The Case OCP in Choctaw[*]

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Abstract Choctaw shows a 'Case OCP' effect, which bans adjacent clausemate nouns from carrying the same case-marker (Broadwell 2006). I refine the description of the Case OCP, showing (a) that it does not hold over clause boundaries, (b) that it only regulates the co-occurrence of NPs whose case-markers take the same morphophonological form (ignoring NPs bearing only the same abstract case *features*), and (c) that it is sensitive to the syntactic function of the case-marker, failing to hold when the same suffix is used to mark switch-reference. I argue that such a constraint is most compatible with a parallel model of the morphological component of the grammar, wherein input syntactic structure and output morphophonological form are visible simultaneously. I provide further evidence that the Case OCP is housed in a parallel morphological component by showing that it is violable in certain circumstances. I provide an implementation of Choctaw's Case OCP within Optimality Theory. Finally, I compare the Choctaw Case OCP with the Japanese *Double-o Constraint* (Hiraiwa 2010), highlighting some points of agreement and difference.

1   Introduction

It has been noted in previous literature that when sequences of Choctaw nouns carry the same case-marker, the resulting sentence is somewhere between 'odd' and 'unacceptable'. This is true both for sequences of nominative noun phrases, as in (1a), and sequences of oblique noun phrases, as in (1b) (the judgments here are from Broadwell 2006).[1]

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1. In this article, most Choctaw examples are written in a modified version of Broadwell's (2006) Modified Traditional Orthography. Doubled vowels are long, doubled consonants are geminate. An underlined vowel is nasalized (all nasalized vowels are long). <lh> is [ɬ]. Word-final /h/ is often unpronounced, but its presence is motivated by phonological factors. An acute accent represents pitch accent. I diverge from Broadwell's orthography in that I do *not* assume that Choctaw has a phonemic glottal stop restricted to word-final positions—however, in examples from Broadwell 2006 (e.g. (1a)), I retain his glottal stops, written as <'>. See Katenkamp (2021) for a recent discussion of pitch accent and word-final segments in Choctaw.

   Note also that the geminate vs. non-geminate status of vowels in certain lexical items may vary depending on morphophonological context. This is due to a process of *iambic lengthening*, by which odd-numbered short vowels in sequences of short vowels become long, thus neutralizing the vowel length contrast in these positions (Nicklas 1974; Ulrich 1986). Following Broadwell (2006), I represent this lengthening orthographically, though I do not alter examples from published sources where it is not represented, e.g. Gordon & Munro (2017).

(1) a. ?? John-**at**   ofi'-**at**   im-illi-h.
         John-**NOM** dog-**NOM** III-die-TNS
         'John's dog died.'   (Broadwell 2006: 304)

     b. *? Bill-**a**   ofi-**ya**   im-aa-li-tok.
         Bill-**OBL** dog-**OBL** III-give-1SG.I-PST
         'I gave Bill a dog.'   (Broadwell 2006: 73)

This effect falls under a family of effects, documented in various languages, that are sometimes known as *Case OCP* effects, modelled on the *Obligatory Contour Principle* (OCP) in phonology (Leben 1973; McCarthy 1986 a.o.). Perhaps the most famous and well-studied Case OCP is the Japanese *Double-o Constraint*, by which adjacent nouns cannot both be marked with the accusative suffix *-o* (Kuroda 1992; Hiraiwa 2010).

This article has two main goals. Firstly, I provide data from original fieldwork that allows a more detailed empirical characterization of Choctaw's Case OCP than currently exists. Secondly, I provide an analysis of Choctaw's Case OCP within a constraint-based model of the syntax-morphology interface, which brings to light a couple of issues of theoretical interest.

One point of interest concerns the nature of the constraints themselves. For one thing, they fall into a larger family of *anti-identity* constraints (cf. Alexiadou 2014), and thus this study provides more support for the existence of such constraints. More specifically, I show that the Case OCP in Choctaw is an interesting hybrid beast: an accurate statement of the Case OCP needs to refer to both syntactic category labels *and* to morphophonological forms, as well as linear order (though interestingly it need not refer to abstract case features). This is unproblematic in morphological theories that employ a parallel rather than serial derivation of morphological outputs—for instance, Realization Optimality Theory (Aronoff & Xu 2010; Xu 2011) or Optimality Theoretic Distributed Morphology (Rolle 2020). In such theories, all possible outputs are evaluated, in parallel, against the input, with the content of both the input and the outputs visible at the same time.

It also fits well with serial models of morphology in which the morphological derivation primarily *adds to*, rather than overwrites, the input syntactic structure, such as Ostrove 2018. But it is not compatible with models in which syntax is 'flattened' into a string of concatenated items over the course of the morphological derivation, with abstract features 'used up' or 'discharged' via exponence, as in certain versions of Distributed Morphology, (Halle 1990; Noyer 1992; Bobaljik 2000).[2] In such models, it would not be possible to locate the Choctaw Case OCP at any particular moment in the derivation.

A further interesting point concerns the place of constraints in the morphosyntactic architecture, since it turns out that Choctaw's Case OCP is *not* an absolute filter on morphological outputs, but can be overcome in certain environments in which case-marking of two adjacent NPs is mandated by other factors. Ultimately, I propose that Choctaw's Case OCP is a violable constraint which regulates the exponence of morphosyntactic features at the syntax-morphology interface. It outranks the general pressure to expone case features, and thus forces non-exponence in some environments. But in some more marked environments, there are stronger, specific pressures to realize case on particular NPs, which can overcome the Case OCP. I provide an account of this interaction in a relatively implementation-neutral version of Optimality Theory.

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2. Not all practitioners of Distributed Morphology take up this assumption. Halle & Marantz (1993); Embick (2015) assume instead that Vocabulary Insertion adds phonological features to a terminal node, but leaves its existing features intact.

The paper is organized as follows. Section 2 provides a brief note on the data and methodology that underlies this paper. Section 3 outlines some basic properties of the Case OCP in Choctaw, and some strategies for obviating it. Section 4 provides the statement of the Case OCP. Section 5 then justifies some of the key parts of the analysis—that the Case OCP is simultaneously sensitive to overt morphological form, and to abstract syntactic structure and category labels. Section 6 shows how the Case OCP is not an absolute filter on outputs, but may be violated when two *obligatorily*-case-marked NPs abut one another. I propose an analysis that makes use of ranked constraints at the syntax-morphology interface. Section 7 shows that the Choctaw Case OCP has remarkable similarities to the *Double-o Constraint* in Japanese, and assesses the prospects for unification. Section 8 concludes and notes some avenues that require further investigation.

2 Data and methodology

All of the data in this article come from my own fieldwork, unless otherwise noted. The fieldwork took place at the Mississippi Band of Choctaw Indians between 2016 and 2019, and the Choctaw individuals interviewed were between the ages of 38 and 70. The examples reported here were collected via traditional 'targeted elicitation' techniques— I would ask speakers for English translations of Choctaw sentences, or I would ask for their judgments of Choctaw sentences supplied by me. In total I interviewed 14 speakers, though most of the examples provided here were volunteered or judged by the same three speakers.

The Case OCP is not a phenomenon about which all Choctaw speakers have strong judgments, and there is a significant degree of inter- and intra-speaker variability (cf. Broadwell 2006: 304).[3] For example, (2) shows two utterances that I have recorded, volunteered by speakers of Choctaw, where two adjacent arguments carry the neutral nominative suffix *-at*, in apparent violation of the OCP. Similar examples are frequent in much existing documentation of Choctaw (e.g. the examples in Davies 1986: 102 and Broadwell 1990: 129).[4]

(2) a. Imaabachi-yat kátos-at im-illi-tok.
       teacher-NOM   cat-NOM   III-die-PST
       'The teacher's cat died.'

    b. Allaa-m-at   iskali-yat   i-kaniiya-tok.
       child-DEM-NOM   money-NOM   III-leave-PST
       'That kid lost the money.'

The same speakers will often judge such sentences to be unacceptable. It therefore seems that a degree of variability and instability is to be expected in judgments of the Case OCP. The judgments reported in the main body of this article are robust for the speakers I consulted, and were checked with at least three speakers. In the conclusion, I discuss some points of variation that require further investigation, perhaps by quantitative rather than qualitative methodology.

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3. Variability in judgments has been noted for Case OCP effects in other languages too. See Hiraiwa (2010: 761) on Japanese and Mohanan (1994: 187) on Hindi.

4. A number of speakers, older and younger, remarked that sequences of nominative markers sound 'old-style'. It could be that the case OCP is a relatively recent development in Mississippi Choctaw. This is supported by the fact that the restriction does *not* hold in Chickasaw (Munro & Gordon 1982, Broadwell 2006: 305), and older doculects of Choctaw.

3   Triggering and obviating the Case OCP in Choctaw

Choctaw is a Western Muskogean language spoken in Mississippi and Oklahoma. It has fairly rigid SOV order, verbal agreement and nominal case-marking. The verbal agreement system follows an *active* alignment pattern, shown in (3): agentive subjects are indexed by one set of agreement morphemes ('Class I'), while patientive arguments, which may be subjects or objects, are indexed by a different set of agreement morphemes (Class 'II').[5] Note that Class I and II agreement indexes only 1st and 2nd-person arguments. Class III agreement, by contrast, indexes all arguments (though the Class III prefix used to index 3rd-person arguments is glossed simply as 'III', as in (2b), since it serves as a default form too—see Ulrich 1986: 241–243).

(3)   a.   Baliili-li-tok.
           run-1SG.I-PST
           'I ran.'

      b.   Sa-ttola-tok.
           1SG.II-fall-PST
           'I fell.'

      c.   Chi-shooli-li-tok.
           2SG.II-hug-1SG.I-PST
           'I hugged you.'

A third set of agreement morphemes ('Class III' or 'dative') indexes oblique and applied arguments, which may be subjects or objects. The examples in (1) show 3rd-person arguments indexed with a default Class III agreement morpheme. The configuration in (1a) in particular, in which the Class III agreement indexes the subject, is of particular relevance in this article, since it is one of the only configurations in Choctaw in which we find two nominative arguments in a single clause.

