar lo lio lipā’n?
   who the.SG John 3SG.AGR=PST see woman with
   ‘Whose wife did John see?’

Therefore, ippān+DP strings cannot occupy positions normally occupied by the Marshallese subject (spec AgrSP in (30b) or spec vP in (30c)).

If we assume that ippān+DP strings are PP adjuncts, we can not only explain the behavior of these strings with respect to adjuncts, but we also can explain both the constituency of ippān+DP strings and the lack of adjacency requirements between the verb and ippān. Since the ippān+DP string in this sentence is a constituent phrase, it is not surprising that coordination and movement of ippān+DP strings are possible. And since the verb does not left adjoin to Voice, it is possible for phrasal material, such as a postverbal subject, to intervene between it and ippān. In a sentence with a postverbal subject, the subject remains VP internal (as I argue in Willson (2008)), and V S
passive sentence three given in (36). Marshallese has three different types of heads that roughly correspond to the English passives, these strings have different syntactic behaviors, which argue in favor of assuming that, like English, the Marshallese passive sentences containing $in+DP$ strings and those containing $ippān+DP$ strings have Voice projections, and if these Voice projections both contain the verb and the $P+DP$ string, then two Voice projections, one containing an overt Voice head and one with a nonovert Voice head, should be able to be coordinated. This is exactly what is possible in Marshallese, as illustrated by (35):

(35) Jaki ko $R=ar$ āj in kōrā eo im lem–lem ippān
mat the.PL.NH $3PL.AGR=PST$ weave by woman the.SG and fold–INTR by leddik eo.
girl the.SG
‘The mats were woven by the woman and folded by the girl.’

As a final point, the analysis I have presented for Marshallese passive sentences can explain why sentences like (20), which include both $in$ and $ippān$, are ungrammatical. If we follow Collins in assuming that, like English, the Marshallese overt head checks accusative case, while the nonovert Voice head checks null case, then it follows that when $in$ is present, there must be an overt DP merged as the specifier of VP. Further, in Marshallese, the preposition $ippān$ must be capable of checking the case of the DP following it. If this were not so, the case of DPs found in the $ippān+DP$ strings of nonpassive sentences would not be checked, as stative and resultative verbs are never able to check accusative case.

These two assumptions allow us to explain the ungrammaticality of (20). In a sentence like (20), the case of the agent DP kōrā ro is checked by the preposition $ippān$. But there is no way for $in$ to check accusative case, as the subject jaki ko checks the nominative case of kar, the T head. Therefore, this sentence is ungrammatical.

4 Conclusion

In this paper, I have argued that Marshallese has two types of $P+DP$ strings. I have shown that these strings have different syntactic behaviors, which argue in favor of the smuggling approach to passives, as proposed by Collins (2005). If my analysis of Marshallese passives is correct, then Marshallese has three different types of heads that roughly correspond to the English by. These are given in (36).

(36) a. $in$ : overt Voice head checks accusative case attracts V
b. $∅$ : nonovert Voice head check null case does not attract V
c. $ippān$ : preposition check case NA

If my analysis is correct, then we must adopt a typology of passives that allows for (at least) three types of languages. The first type includes languages like English, in which the DP agent in a passive sentence is merged as the specifier VP and a word corresponding to ‘by’ as a Voice head.
We must also assume that in some languages, the Voice head may be absent, as some languages such as Haya (Bantu) and Vietnamese do not require an adposition to introduce the agent DP in a passive sentence (Keenan and Dryer, 2007). The second type of languages includes Japanese-like and Hindi-like languages, in which a PP headed by ‘by’ is merged as the specifier of vP. The final type of languages, including Marshallese, employs both the English-like and the Japanese and Hindi-like strategies.

References


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