   Turning now to Choctaw's nominal case system, there are two case values: nominative (NOM) and oblique (OBL).[6] Overt subjects must carry a nominative suffix, the most basic of which is *-at* (with postvocalic allomorphs *-t* and *-yat*). Some overt non-subjects carry an oblique suffix, and other overt non-subjects are unmarked. The most basic oblique case suffix is -*a* (with postvocalic allomorph -*ya*). A simple transitive sentence, with an obligatorily case-marked subject and an optionally case-marked object, is shown in (4). Though as just noted, verbs whose subjects are indexed by Class III agreement often take *nominative* objects instead.

(4)   Ohooyo-**t**   alla-**(ya)**   lhiyohli-tok.
      woman-**NOM**   child-**(OBL)** chase-PST
      'The woman chased the kid.'

There are other variants of the case-markers too: *-ato/-ano*, which appear on contrastive NPs, and *-oosh/-o*, which appear on some focused and quantified NPs—these are discussed in section 5.2.

The presence vs. absence of case-marking on objects is not conditioned by the kinds of factors that are usually relevant for Differential Object Marking (DOM) systems, such as definiteness, specificity or animacy (Broadwell 2006: 75). Tyler (2019) argues that object case-marking *does* involve a kind of DOM, but an unusual one conditioned by A'-status, and for now the characterization of case-marking as 'optional' will suffice.

Finally, note that case is only marked once on a noun phrase, at its right edge. Modifiers including demonstratives, numerals and adjectives intervene between the head noun and the case-marker, as in (5).

(5) a. Bashpo yamm-<u>a</u> ishih.
    knife   that-OBL take
    'Take that knife.'

   b. Iti   tóklo-m-at   itti-<u>o</u>-kaaha-h.
     wood two.NMLZ-DEM-NOM RECIP-SUP-lie.DL-TNS
     'Those two sticks are lying on top of each other.'

   c. Tea kapássa-yat   sa-kapassali-h.
     tea cold.NMLZ-NOM 1SG.II-cool.TR-TNS
     'The cold tea is cooling me down.'

3.1 Triggering the Case OCP

The sentences in (6), repeated from (1), show that within a single clause, two nouns bearing identical case-markers cannot generally be adjacent.

(6) a. ??John-**at**   ofi'-**at**   im-illi-h.
     John-**NOM** dog-**NOM** III-die-TNS
     'John's dog died.'   (Broadwell 2006: 304)

   b. *?Bill-<u>a</u>   ofi-<u>ya</u>   im-aa-li-tok.
     Bill-**OBL** dog-**OBL** III-give-1SG.I-PST
     'I gave Bill a dog.'   (Broadwell 2006: 73)

I described this as a Case OCP effect. It's important to state from the outset that this effect seems to be a relatively recent development in Mississippi Choctaw, and is not described in much of the previous documentation of the language. As far as I can tell, the first published documentation of Choctaw's Case OCP effect is in Broadwell's 2006 reference grammar (it is not mentioned in his 1990 dissertation). Let's now briefly consider the syntax of these sentences, which show the possible environments in which a Case OCP effect could arise.

The sentence in (6a) shows an applicativized intransitive verb, where the Class III agreement indexes the applied argument. The theme argument of the intransitive (the dog) is in the object position and the applied argument (John, indexed by III agreement) is in the subject position. This clause receives an external possession interpretation, but the same configuration (a transitive verb with a III-indexed subject) is also compatible with several other kinds of interpretation.[7] Typically, non-subjects in Choctaw carry oblique

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7. Sentences like (6a) have been analyzed as *possessor raising* or *possessor ascension* sentences (Davies 1986, Broadwell 2006: 303–308), owing to their interpretation, but the same syntactic frame (NOM-NOM case-

case, as in (4), but all Choctaw sentences with III-indexed subjects exceptionally permit nominative case to appear on the object (*modulo* the Case OCP). The claim, assumed here, that the second nominative argument in configurations like (6a) really is an object is discussed in more detail by Tyler (2021).

The sentence in (6b) involves a double-object construction. In all Choctaw double-object constructions, which may be built by applicativizing or causativizing a monotransitive verb, either object can be optionally marked with oblique case (*modulo* the Case OCP). Note also that the objects of a double-object verb can be freely reordered, as shown in (7). This does not, to my knowledge, affect their case-marking properties.

(7) a. Sippókni-m-a̱   ak̲a̲ka   im-awashli-li-tok.
         old.NMLZ-DEM-OBL   chicken III-fry.TR-1SG.I-PST
         'I fried the chicken for the elder.'

     b. Ak̲a̲ka   sippókni-m-a̱   im-awashli-li-tok.
         chicken old.NMLZ-DEM-OBL   III-fry.TR-1SG.I-PST
         'I fried the chicken for the elder.'

Oblique-marked adjunct NPs are afflicted by the Case OCP in the same way that argument NPs are. In (8), *aayittanáaha-ya̱* 'church' is an adjunct and *chim-alla-ya̱* 'your child' is an argument.

(8)??Aayittanáaha-**ya̱** chim-alla-**ya̱**   pí̱sa-li-tok.
     church-**OBL**   2SG.III-child-**OBL** see:NG-1SG.I-PST
     'I saw your kid at church.'

3.2 Obviating the Case OCP

There is no uniform 'repair' for sentences like those in (1) that violate the Case OCP. Rather, there are multiple possible ways of altering OCP-violating sentences and getting an acceptable utterance of Choctaw. A small change that will make these sentences acceptable, without (majorly) changing their interpretation, is to omit the case-marker from one of the arguments. The nominative object argument in (9a) can be left unmarked, as in (9b), because case-marking is generally optional for objects in Choctaw (case-marking cannot be left off *John-at*, because case-marking is obligatory for most subjects).

(9) a.??John-**at**   ofi'-**at**   im-illi-h.
        John-**NOM** dog-**NOM** III-die-TNS
        'John's dog died.'   (Broadwell 2006: 304)

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marking and Class III agreement with the subject) occurs in many sentences that don't involve a possession relation. Additionally, Broadwell (2006: 310) states that adjacent nominative-marked arguments are unacceptable in 'possessor raising' sentences like (6a), but are in fact *acceptable* in other III-subject transitives like (i) (which he refers to as 'dative-raising' sentences).

(i) John-at   iskali-yat   im-á̱sha-h.
     John-NOM money-NOM III-be.PL:NG-TNS
     'John has money.'   (Broadwell 2006: 310)

The speakers I consulted, however, found both kinds of OCP-violating sentence to be equally unacceptable.

b. John-**at**   ofi-**Ø** im-illi-h.
    John-**NOM**   dog   III-die-TNS
    'John's dog died.'

Nominative case-marking on objects is (sometimes) freely interchangeable with oblique case-marking, as shown in (10a).[8] The contrast in (10b) shows that the Case OCP is, as expected, *not* triggered when a nominative subject abuts an oblique-marked object. But it is triggered when the object is nominative-marked.

(10) a. *pro*$_{1SG}$ Hohchífo-**yat/ya** am-ihaksi-tok.
               name-**NOM/OBL**   1SG.III-forget-PST
          'I forgot my name.'

      b. Mary-at   hohchífo-***yat/ya** im-ihaksi-tok.
          Mary-NOM   name-***NOM/OBL**   III-forget-PST
          'Mary forgot her name.'

The sentence in (11a) with two overt object arguments becomes acceptable if one or both case-markers is omitted, as in (11b-d). Case-marking may be omitted on either of the object arguments in a double-object construction—see also Broadwell (2006: 73-74).[9]

(11) a.*? Bill-**a**   ofi-**ya**   im-aa-li-tok.
           Bill-**OBL** dog-**OBL** III-give-1SG.I-PST
           ('I gave Bill a dog.')   (Broadwell 2006: 73)

      b. Bill-**Ø** ofi-**ya**   im-aa-li-tok.
          Bill   dog-**OBL** III-give-1SG.I-PST
          'I gave Bill a dog.'

      c. Bill-**a**   ofi-**Ø** im-aa-li-tok.
          Bill-**OBL** dog   III-give-1SG.I-PST
          'I gave Bill a dog.'

      d. Bill-**Ø** ofi-**Ø** im-aa-li-tok.
          Bill   dog   III-give-1SG.I-PST
          'I gave Bill a dog.'

The Case OCP can also be obviated by omitting entire arguments, something Choctaw freely allows. The two sentences in (12) show that either a nominative subject or a nominative object may be omitted, and the sentence in (13), which has at least two possible interpretations, shows that either object of a ditransitive may be omitted too.[10]

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8. III-subject sentences with possession interpretations like (9b) do not generally allow their object (the possessee) to be oblique-marked. III-subject sentences with other interpretations do allow this, though there is variation across verbs.

9. Contrast this with Chickasaw, where a case-marked object must precede a caseless object (Munro 2016: 386).

10. Munro (1999: 272) shows that sentences like (12b) are not possible in Chickasaw.

(12) a. *pro* Ofi-yat   im-illi-h.
             dog-NOM   III-die-TNS
          'Their dog died.'

      b. John-at   *pro*   im-illi-h.
          John-NOM   III-die-TNS
          'John's [pet/relative] died.'

(13) Ofi-ya̲   im-aa-li-tok.
      dog-OBL   III-give-1SG.I-PST
      'I gave them a dog.' / 'I gave it to the dog'

A third way to obviate the Case OCP is by separating the two case-marked NPs. In (14) a temporal expression intervenes between the nominative-marked subject and the nominative-marked object. And as a result, both arguments may be overtly case-marked.

(14) Sa-tiikchi-**yat**   ik-hopáak-o-k-aash   carh-**at**   i̲-hikíya-tok.
      1SG.II-wife-**NOM** IRR-long.time:LG-NEG-COMP-PREV car-**NOM** III-stand:NG-PST
      'My wife had a car not long ago.'

Another kind of example is given in (15). Here, the direct object *foni-ya̲* 'the bone' has been extraposed, while the indirect object *ofi-ya̲* 'the dog' has remained *in-situ*. The resulting sentence is acceptable.[11]

(15) Ofi-**ya̲**   im-aa-li-tok   foni-**ya̲**ᵢ.
      dog-**OBL** III-give-1SG.I-PST bone-**OBL**
      'I gave it to the dog, the bone.'

The sentences in (14-15) show that Choctaw's Case OCP is sensitive to linear adjacency (and not mere clausematehood).

   With these basic properties and obviation strategies for the Case OCP established, I present an initial account of it.

4   Analysis

I propose that Choctaw's Case OCP is a pair of constraints on morphological representations, given in (16).[12]

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11. It is not possible to separate two in-situ object arguments (i.e. those sitting between the subject and the verb) with any kind of adverb. Similarly, it is not possible to front a nominative object—fronting a nominative object will invariably cause it to become oblique (see Munro 1999: 276 for description of a similar effect in multiple-nominative constructions in Chickasaw).

12. I remain agnostic on whether these constraints are separate, or are special cases of a single meta-constraint like (i).

(i) *[$_{NP}$ ... K$_{[\alpha]}$] [$_{NP}$ ... K$_{[\alpha]}$]

(16) a. *[$_{NP}$ ... -*at*] [$_{NP}$ ... -*at*]

    b. *[$_{NP}$ ... -*a̲*] [$_{NP}$ ... -*a̲*]

What these constraints basically say is that two adjacent NPs may not both carry the basic nominative suffix -*at,* and they may not both carry the basic oblique suffix -*a̲*. Note that '-*at*' and '-*a̲*' here should be understood as morphophonological forms—abstract categories that include the phonologically-conditioned allomorphs -*t/-yat* and -*ya̲*.

   These constraints have a notable property: they reference information both about the *syntactic category* of the constituents hosting the case-marker, and about *forms* of the case-markers themselves. That is, at the point where the constraint is 'active', information about syntactic category (is the host phrase an NP?) and information about form (is the case-marker the basic -*at/-a̲* form or is it one of the alternative case-markers?) must be visible simultaneously. Interestingly, no reference to underlying morphosyntactic case *features* (e.g. [NOM] or [OBL]) is necessary—this is discussed in more detail in section 5.2. In section 6 I discuss in more detail the position of the Choctaw Case OCP constraints in the grammatical architecture, and I propose that they are violable constraints. They outrank the general pressure to case-mark NPs, but they are themselves outranked by the specific pressure to mark case on particular NPs in marked environments.

   The fact that Case OCP constraints need simultaneous access to different classes of grammatical information is well-established. Mohanan (1994) proposes that the Case OCP in Hindi needs to be able to simultaneously check not only linear order, but also phonological representation, semantic representation and syntactic constituency. She argues that the existence of constraints like the Case OCP supports the need for simultaneous, multidimensional representations of different kinds of linguistic structure, which can influence and interact with each other. By contrast, the account I propose here retains a serial ordering of grammatical components, and locates the relevant constraint solely within the morphological component of the grammar.

   In the following three sections, I refine the analysis of the Case OCP. In section 5, I provide empirical support for formulating the Case OCP as the two constraints in (16). In section 6, I provide evidence for the claim that the Case OCP is violable, and I provide an implementation within a fairly general Optimality Theory framework. Then, in section 7, I compare the Choctaw Case OCP with the Japanese *Double-o Constraint,* and show that they have remarkable similarities.

5   The Case OCP: Domain and sensitivity

In this section, I flesh out and justify the details of this analysis. I first consider the domain of application of the constraint (section 5.1), showing that it holds only of NPs within the same minimal clause. The clause, for the purposes here, includes possessor-topics, which Tyler (2020) argues to sit above the canonical subject position. I then discuss what exactly the Case OCP is sensitive to. I show in section 5.2 that the Case OCP is sensitive to the overt form of the case-marker—adjacent NPs with the same case value are not afflicted by the Case OCP, so long as the case-marker takes a different overt form on each NP. I then show in section 5.3 that the Case OCP is sensitive to the *function* of the case-marker too—adjacent NPs with the same overt case-marking suffix need not violate the Case OCP, provided that one of the case-markers is not actually marking *case* per se, but is in fact marking switch-reference. At each stage, I show how each of these properties can be accounted for by the constraints in (16).

5.1 Domain of application of the constraint

Choctaw's Case OCP holds only between two NPs within a clause. The sentence in (17) shows that two nominative-marked subject arguments may happily sit side-by-side if they are in different clauses.

(17)   Jane-**at**   [kán-**at**   achokmahni-kiyo-h] im-ahwa-h.
       Jane-**NOM**   someone-**NOM** like-not-TNS   III-seem-TNS
       'Jane thinks that noone likes her.'

The domain over which the Case OCP applies is therefore something like the clause. Possessor-topics, which Tyler (2021; 2020) argues sit above the canonical subject position, *are* included within the clause for the purposes of calculating the Case OCP. The pair of examples in (18) illustrates this.

(18)   a.?*John-**at**   im-ófi-**yat**   illi-h.
            John-**NOM**   III-dog-**NOM** die-TNS
            'John's dog died.'

       b. John-**at**   piláashaash im-ófi-**yat**   illi-h.
           John-**NOM**   yesterday   III-dog-**NOM** die-TNS
           'John's dog died yesterday.'   (Tyler 2021: 83)

Therefore the domain that counts as the 'clause' includes not only the subject but some material above the subject too.

   I am not aware of a configuration in Choctaw that will put two oblique-marked arguments next to each other across a clear clause boundary, so unfortunately I couldn't test the boundary-sensitivity of the case OCP for oblique case-marking (though participial clauses may be important here—see §8.1).

   The clause-sensitivity of Choctaw's Case OCP (or at least the part of the OCP that restricts nominative case-marking) suggests that the constraints in (16) cannot 'see' beyond the edge of a single clause. In cyclic approaches to morphological spell-out, like those found in mainstream minimalism and Distributed Morphology, syntactic structures are not converted into morphological structures all in one piece, but are split up into smaller subparts ('spellout domains' or 'phases') and are transferred to the morphological component of the grammar in a piece-by-piece fashion. I therefore assume that the Case OCP constrains the distribution of case-markers within these smaller pieces, and does *not* apply at the sentence level (Hiraiwa 2010 provides a similar account of the clause-boundedness of the Japanese Case OCP, on which see section 7). This means that clause-sensitivity does not need to be written into the definition of the constraints themselves—it emerges from the architecture of the grammar.[13]

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13. In mainstream minimalism, both CPs and vPs are phases, and Hiraiwa (2010) claims that both CP and vP are relevant for the Case OCP in Japanese. However, it is unlikely that vP is a relevant domain for the Case OCP in Choctaw. In examples like (9a), the Case OCP prevents the co-occurrence of a nominative subject and a nominative object: the subject is in a vP-external position, and there is no reason to think that an object obligatorily moves into the same vP-external domain. Indeed, examples like (14) show that nominative-marked arguments can appear to the right of (i.e. structurally lower than) adjoined expressions which, by virtue of appearing to the right of a subject, must be adjoined in the region of the vP edge. So even though one argument is within the vP and the other is outside it, case-marking is still restricted by the Case OCP.

5.2 The constraint is sensitive to the form of the case-markers

Choctaw has several different 'flavors' of case-marker. Instead of the basic or 'neutral' nominative/oblique case-markers (-*at*/-*a̱*), NPs may instead carry 'focus' case-markers, as in (19a) or contrastive case-markers, as in (19b).[14] The full paradigm of case-markers is given in (20).

(19) a. Aay̱ípa bolókta-**yoosh** hap̱i-hiḵíya-h.
     table square-**NOM.FOC** 1PL.III-stand:NG-TNS
     'A square table is what we have.'

     b. Pisachokma-h im-ahwa-kak-**o̱** an-**aato** kiiyo-h.
     good.looking-TNS III-seem-although-DS me-**NOM.CONTR** not-TNS
     'She thinks he's good-looking, but I don't.'

(20)

Flavor	NOM	OBL
neutral	-*at*	-*a̱*
contrastive	-*ato*	-*ano*
focus	-*oosh*	-*o̱*

I discuss only the focus case-markers here. If a NP marked with a focus nominative suffix is adjacent to one with a neutral nominative suffix, then no Case OCP violation arises as shown in (21) (Broadwell 2006: 305). The same goes for oblique-marked NPs, as shown in (22).[15]

(21) a. Kiiyo, m̱iko-**at** kátos-ak-**oosh** im-ittola-tok.
     no chief-**NOM** cat-FOC-**NOM.FOC** III-fall-PST
     'No, the chief dropped the CAT.'

     b. Mary-ak-**oosh** ofi-**yat** i̱-kahm̱áya-h.
     Mary-FOC-**NOM.FOC** dog-**NOM** III-lie.PL:NG-TNS
     'It's Mary who has a lot of dogs.'

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14. Tyler (2020) refers to -*oosh*/-*o̱* as 'special' case-markers, to reflect the fact that they do not straightforwardly mark focus, and appear in some other environments too. For convenience, I refer to them here as focus case-markers.

15. I was unable to elicit clear judgments on the acceptability of adjacent NPs marked with the same focus case-marker (i.e. X-*oosh* Y-*oosh* or X-*o̱* Y-*o̱* sequences), or NPs marked with the same contrastive case-marker (X-*ato* Y-*ato* or X-*ano* Y-*ano* sequences). One reason for speakers' uncertainty could be that such sentences are only licensed by particular information-structural conditions, which I failed to set up during elicitation.

     Another possibility is that each focused or contrastive element needs to be in its own prosodic domain. Studies of the Case OCP in Japanese and Hindi have shown that violations are ameliorated by inserting a pause between the two NPs (Hiraiwa 2010: 761, Mohanan 1994: 187), so it would not be surprising if there were an effect of prosody in Choctaw too. This requires further investigation.

(22) a. Alla-**ya**   illípa-**yo**   im-aa-l-aach<u>i</u>-h.
          child-**OBL**   food-**OBL.FOC**   III-give-1SG.I-FUT-TNS
          'I'm going to give the FOOD to the kids.'

  b. Ofi-**yo**   foni-**ya**   im-aa-l-aach<u>i</u>-h.
          dog-**OBL.FOC**   bone-**OBL**   III-give-1SG.I-FUT-TNS
          'I'm going to give the DOG the bone.'

The constraints in (16) make direct reference to the form of the case-markers: two adjacent -*at*-marked NPs or two adjacent -<u>a</u>-marked NPs trigger the Case OCP. The examples in (21-22) justify this choice—the Case OCP isn't triggered when two adjacent clause-mate NPs happen to carry the same 'abstract' case feature ([NOM] or [OBL]), provided that those abstract case features are realized by different surface suffixes (or perhaps not realized at all—see the examples in (11)).

It's important to note here that the Case OCP is sensitive to *morphophonological* forms, and not directly to phonological forms. We know this because after vowels, the neutral nominative case-marker -*at* may be realized -*yat* or as -*t* (with the two allomorphs in apparent free variation). Yet although these two allomorphs are clearly phonologically distinct, they both participate in the Case OCP in the same way, triggering ungrammaticality in the context of -*at*, shown in (23). For this reason, the 'form' to which the Case OCP is sensitive should be understood as morphophonological form—that is, an abstract category over phonologically-conditioned allomorphs.

(23) Alíkchi-{**yat/t**} kátos-(*****at**) im-ittola-tok.
      doctor-**NOM**   cat-**NOM**   III-fall-PST
      'The doctor dropped the cat.'

5.3   The constraint is sensitive to the function of the case-markers

Choctaw's case-markers perform double duty as switch-reference markers. Embedded complement clauses, adjoined clauses and relative clauses can all be marked with the same suffixes that show up on NPs. In their switch-reference functions, the 'nominative' case-marker -*at* (and its colleagues -*oosh* (focus) and -*ato* (contrastive)) marks same-subject clauses, and the 'oblique' case-marker -<u>a</u> (alongside -<u>o</u> and -*ano*) marks different-subject clauses. The paradigm of case/switch-reference markers is shown in (24), extended from (20).

(24)

forms		usage as case-marker	usage as SR-marker
SS/NOM	DS/OBL		
-*at*	-<u>a</u>	neutral	after -*k*, -*km*, -*hm*, ...
-*ato*	-*ano*	contrastive	same as -*at*/-<u>a</u>
-*oosh*	-<u>o</u>	'focus'	after -*ak*, tense-markers, ...

In this section, I show that despite this cross-paradigm syncretism, the case OCP ignores the 'case' markers when they are being used to mark switch-reference. I propose that the relevant distinction between the markers in the two environments is syntactic category—specifically, the syntactic category of the XP they are attached to. Markers attached to NPs are canonical case-markers; markers attached to CPs are switch-reference markers.

In the Case OCP constraints stated in (16), only those markers that are attached to NPs are relevant; markers attached to CPs are ignored.

This subsection is organised as follows. Section 5.3.1 presents evidence from Tyler (2020) that the case and switch-reference suffixes consist of the same synchronic set of morphemes, and should not be treated as homophonous, underlyingly distinct morphemes. The three subsections following that (§5.3.2-§5.3.4) then consider three environments in which a word bearing a switch-reference suffix abuts a word bearing the same suffix, *without* triggering a Case OCP violation, thus supporting my claim that switch-reference markers don't participate in the Case OCP. First, section 5.3.2 considers contexts where a SR-marked clause abuts an NP bearing the same case-marker. Then, section 5.3.3 considers contexts where two clauses, both embedded within the same main clause, are adjacent and carry the same switch-reference marker (in this case, a different-subject marker). Thirdly, section 5.3.4 considers contexts in which an NP bearing the nominative suffix *-at* is adjacent to a participle bearing the suffix *-t*—a suffix which is diachronically related to nominative *-at,* and may still be synchronically related.

5.3.1 A uniform analysis of the case and switch-reference suffixes

The table in (24) shows how all three sets of case markers (neutral, contrastive and focus) can *also* be used as switch-reference markers. The nominative forms show up in same-subject contexts, the oblique forms in different-subject contexts. It's *possible* that this recycling of morphological material to mark both case and switch-reference should be analyzed as homophony, but this does not seem parsimonious. In the rest of this section, I present four further arguments, all initially noted in Tyler (2020), that Choctaw's case and switch-reference markers are not merely homophonous, but are in fact the same set of elements in speakers' synchronic grammars.

Firstly, the case and switch-reference markers are in complementary distribution on relative clauses (Gordon & Munro 2017). In (25a), the relative clause can be marked with *-at* or *-a*: *-at* (same-subject/nominative) because the relative clause and the matrix clause share a subject; *-a* (different-subject/oblique) because the relative clause sits in object position. Likewise in (25b), where a relative clause is in subject position within the main clause, but has a *different* subject from the matrix clause, again both case/switch-reference suffixes are available. The fact that case and switch-reference markers compete for the same morphological slot is a reason to treat them as being synchronically the same item.[16]

(25) a. Same-subject relative clause in object position
      [Hattak ayoppáchi-li-m   **-a/-at**   ] apila-li-h.
        man   like:NG-1SG.I-DEM-**OBL/-SS**   help-1SG.I-TNS
      'I helped the man I like.'

   b. Different-subject relative clause in subject position
      [Jan ofi ipita-tok-m **-a/-at**] bali-t   kaniya-h.
        Jan dog feed-PST-DEM-**DS/-NOM**   run-PTCP leave-TNS
      'The dog Jan fed ran away.'   (Gordon & Munro 2017: 4-5, reglossed)

Secondly, both the case-markers and the switch-reference markers can be replaced with the 'previous-mention' marker *-aash* (see Broadwell 2006: 89). (26) shows that *-aash* can

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16. Gordon & Munro (2017) do not mark vowel length changes that derive from rhythmic lengthening, and I have not modified their examples.

be used in lieu of both same-subject and different-subject markers, and (27) shows that
-*aash* can also be used in lieu of both nominative and oblique case-markers.

(26) a. [Mary-at   n**á**n   anooli-tok-**aash**] yoppa-k-at   aatapaa-tok.
           Mary-NOM   thing   tell-PST-PREV   laugh-COMP-SS do.much-PST
           'Mary was telling the story and laughing a lot.'

      b. Ish-ikk**á**na-m**ó**ma-h-<u>o</u>,   [okkata   il-iiya-k-**aash**   ].
          2SG.I-know:NG-still-TNS-Q   lake   1PL.I-go-COMP-PREV
          'Do you remember the time we went to the lake?'

(27) a. Bill-**aash**   iya-tok.
           Bill-PREV   go-PST
           'Bill left.'

      b. Ak<u>a</u>ka-**yaash**   apa-hnik.
          chicken-PREV   eat-certain
          'He really did eat the chicken.'

Thirdly, -*at/-<u>a</u>* can always be replaced by the focus suffix -*ak*, optionally followed by
-*oosh/-<u>o</u>*, regardless of whether the -*at/-<u>a</u>* suffix is being used to mark case or to mark
switch-reference. (28a) shows -*ak* being appended to a noun phrase in subject position,
where one might otherwise find the case-marker -<u>a</u>, and (28b) shows -*ak* being appended
to an adjoined clause, where one might otherwise find the switch-reference marker -<u>a</u>.[17]

(28) a. Opp**ó**lo-m-**ak**-<u>o</u>   ishi-tok.
           break.INTR.NMLZ-DEM-**FOC**-OBL   take-PST
           'It's the broken one that he got.'

      b. [<u>O</u>ba-t   issa-km-**ak**-<u>o</u>] kil-ilhkooli.
          rain-PTCP   stop-if-**FOC**-DS   1PL.IRR-go
          'Let's go when it stops raining.'

Fourthly and finally, it appears that the nominative and same-subject markers are un-
dergoing a parallel decline in use, as younger speakers generalize the different-subject
and oblique markers to a wider range of environments. The examples in (29), volunteered
by one late-30s speaker of Choctaw, illustrate this phenomenon. In (29a), a transitive
subject lacks a nominative suffix where we would expect one in more conservative vari-
eties, and in (29b), an oblique suffix is used on a subject. Similarly, in (29c) an adjoined
different-subject marker is used in an environment where we might expect a same-subject
marker.

(29) a. Am-aafo   ichch<u>o</u>kash-**Ø** achokma-kiyo-h.
           1SG.III-grandfather   heart   good-not-TNS
           'My grandfather's heart isn't good.'

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17. Although -*ak* does not contribute focus interpretation in any obvious way in (28b), I gloss it as 'FOC' for
consistency.

b. Alla nakni alhíiha-m-**a**   fakki̱ha-tok.
   child boy   group-DEM-OBL fight-PST
   'Those boys had a fight.'

c. [Kátos ahoochi-li-hm-**a**   ] i̱pa-chii-li-tok.
     cat   find-1SG.I-when-**DS**   eat-CAUS-1SG.I-PST
   'When I found the cat, I fed it.'

The observation that the same-subject and nominative markers are declining in parallel, and that different-subject and oblique markers are being extended in parallel, is a further hint that they are one and the same item—with the caveat that this observation remains impressionistic at this stage, and requires more methodical quantitative assessment.

I have presented four arguments for a unified analysis of the case-markers and switch-reference markers—that is, we should not think in terms of separate case-markers and switch-reference markers, but only 'case/switch-reference markers', which can appear in different morphosyntactic environments to perform different functions. Note that I do *not* provide an explanation for why case and switch-reference—two functional systems with apparently quite different roles—should make use of the same underlying pair of formal features, which I refer to as [NOM] and [OBL] (though they could just as easily be labelled '[SS]' and '[DS]'). Camacho (2010) provides one potential formal unification of the two systems, but typological work by McKenzie (2012; 2015) might give us a reason to be wary of any such 'deep' unification of the two systems, on the basis that such an account could end up being too parochial. He shows that switch-reference systems cross-linguistically tend to recruit and repurpose various kinds of binary oppositions from a language's functional domain, including but not limited to case-marking. Thus I leave this an issue for future work.

In the following three subsections, I show that despite the unity of case and switch-reference that I just established, the Case OCP does *not* restrict the co-occurrence of a two identical markers when one of them is performing a switch-reference function. This is captured by the constraints stated in (16), which distinguish between a case/switch-reference marker attached to an NP, and a case/switch-reference marker attached to a CP.

5.3.2 Where a clause and an NP are adjacent

In this subsection, I consider two configurations in which a clause-final verb within an embedded clause is marked with a switch-reference suffix, and finds itself adjacent to a noun bearing the same suffix. As we will see, these configurations do not trigger Case OCP violations.

The first of these configurations is when the switch-reference-marked verb shows up next to a clausemate NP which bears the same suffix as the verb. This configuration is schematized in (30).

(30)   [[$_{NP}$ ... -CASE] V -SR]

Some examples are given in (31). In (31a), the nominative object of the embedded clause *iskali-yat* can abut that clause's verb *chi̱-lawa-k-at,* without leading to unacceptability.

Similarly in (31b), the non-subject within the adjoined clause *aa-lashpa-ya* does not trigger a Case OCP violation when adjacent to the SR-marked verb *ish-hikíya-h-o-km-a*.[18]

(31) a. [Iskali-**yat**   chi̱-lawa-k-**at**   ] na̱n   láwa   ish-cho̱pa-tok.
          money-**NOM**   2SG.III-many-COMP-**SS**   thing many.NMLZ   2SG.I-buy-PST
          'You had a lot of money and bought a lot of stuff.'

      b. [Aa-láshpa-**ya**   ish-hikíya-h-o-km-**a**   ] chi-los-ahii-h.
          LOC-hot.NMLZ-**OBL**   2SG.I-stand:NG-TNS-LINK-if-**DS**   2SG.II-black-MOD-TNS
          'If you stand in the sun you will get darker.'

The second configuration involving a switch-reference marked verb in an embedded clause, and an adjacent NP bearing the same suffix, is when the NP is part of the *matrix* clause ('CP-Mat.'), rather than the embedded clause ('CP-Emb.'). The two possible permutations of this configuration are schematized in (32). There are two permutations here because the matrix NP may be ordered before or after the embedded clause.

(32) a. [$_{\text{CP-Mat.}}$ [$_{\text{CP-Emb.}}$ ... -SR] [$_{\text{NP}}$ ... -CASE]]

      b. [$_{\text{CP-Mat.}}$ [$_{\text{NP}}$ ... -CASE] [$_{\text{CP-Emb.}}$ ... -SR]]

Some examples of the configuration in (32a), where both suffixes are *-at*, are given in (33). In (33a) the clause abuts a nominative object, and in (33b) the clause abuts a subject. As shown, both examples are acceptable.[19]

(33) a. [Akooposhi átta-hm-**at**   ] kátos-**at**   im-abiika-tok.
          bedroom   be:NG-when-**SS**   cat-**NOM**   III-sick-PST
          'When it was living in the bedroom, her cat got sick.'

      b. [Nípi   aayo̱ba kíyo   apa-hm-**at**] Mary-**at**   im-abiika-tok.
          meat   healthy not.NMLZ   eat-when-**SS**   Mary-**NOM**   III-sick-PST
          'When it ate the rancid meat, Mary's [pet/relative] got sick.'

Equivalent examples with the oblique/different-subject suffix *-a* are shown in (34). Here, the embedded clause abuts the indirect object of the main verb. Again, the examples are acceptable.[20]

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18. The different-subject switch-reference suffix *-a* in (31b) is unexpected, given that the main and embedded clauses have the same subject. This is part of a larger trend where different-subject marking is starting to appear in places where same-subject marking would be expected in more conservative varieties—see Tyler (2020: 101, 400) for discussion of this phenomenon. Impressionistically, I believe more innovative speakers are more likely to have strong Case OCP judgments.

19. The example in (33b) is less instructive, since both *-at* suffixes are obligatory—the first because it is a switch-reference marker; the second because it is on a subject. As discussed in section 6, obligatory markers can escape the Case OCP. However, the example in (33a) makes the point more clearly, because *kátos-at* is not a subject and so its case-marking is optional.

20. It's worth noting that the embedded clause in the examples in (31-33) is adjoined, while the embedded clause in the examples in (34-35) is a complement clause. I do not believe that the complement vs. adjunct status of an embedded clause affects whether or not its switch-reference marker participates in the Case OCP (none do).

(34) a. [Ittihalall-aach<u>i</u>-h   miya-k-**a**   ] sa-ttik<u>a</u>na-**ya**   im-anooli-tok.
           marry.RECIP-FUT-TNS say-COMP-**OBL**   1SG.II-friend-**OBL** III-tell.TR-PST
           'She told my friend that they were getting married.'

      b. [<u>I</u>sha-t   hofoobi-ch-aach<u>i</u>-k-**a**   ] hattak-**a** i-makaa-li-tok.
           exceed-PTCP deep-CAUS-FUT-COMP-**DS**   man-**DS**   III-say-1SG.I-PST
           'I told the men to make it deeper.'

Some examples of the configuration in (32b), in which the case-bearing NP precedes the SR-bearing clause, are given in (35-36). Note that the clause in these examples contains only one word, to ensure that the NP and the verb are linearly adjacent, but still no Case OCP violation is triggered.[21]

(35) a. Baalókka-**yat** [ossi-k-**at**   ] im-at<u>á</u>pa-h,
           pants-**NOM**   small-COMP-**SS**   III-exceed:NG-TNS
           'The pants are too small.'

      b. Hattak-**at** [hik-<u>a</u>na-k-**at**   ] yimmi-h.
           man-**NOM**   fly-MOD-COMP-**SS**   believe-TNS
           'The man believes he can fly.'

(36) Ch<u>i</u>-hattak-**a**   [ámmona-k-**a**   ] kátimma ish-afaama-ttook?
      2SG.III-man-**OBL** first.GG-COMP-**DS**   where   2SG.I-meet-DPST
      'Where did you first meet your husband?'

If we considered either of the configurations in (30) or in (32) in isolation, we might be tempted towards a simple analysis: these examples fail to trigger the Case OCP because the NP and the switch-reference marker are in different clauses. After all, we saw in section 5.1 that the Case OCP does not hold across clause boundaries, so this would allow us to simplify our statement of the constraints in (16). However, if we take the two configurations together, we see that this explanation cannot be right. The problem is essentially that depending on which configuration is considered, we would come to two contradictory conclusions about whether the switch-reference suffix is in the higher or the lower clause, for the calculation of the Case OCP.

So let's consider first the configuration in (30), where a case-marked noun adjacent to a clausemate verb carrying the same switch-reference suffix does not trigger a Case OCP violation. If we want to make use of the explanation that the case-marker and switch-reference marker are in different clauses, we would need to claim that the switch-reference marker is treated as part of the *matrix* clause, and not as part of the embedded clause. But let's turn now to the configuration in (32), where a case-marked noun in the matrix clause is adjacent to a verb in an embedded clause which carries the same switch-reference suffix, and no Case OCP violation arises. Here, if we wished to explain the lack of OCP violation by claiming that the markers are in different clauses, we would need to claim that the switch-reference marker is in the *embedded* clause, and not in the

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21. The examples in (35) are affected by the same complication as (33b), discussed in footnote 19: both -*at* markers are obligatory (the switch-reference marker because all switch-reference markers are obligatory; the case-marker because it is on a subject), and obligatoriness overrides the OCP. To my knowledge, there is no way to construct an example of the configuration in (32b), with nominative/same-subject markers, that does not suffer from this complication. Nonetheless I include the examples for completeness.

matrix clause. Thus a consideration of the two configurations together shows us that we cannot explain away the non-participation of switch-reference markers in the Case OCP by simply claiming that they are in a different clause from the noun they are adjacent to, since if we do that we end up in a contradiction.[22] Instead I suggest that the Case OCP constraints really are sensitive to the syntactic category of the constituent they are attached to, as encoded in the constraints in (16).

In the final two parts of this subsection, I provide two pieces of supporting evidence for the claim that the switch-reference suffixes are ignored by the Case OCP. One comes from configurations with two embedded clauses, the other comes from participial clauses (which *may* have a switch-reference suffix, depending on your analysis).

5.3.3   Where two embedded clauses are adjacent

When two clauses, both marked with the same switch-reference suffix, are embedded within one matrix clause, no Case OCP effect is triggered. This is shown with -*a*-marked clauses in (37), and with -*at*-marked clauses in (38) (note that most of the below examples involve comparative constructions, which neatly illustrate this structure).

(37) a. Kaniiya-ttoo-k-**a**   hopaaki-k-**a**   káti-fokaali-h?
          go.away-DPST-COMP-**DS** long.time-COMP-**DS** how.long-approximately-TNS
          'How long since he left?'

      b. Baliili-li-k-**a**   ish-baliili-k-**a**   chi̠-shahli-li-h.
          run-1SG.I-COMP-**DS**   2SG.I-run-COMP-**DS** 2SG.III-exceed-1SG.I-TNS
          'I go running more than you.'

      c. Kafi   ish-ikbi-k-**a**   ish-ishko-k-**a**   ish-i̠-shahli-h.
          coffee 2SG.I-make-COMP-**DS** 2SG.I-drink-COMP-**DS** 2SG.I-III-exceed-TNS
          'You make more coffee than you drink.'

(38)   Chi-ttola-k-**at**   chi̠-palammi-k-**at**   ano   i̠-shahli-h.
       2SG.II-fall-COMP-**SS** 2SG.III-struggle-COMP-**SS** me   III-exceed-TNS
       'You fell harder than I did.'

The non-application of the Case OCP here follows from the constraints as stated in (16): both suffixes are attached to CPs, rather than NPs, and so are ignored by the constraints. However, it's also worth noting that these examples may be less instructive than those involving an NP and an adjacent verb, since clauses with -*k* complementizers, as in (37-38), are obligatorily marked with a switch-reference suffix.

because the Case OCP may be 'overcome' when both participating elements have *obligatory* rather than optional suffixes—this issue is discussed in more detail in section 6 (see also footnote 19).

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22. One could salvage the analysis in which the complement clause and its clausemate object argument occupy different Case-OCP-domains by claiming that the SR-marker that is attached to an embedded clause is not in the same Case-OCP-domain as any arguments in its matrix clause. However, this is simply a notational variant of the claim that SR-markers are ignored by the Case OCP.

5.3.4 Participial clauses ending in *-t*

One way of forming participial clauses in Choctaw is with the suffix *-t*. Some examples are given in (39)—the participial clause may serve as a complement to the finite verb, as in (39a), or it may serve as an adjunct, as in (39b).

(39) a. Ahii   lhabóoha-**yat**   walhalli-**t** alhtaha-h
        potatoes boil.NMLZ-**NOM** boil-**PTCP** finished-TNS
        'The potatoes finished boiling.'

    b. Ilílli-**yat**   ila-chi-**t**   sa-kachi-tok.
       illness-**NOM** different-CAUS-**PTCP** 1SG.II-really.do-PST
       'The illness really changed me.'

    c. John im-ófi-**yat**   bali-**t**   kaniiya-hm-a   ...
       John III-dog-**NOM** run-**PTCP** leave-when-DS
       'When John's dog ran away ...'

Munro (1983) and Broadwell (2006: 217) analyze participial *-t* as diachronically related to the nominative/same-subject *-at* suffix (recall also that this suffix has the allomorph *-t* in postvocalic position). This is supported by the fact that participial *-t* clauses almost always have the same subject as their matrix clause.[23] If participial *-t* is not just diachronically related to the case/SR-marker, but is in fact a synchronic variant of it , then it is notable that it does not participate in the Case OCP: the *-at*-marked subjects in (39) can happily abut a clausemate participle.

  In this subsection I have shown that the *-at* and *-a* suffixes do not participate in the Case OCP when they are marking switch-reference, rather than case. This was demonstrated by looking at a number of configurations involving switch-reference markers which we might *expect* to run afoul of the Case OCP. Upon investigation, we found that none of them did.[24] In the constraints in (16) I have encoded this restriction by putting a notion of syntactic category into the constraints themselves: the constraints apply only to those suffixes which are attached to NPs, and they ignore those suffixes that are attached to CPs.

5.4 Interim summary

Together, the previous two subsections (§5.2, §5.3) show that the Case OCP is sensitive both to the *surface form* of the markers (*-at* vs. *-a*) and to their *syntactic category* (CP-attached vs. NP-attached). Interestingly, the abstract case features themselves ([NOM] vs. [OBL]), which are ultimately realized as the case/switch-reference suffixes, do not appear to play a role in the Case OCP. The configurations with focus case-markers discussed in section 5.2, and the configurations with switch-reference markers discussed in section 5.3, all involve adjacent XPs with the same abstract case features, but as we saw, the Case OCP is only triggered by adjacent NPs (and not CPs) carrying the same surface case-markers.

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23. The major class of exceptions to this generalizations comes with participial quantifier verbs, whose subject (the quantified NP) may be co-identified with a non-subject argument of the matrix clause—see Broadwell (2006: 218) and Tyler (2020: 358) for several sentences that exemplify this.
24. A significant gap in the data I have on hand is relative clauses—see the conclusion for further discussion.

Of the two properties that are relevant to the Case OCP—surface form and syntactic category—only the latter is present in the input to the morphological derivation. The former is determined in the morphological component itself. This statement of the Choctaw Case OCP is thus consistent only with certain kinds of models of the morphological component. It is consistent with a *parallel* morphological component, in which all possible morphological outputs are evaluated simultaneously with respect to the input and some kind of evaluation function (in Optimality Theory, a constraint ranking). And it is also consistent with a serial morphological component that is primarily *additive*—that is, a morphological component composed of multiple ordered stages, in which information is *added* to the input syntactic representation at each stage, but not *removed* (i.e. morphosyntactic features are not 'used up' or 'discharged' as information about form is added, and hierarchical syntactic structure is not 'flattened' as the linear string is calculated).

In the next section, I argue for a constraint-based account within a parallel morphological component, driven by the observation that the Case OCP is not an absolute filter on morphological outputs, but is overridden in cases where two adjacent NPs must both be obligatorily case-marked.

6   Refining the Case OCP: interaction with obligatory case-marking

The sentences in (40) show that the Case OCP is not inviolable. In (40a) two NPs marked with the same nominative suffix are adjacent to one another, and (40b) shows the same thing with two oblique-marked NPs.

(40) a. Bill-**at**   chokka-m-**at**   <u>i</u>-toba-tok.
          Bill-**NOM**   house-DEM-**NOM**   III-be.made-PST
          'Bill had that house built.'

      b. Tóowa-p-**<u>a</u>**   allaa-m-**<u>a</u>**   im-aa-l-aach<u>i</u>-h.
          ball-DEM-**OBL**   child-DEM-**OBL**   III-give-1SG.I-FUT-TNS
          'I will give this ball to that kid.'

An important fact about all of the case-marked NPs in (40) is that case-marking on each one is obligatory. In (40a), *Bill-at* bears obligatory nominative case because it is an overt subject, and all overt subjects require case-marking. And the object *chokka-m-<u>a</u>* 'that house' bears obligatory case because it has a demonstrative determiner, and the determiners *-m-* 'that' and *-p-* 'this' must be followed by a case marker. Case-marking on the two object NPs in (40b) is necessary because both NPs have determiners.

If the constraints in (41), repeated from (16), constrained morphological output, we would expect the sentences in (40) to be unacceptable. Yet they are fine.

(41) a. *[$_{NP}$ ... *-at*] [$_{NP}$ ... *-at*]

      b. *[$_{NP}$ ... *-<u>a</u>*] [$_{NP}$ ... *-<u>a</u>*]

One analytical possibility would be to complicate and rewrite the constraints such that they 'ignore' cases like (40). However, this would result in quite complex, 'bespoke' constraints, especially given the interaction between optionally and obligatorily-case-marked elements discussed later in this section. Instead, in the rest of this section I provide an alternative analysis, which recasts the statements in (41) as violable constraints that sit within a larger ranking of syntax-morphology interface constraints.

The basic contours of the analysis follow Aissen's (2003) analysis of Differential Object Marking, couched within Optimality Theory (OT, Prince & Smolensky 1993). The intuition is essentially that while the pressure to adhere to the OCP outranks the generalized pressure to realize case on an NP, the specific pressure to realize case in certain marked environments (subject position, and following a determiner) outranks the pressure to adhere to the Case OCP. That is, the OCP interpolates between a constraint that forces case-marking in all environments, and some other higher-ranked constraints that force case-marking in more marked environments.[25]

The generalized pressure to realize an abstract syntactic case feature ([NOM] or [OBL]) as a morphophonological form is encoded as a constraint REALIZECASE, defined in (42). Note that the constraints here are stated in a relatively theory-neutral manner, and are compatible with various constraint-based models of the syntax-morphology interface, such as OT-Distributed Morphology (Trommer 2001; Dawson 2017; Rolle 2020), though the model I have in mind is Realization OT, as discussed in Aronoff & Xu (2010); Xu (2011).

(42)   REALIZECASE
       Assign one violation for every [NOM/OBL] feature that lacks a morphophonological exponent.

As a way of modelling the general optionality of case-marking in Choctaw, I analyze REALIZECASE as being *variably* ranked with respect to a constraint *CASE: the overall pressure to avoid morphological case-marking, defined in (43) (this is essentially the same as Aissen's *STRUC$_C$ constraint).

(43)   *CASE
       Assign one violation for an NP with morphologically-marked case.

The effect of this variable ranking is optional case-marking, as demonstrated by the tableau in (44). The input is given simply as 'NP' with an abstract [OBL] case feature—more context will be added as necessary in subsequent tableaux.[26]

(44)

	NP[OBL]	REALIZECASE	*CASE
☞	NP	*	
☞	NP-a		*

A constraint OCP, defined in (45), outranks REALIZECASE and *CASE. This constraint just takes the two 'absolute' constraints stated in (16/41) and wraps them in a Optimality-Theoretic shell, rendering them violable.

(45)   OCP
       Assign one violation for every violation of one of these configurations:
       i.   [$_{NP}$ ... -*at*] [$_{NP}$ ... -*at*]
       ii. *[$_{NP}$ ... -*a*] [$_{NP}$ ... -*a*]

The tableau in (46) shows how ranking OCP above REALIZECASE captures standard OCP effects, like that seen in a double-object construction (see example (1b)).

(46)

	NP[OBL] NP[OBL]	OCP	REALIZECASE	*CASE
☞	NP NP		**	
☞	NP-<u>a</u> NP		*	*
☞	NP NP-<u>a</u>		*	*
	NP-<u>a</u> NP-<u>a</u>	*		**

In order to capture how Choctaw's Case OCP may be violated in the configurations exemplified in (40), we can define two further constraints, which enforce the realization of case-markers in more specific (marked) environments: on NPs in subject position, and on NPs that have demonstrative determiners. These constraints are defined in (47).[27]

(47)   a.   <u>REALIZECASE-SUBJECT</u> (RC-SUBJ)
          Assign one violation for every [NOM/OBL] feature that lacks an exponent, on
          an NP in subject position.

       b.   <u>REALIZECASE-DEMONSTRATIVE</u> (RC-DEM)
          Assign one violation for every [NOM/OBL] feature that lacks an exponent, on
          an NP with a demonstrative determiner.

If these constraints are to have any effect on determining the output, given any input, they must be ranked higher than the general constraint REALIZECASE (by the logic of *Panini's Principle,* or the *Specificity Condition*; McCarthy & Prince 1994; Xu 2007; 2011). In order to overcome the effect of the Case OCP in particular, they must be ranked above OCP. We thus arrive at the constraint ranking in (48), which is as far as I will develop this approach here.

(48)   {RC-SUBJ, RC-DEM} » OCP » {REALIZECASE, *CASE}

The tableau in (49) shows how the high-ranked constraint REALIZECASE-DEMONSTRATIVE forces case-marking onto two objects when each has a demonstrative determiner (*-p* 'this' or *-m* 'that'), as in (40b), even when doing so causes a violation of OCP.[28]

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27. There may be further constraints that force case-marking to be realized in other marked environments: for instance, on NPs that have undergone A'-movement. See Tyler (2019), Tyler (2020: 374-383).

28. The determiners *-pa* and *-ma* sometimes occur in texts (Broadwell 2006: 68-84, Tyler 2020: 373). If the correct underlying representation of determiners is *-pa* and *-ma* (rather than *-p* and *-m*), then these forms could be analyzed as determiners *without* a following case-marker. However, my suspicion is that these forms are variants of *-p-a* and *-m-a*. Vowel nasalization can be quite hard to distinguish in word-final position, and this is especially true following /m/, whose nasal quality may persevere into the following vowel regardless of whether it is phonologically nasalided. Additionally, analyzing the determiners as *-pa* and *-ma* would entail a resegmentation of forms like *-mak*, consisting of a determiner and the focus marker *-ak* (or instead: *-k*). Analyzing the focus-marker as *-k* rather than *-ak* is not ideal, as there is independent evidence that its form is immutably *-ak*, and that it does *not* reduce to *-k* following vowels, but rather becomes *-yak* instead.

(49)

NP-p[OBL] NP-m[OBL]	RC-Subj	RC-Dem	OCP	REALIZECASE	*CASE
NP-p NP-m		**		**	
NP-p-a NP-m		*		*	*
NP-p NP-m-a		*		*	*
☞ NP-p-a NP-m-a			*		**

And the tableau in (50) shows how a high-ranked constraint REALIZECASE-SUBJECT, in tandem with a high-ranked REALIZECASE-DEMONSTRATIVE, results in a grammatical OCP violation in configurations like (40b), where both the subject and object are obligatorily case-marked. I represent the property of subjecthood as a feature [SUBJ] for convenience, and I do not take a position on how subjecthood is represented in the input to the morphology.

(50)

NP[NOM,SUBJ] NP-m[NOM]	RC-Subj	RC-Dem	OCP	REALIZECASE	*CASE
NP NP-m	*	*		**	
NP-at NP-m		*		*	*
NP NP-m-at	*			*	*
☞ NP-at NP-m-at			*		**

This approach accounts for an interesting consequence of the Case OCP: when an optionally-marked NP abuts an obligatorily-marked one, case-marking on the optionally-marked NP becomes *impossible*. To illustrate, consider the example in (51). Here, the first of the two NPs in a double-object construction carries a demonstrative determiner, so is obligatorily case-marked. As a consequence, the second of the two NPs, which in any other environment would be optionally case-marked, is incapable of being case-marked.

(51) Tóowa láwa-m-**a**   alla-**(*ya)**   im-aa-l-aach̲i-h.
      ball   many.NMLZ-DEM-**OBL** child-(*OBL) III-give-1SG.I-FUT-TNS
      'I'm going to give the kid loads of balls.'

The tableau in (52) shows how this pattern would emerge under the constraint ranking established so far.

(52)

NP-m[OBL] NP[OBL]	RC-Subj	RC-Dem	OCP	REALIZECASE	*CASE
NP-m NP		*		**	
☞ NP-m-a NP				*	*
NP-m NP-a		*		*	*
NP-m-a NP-a			*		**

A further example of this interaction is found in nominative object constructions: in the presence of an overt subject marked with *-at*, the object cannot be marked with *-at* (unless it is has a demonstrative determiner, see (50)). That is: an obligatorily-marked NP (the subject) forces an optionally-marked NP (the object) to go unmarked. This is illustrated by (53) (note the additional complication that most nominative objects in Choctaw can be optionally marked as oblique instead, in which case there would be no OCP interaction with the nominative subject).

(53) Hopóoni-**yat** ak<u>a</u>koshi-{*yat/y<u>a</u>/Ø} im-alwasha-tok.
chef-**NOM** egg-{*NOM/OBL/Ø} III-fry.INTR-PST
'The chef had the eggs fried.'

The tableau in (54) shows how this pattern would emerge (I assume that the output where the object bears oblique case-marking is derived from a different input).

(54)

	NP[NOM,SUBJ] NP[NOM]	RC-SUBJ	RC-DEM	OCP	REALIZECASE	*CASE
	NP NP	*			**	
☞	NP-at NP				*	*
	NP NP-at	*			*	*
	NP-at NP-at			*		**

   In summary, we have seen in this section that the Choctaw Case OCP, as stated in (16/41) cannot be treated as an absolute filter on morphological outputs. Instead, it should be treated as a violable constraint, which constrains the availability of *optional* case-marking, but can be overridden in contexts where two adjacent NPs must both be obligatorily case-marked. I provided an implementation of this idea within Optimality Theory.[29]
   In the final section before the conclusion, I compare the Choctaw Case OCP with the Double-*o* Constraint in Japanese, and show that there are some remarkable similarities.

7   Comparison with the Japanese *Double-o Constraint*

The most famous and well-studied example of a Case OCP effect is the Japanese *Double-o Constraint* (DoC), which bans adjacent clausemate NPs from carrying the accusative case-marker -*o*.[30] See Harada (1973); Kuroda (1992); Poser (2002); Hiraiwa (2010) for discussion. An example is given in (55).[31]

(55) *Ken-ga   Naomi-**o**   atama-**o**   tatai-ta.
Ken-NOM   Naomi-ACC   head-ACC   hit-PST
'Ken hit Naomi on the head.'   (Hiraiwa 2010: 729)

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29. There are ways one might account for Choctaw's violable Case OCP within a serial, rule-based analysis. The fundamental challenge to overcome is that the Case OCP is only able to restrict the availability of case-marking on NPs on which case-marking is, absent the Case OCP, optional. One possibility would be to 'key' the Case OCP such that it can restrict the application only some case-marking rules, but not others. So in Choctaw, the Case OCP prevents the application of the general (and optional) rule that inserts case-markers on most NPs (i.e. non-subjects and NPs with demonstrative determiners). But the Case OCP does not affect the application of the more specific rules that insert case-markers on subjects and NPs with demonstrative determiners.

30. For work on case OCP effects in other languages, see Mohanan (1994) on Hindi and Anttila & Fong (2000) on Finnish.

31. Scholars have noted that there are at least two restrictions that are often subsumed under the label of 'Double-*o* Constraint' (Kuroda 1992; Poser 2002; Hiraiwa 2010). The one whose properties are discussed here arises mainly in possessor-raising constructions, but also some other constructions (e.g. *tokoro* clauses, as in (64a)). The other 'Double-*o* Constraint' prevents the causee argument of a causativized transitive from being accusative, forcing it to be dative instead. This constraint is quite different in character from the one discussed here: it holds regardless of the adjacency of the two arguments, and cannot be obviated by movement or ellipsis of an -*o*-marked argument.

There are a number of similarities between the DoC and Choctaw's Case OCP effects. For one thing, the restriction fails to hold for adjacent NPs in different clauses, shown in (56).

(56) a. Ken-ga   yorugohan-**o** [terebi-**o** mi-nagara   ] tabe-ta.
          Ken-NOM dinner-**ACC**   TV-**ACC** watch-while   eat-PST
          'Ken had dinner while watching the TV.'

      b. Ken-ga   Naomi-**o**$_i$ [t_i eigo-**o**   hanas-er-u   to   ]
          Ken-NOM Naom-**ACC**   English-**ACC** speak-can-PRES   COMP
            omotte-ir-u.
            think-PROG-PRES
          'Ken thinks that Naomi can speak English.'   (Hiraiwa 2010: 747-8)

The DoC can also be obviated in many of the same ways as the Choctaw Case OCP. Ways include *pro*-dropping one of the arguments (57a), scrambling one of the arguments to the edge of the clause (57b), omitting case-marking from one argument (57c), or separating the two arguments with an intervening adverb (57d) (see Hiraiwa 2010 for in-depth discussion of obviation strategies; see Mohanan 1994 for similar data from Hindi).

(57) a. Ken-ga   *pro* atama-**o**   tatai-ta.
          Ken-NOM   head-**ACC** hit-PST
          'Ken hit (him) on the head.'

      b. Naomi-**o**$_i$ Ken-ga   omoikkiri t_i atama-**o**   tatai-ta.
          Naomi-**ACC** Ken-NOM hard   head-**ACC** hit-PST
          'Ken hit Naomi hard on the head.'

      c(?) Naomi-**o**   doko-**Ø** tatai-ta no?
          Naomi-**ACC** where   hit-PST Q
          'Which part of Naomi's body did you hit?'

      d. Ken-ga   Naomi-**o**   omoikkiri atama-**o**   tatai-ta.
          Ken-NOM Naomi-**ACC** hard   head-**ACC** hit-PST
          'Ken hit Naomi hard on the head.'   (Hiraiwa 2010: 735-41)

Unlike the Choctaw Case OCP, however, The DoC applies only to accusative arguments. Adjacent clausemate nominative arguments are uncontroversially acceptable (see Tateishi 1991; Vermeulen 2005 for discussion of multiple nominative constructions in Japanese):

(58) Taro-**ga**   mabuta-**ga** hare-ta.
      Taro-**NOM** eyelid-**NOM** swell-PST
      Taro's eyelids swelled.   (Akiyama 2004: 671)

Furthermore, the Japanese DoC can be analyzed, fairly straightforwardly, as a constraint on morphological outputs whose only syntactic sensitivity is to clause boundaries. There is no evidence, that I am aware of, that it is ever relaxed for adjacent clausemate NPs, nor that it is sensitive to information like syntactic category.[32] This contrasts with the

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32. Hiraiwa (2010) provides an analysis of the Double-*o* Constraint in which it holds at the interface between syntax and PF, and is sensitive to structural locality rather than linear adjacency. He argues that *every*

situation in Choctaw. We saw in section 5.3 that the Case OCP is sensitive to syntactic category information, and we saw in section 6 that it is not a filter on morphological output.

This does not mean that the Choctaw OCP and the Japanese DoC are two entirely separate phenomena—rather, Choctaw simply has some structural properties that allow us to tease out properties of its Case OCP, in ways that are not available for Japanese (e.g. case-markers attaching to clauses to mark switch-reference; a parallel set of focus case-markers). Furthermore, we would expect Case OCPs to differ across languages: not all languages with apparent Case OCP effects would have constraints that are exactly equivalent to those in (16/41), and other languages' Case OCP constraints might be be ranked differently at the syntax-morphology interface. I briefly return to this issue in section 8.1

8   Discussion and conclusion

In this article I have outlined some properties of Choctaw's Case OCP: the ban on adjacent NPs carrying the same case-marker. I showed that it constrains the distribution of both nominative and oblique suffixes and that it does not hold across clause boundaries (§5.1). I showed that it is sensitive both to the surface form of the case-marker (§5.2) and to the syntactic category of the constituent to which the case-marker is attached (§5.3). I also showed that it does not act as a filter on morphological outputs, since, where two *obligatorily*-case-marked NPs are adjacent, the resulting sentence is fine (§6).

By way of analysis, I proposed in section 4 that the Case OCP is composed of two similar constraints, repeated in (59). In section 6, I propose that these constraints can be modelled as a single single syntax-morphology interface constraint Ocp, which outranks the general pressure to insert case-marking on nouns (embodied as Realize Case), but it itself outranked by the pressure to insert case in certain marked environments (embodied as, at least, RealizeCase-Subject and RealizeCase-Demonstrative). The proposed constraint ranking is repeated in (60).

(59)   a.   *[$_{NP}$ ... -*at*] [$_{NP}$ ... -*at*]

     b.   *[$_{NP}$ ... -*a̱*] [$_{NP}$ ... -*a̱*]

(60)   {RC-Subj, RC-Dem} » OCP » {RealizeCase, *Case}

This analysis raises some points of theoretical interest.

Firstly, this analysis claims that morphosyntactic case OCP constraints, which are a subtype of a larger family of 'anti-identity' constraints, are real (rather than epiphenomenal). Anti-identity constraints have been argued to hold at various levels of syntax and morphology, and filter out possible representations. They are well-established within morphology in particular—for instance, an anti-identity constraint is invoked in many accounts of clitic dissimilation in Romance (e.g. Spanish *le lo mandó → se lo mandó* '(s)he sent it to him/her'). See Nevins (2007) for one implementation. Anti-identity constraints have also been argued to restrict the syntactic derivation—for instance, Alexiadou & Anagnostopoulou (2001; 2007) argue that the "subject-in-situ generalization"

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instance of a DoC-violating sentence in fact involves two NPs that are too *structurally* local (specifically, within the same phase). I am unable to critique his account here, but the same data can be captured with a filter on morphological outputs that does make reference to linear adjacency.

bans the co-occurrence within vP of two NPs bearing structural case, accounting for the incompatibility of English subject inversion with transitives, as in (61).

(61) a. There arrived a man.

      b. *There finished somebody the assignment.   (Alexiadou 2014: 201)

Turning to Case OCP effects in particular, noteable investigations include that of Mohanan (1994), who argues that the Hindi Case OCP requires simultaneous reference to multiple kinds of linguistic structure (syntactic, semantic and phonological); and Hiraiwa (2010), who argues that the Japanese Double-*o* Constraint (see §7) can be stated as a constraint solely on syntax. However, other authors have concluded, upon in-depth investigation of certain anti-identity effects, that they are only apparent (e.g. Manzini 2014). In this way, the challenge they pose to the serial derivations of Minimalist syntax and Distributed Morphology may be neutralized. Ultimately, the study of the Choctaw Case OCP here argues for the reality of constraints, at least in the morphological component of the grammar.

Secondly, this analysis claims that (some) constraints can simultaneously access information about hierarchical syntactic structure, syntactic category labels, *and* particular morphophonological forms (in Distributed Morphology these could be characterized as Vocabulary Items). This claim is compatible with only *some* contemporary accounts of the morphological component of the grammar. It is compatible with parallel models, in which the input and all possible outputs are visible and evaluable simultaneously. Models of this nature include Realization OT (Aronoff & Xu 2010; Xu 2007; 2011) and OT Distributed Morphology (Rolle 2020). The claim is compatible with certain serial models too. Specifically, the existence of constraints like the Choctaw Case OCP would require a serial morphological derivation be primarily *additive* in nature—in that it adds information on top of the existing syntactic structure—rather than *replacive* in nature, where the morphological component destroys ('discharges' or 'uses up') and replaces previously-visible syntactic information. One such additive model is that of Ostrove (2018), but the core additive assumption is shared by much syntax-prosody interface work (e.g. Match Theory, Selkirk 2011), where hierarchical syntactic structure and category labels must remain visible at the interface between morphology and prosody (and thus cannot have been removed in the morphological component). By contrast, the Choctaw Case OCP constraints, as stated here, are incompatible with a serial morphological component, which 'flattens' syntactic structure into a series of concatenated terminals, and replace or remove syntactic category labels by the point of Vocabulary Insertion—e.g. Embick (2010).

Thirdly, this analysis claims that the Choctaw Case OCP is housed most naturally within a constraint-based model of the syntax-morphology interface, rather than a rule-based one. Note that this is not because constraints and rules are inherently incompatible—see Arregi & Nevins (2012) for a primarily rule-based morphology that nonetheless provides a limited role for constraints. Rather, the evidence comes from the fact that the Choctaw Case OCP is not an inviolable filter on morphological outputs, but can be violated (without ungrammaticality) in the event that both case-bearing elements are *obligatorily* case-marked. It is hard to encode a *violable* constraint within a rule-based model.

Fourthly, I showed that the Choctaw Case OCP does not hold across clause boundaries (like the Japanese DoC, §7). This confirms that the clause comprises a locality domain not just for syntax, but for morphology too. I argued in section 5.1 that this property

does not need to be built into the statements of the constraints themselves, but rather falls out of the cyclicity of syntax.

8.1 Avenues for further study

There are several aspects of the Case OCP in Choctaw that require more research.

One area that merits investigation is relative clauses, which in Choctaw are internally-headed and may carry a case-marker. As briefly discussed in section 5.3.1, the case-marker attached to the edge of the relative clause may freely mark either the case assigned to the relative clause by the main clause syntax, *or* the switch-reference value of the clause (Broadwell 2006: 296ff., Gordon & Munro 2017). There are various confounds in setting up the right configurations to test whether the Case OCP holds between a relative clause and clausemate argument, and I leave it to future work.

A second area of uncertainty is whether the Case OCP holds between a possessor and an adjacent noun. Possessors, like most objects, can carry oblique case. However, outside of obligatory-case-marking environments, case-marking on possessors is very rare (though it is attested, cf. Broadwell 2006: 69). Preliminary evidence suggests that it does, with three speakers judging (62) to be unacceptable and none judging it acceptable. However, more work, and testing of other configurations, is required.

(62) *Suzie-y<u>a</u>   ishki-y<u>a</u>   afaama-li-tok.
     Suzie-OBL mother-OBL meet-1SG.I-PST
     ('I met Suzie's mother.')

A third area of uncertainty is whether the Case OCP can be ameliorated by increasing the linear distance between the two case-marked nouns, by expanding the size of the second NP. The constraints, as they are formulated in (59), would not lead us to expect that this would help, but this is not based on any evidence. What evidence I do have is not clear either way. When presented with the sentences in (63), speakers would give conflicting judgments, though everyone uniformly preferred them with the second case-marker removed.

(63) ??/✓ Tóowa-**y<u>a</u>** [alla   láwa-**y<u>a</u>**   ] im-aa-l-aach<u>i</u>-h.
        ball-**OBL**   child many.NMLZ-**OBL** III-give-1SG.I-FUT-TNS
        'I'm going to give the balls to a lot of kids.'

A cross-linguistic comparison shows that there is variation in this domain. The Japanese DoC is not ameliorated by increasing the size of the second NP, as in (64a), while the Hindi Case OCP (which militates against adjacent *-ko*-marked nouns) *is* ameliorated, as in (64b).

(64) a.??Ken-ga   Naomi-**o**   [nige-yoo   to   si-ta   tokoro-**o**]
         Ken-NOM Naomi-**ACC**   run.away-try COMP LV-PST while-**ACC**
          tukamae-ta.
          catch-PST
         'Ken caught Naomi as she tried to run away.'   (Hiraiwa 2010: 752)

      b. raam-**ko** [apnii bahin-ke   baccõ-**ko**   ] samhaalnaa   paḍaa.
         Ram-**DAT**   self's sister-GEN children-**ACC** take.care.NFIN fall.PERF
         'Ram had to take care of his sister's children.'   (Mohanan 1994: 187)

This kind of cross-linguistic variability is expected in the analysis presented here: OCP constraints might differ in small ways from those in (59) (e.g. being sensitive to adjacent Ns rather than NPs), and this would account for small variations in the behavior of the Case OCP.

Finally, there is an unresolved question as to the status of participial clauses (on which see section 5.3.4) with respect to the Case OCP. Examples like (65), in which a case-marked object in the main clause abuts a case-marked object in the embedded clause, appear to indicate that they are like full clauses in that they constitute a local domain the Case OCP (see discussion in section 5.1).[33]

(65) Mary-at   aat<u>o</u>ksáli-**ya**   [holísso sókko-m-**a**   shá̠li-t   ]
     Mary-NOM   workplace-**OBL**   paper   thick.NMLZ-DEM-**OBL** carry:NG-PTCP

      nowa-t   iya-tok.
      walk-PTCP   go-TNS

     'Mary walked to work carrying the book.'

But more investigation is required. Of particular interest, the example in (66) shows that the object of a participial clause may *precede* the object of the matrix clause, implying that the participial object has moved into the matrix clause. Yet for the Choctaw speaker who volunteered this sentence, the Case OCP failed to apply.

(66) Mary-at   holísso-m-**a**   aat<u>o</u>ksáli-**ya**   shá̠li-t   nowa-t   iya-tok.
     Mary-NOM   paper-DEM-**OBL**   workplace-**OBL**   carry:NG-PTCP   walk-PTCP   go-TNS
     'Mary walked to work carrying the paper.'

This requires further and more rigorous investigation, since the extent to which the Case OCP is robustly relaxed in environments like (66) will have important consequences for the derivational timing of the Case OCP.

Abbreviations

1/2 = 1st/2nd-person, ACC = accusative, CAUS = causative, COMP = complementizer, CONTR = contrastive, DAT = dative, DEM = demonstrative, DPST = distant past, DS = different-subject, FOC = focus, FUT = future, GEN = genitive, GG = g-grade, I/II/III = Class I/II/III agreement, INTR = intransitive, IRR = irrealis, LOC = locative, LG = l-grade, LINK = linker, LV = light verb, MOD = modal, NEG = negative suffix, NFIN = non-finite, NG = n-grade, NMLZ = nominalization, NOM = nominative, OBL = oblique, PERF = perfective, PL = plural, PROG = progressive, PRES = present, PREV = previous-mention, PST = past, PTCP = participle, Q = question, RECIP = reciprocal, SG = singular, SS = same-subject, TNS = default tense, TR = transitive.

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33. The Japanese Double-*o* Constraint (see §7) similarly does not hold across the boundary of a participial clause (Hiraiwa 2010: 747):

(i) Ken-ga   yorugohan-**o** [terebi-**o** mi-nagara]   tabe-ta.
    Ken-NOM   dinner-**ACC** [TV-**ACC**   watch-while] eat-PST
    'Ken had dinner while watching the TV.'   (Hiraiwa 2010: 747)

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