Successive-Cyclic *Wh*-Movement Feeds Case Competition in Koryak

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Abstract

I argue for the dependent analysis of ergative case in Koryak (Chukotko-Kamchatkan) on the basis of a heretofore unattested pattern of interaction between case assignment and successive-cyclic movement. Specifically, I argue that the cross-clausal movement of absolutive *wh*-phrases triggers dependent case licensing at each stop of successive-cyclic movement along the noun phrase's movement path, which I argue to be [Spec,vP] and [Spec,CP]. The result of this is that nouns along the moving *wh*-phrase's movement path bear case-marking they would not otherwise have: ergative on otherwise-absolutive subjects, and dative on otherwise-absolutive objects. This provides a novel type of argument both for a dependent account of case marking as well as for intermediate landing sites of of *wh*-movement.

1 Introduction

Much of the work on case in generative syntactic research has centered around three types of analyses:

- Structural case (Vergnaud 1977; Chomsky 1981, 1993, 2000 etc.), whereby arguments in a clause receive case due to the position they are in with respect to elements of the extended

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The Koryak data is presented in broad phonetic transcription using the IPA, though certain dialectal features are abstracted over for consistency across examples. Abbreviations: 1 - 1st person, 2 - 2nd person, 3 - 3rd person, A - transitive subject, ABS - absolutive, ABL - ablative, ACC - accusative, ADJ - adjective, ADV - adverb, AGR - agreement, ALL - allative, AOR - aorist, AP - antipassive, COMP - complementizer, CS - causative, CVB - converb, DAT - dative, DES - desiderative, DIM - diminutive, DU - dual, EP - epenthetic vowel, ERG - ergative, FUT - future, HAB - habitual, IMP - imperative, IN - inessive, INCH - inchoative, IND - indicative, INF - infinitive, INV - inverse, IPFV - imperfective, LOC - locative, NARR - narrative, NFIN - non-finite, NMLZ - nominalizer, NSG - non-singular, O - object, OBL - oblique, PL - plural, PLRACT - pluractional, POSS - possessive, PRS - present, PST - past, PTCP - participle, RES - resultative, S - intransitive subject, SBJ - subject, SG - singular, SUBL - sublative, SUP - superessive, UW - unwitnessed, VBLZ - verbalizer

verbal projection. For example, Chomsky (2000, 2001) proposes that the subject gets nominative case in English by being targeted for agreement with T as the structurally closest nominal to it.

- Configurational case (Yip et al. 1987; Marantz 1991; Baker 2015 etc.), whereby nominals receive case marking by being in sufficiently local configurations with each other. Marantz (1991), for example, argues that accusative is assigned to the internal argument of a transitive verb because it is the lower of two caseless nominals within IP.[1]

- Inherent case (Chomsky 1986; Nash 1996; Woolford 1997; Legate 2008 etc.), whereby nominals receive case marking by merging with (a projection) of a head that assigns them a particular θ-role. Legate (2008) proposes along these lines that ergative case is assigned to transitive subjects by virtue of their having merged into the specifier of an agentive v°.

These three analyses are not necessarily at odds with each other, as Baker and Vinokurova (2010)'s mixed structural-configurational analysis of case marking in Sakha shows.[2] However, considerable debate currently exists over the analysis of the facts of particular languages, as well as the correct analysis of ergative case crosslinguistically. For example, Baker and Bobaljik (2018) question whether there are any languages whose facts are better accounted for by inherent case theory than by dependent case theory, whereas Sheehan (2017) argues that inherent case theory manages to account for the entire variety of attested crosslinguistic variation without while avoiding the theoretical problems found in competing theories. Against this backdrop, I provide in this paper new empirical support for the configurational account of ergative case and against both the structural and inherent accounts of it based on fieldwork data from Koryak (Chukotko-Kamchatkan; Kamchatka Krai, Russia). In this language, I argue, long-distance movement of an absolutive *wh*-expression causes nouns in higher case domains to bear case-marking they would otherwise not have. I analyze this by proposing that *wh*-moved nominals have the potential to trigger configurational case assignment at each step along their path of successive-cyclic movement (*pace* Poole 2016). I then show that a theory of configurational case assignment largely in line with Baker (2015)'s Dependent case theory is suitable for analyzing these facts. I argue that a satisfactory account of these facts is unique to configurational accounts of ergative and dative case, providing empirical support to configurational theories of case. In doing so, I provide the first argument for intermediate landing stops of successive-cyclic movement from morphological case.

The structure of the paper is as follows: in §2, I provide the background on dependent theories of ergative case and successive-cyclic movement. In §3, I provide a variety of arguments from non-movement contexts that motivate a dependent analysis of ergative as well as some instances of dative case. In §4, I discuss the basic data motivating the proposal that movement can feed dependent case marking, for which I provide an analysis in §5. §6 discusses the position of the

[1] One notable difference between structural case analyses and most instantiations of configurational analyses of case is that the latter are not claimed to be theories of nominal licensing (though see Branan (to appear)), but merely of surface case marking, unlike the former, which are usually claimed to be theories of both case marking and nominal licensing.

[2] Though see Levin and Preminger (2015) for a configurational-only reanalysis of these facts.

absolutive direct object and provides evidence that it moves out of the VP. In §7, I discuss various consequences of the analysis, including how the proposal allows us to make sense of an otherwise puzzling extraction restriction, and compare how other possible accounts fare.

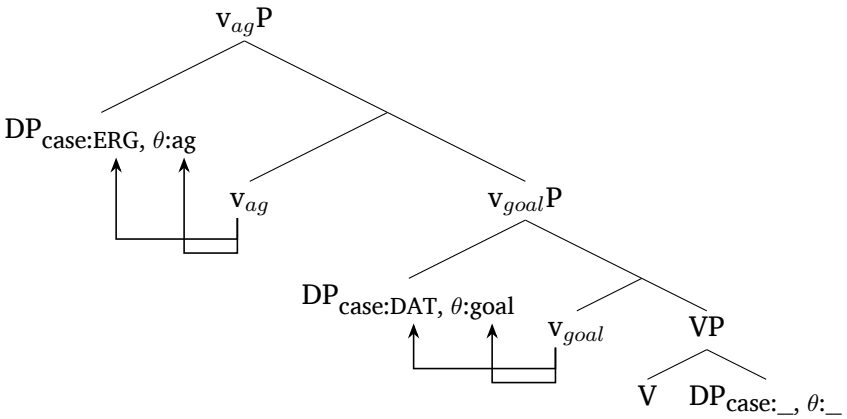
2 Background

2.1 Inherent and Dependent Ergative

In this section, I will flesh out the properties of the inherent and configurational case analyses of ergative case. For inherent case. I will focus specifically on theory of Dependent Case introduced in Marantz (1991) and developed by other authors in subsequent works (Baker and Vinokurova 2010; Baker 2014, 2015; Baker and Bobaljik 2018). As discussed in Baker (2015), structural accounts of case (in particular, case-by-agree) has well-known difficulties when it comes to accounting for ergativity, and have not featured significantly in recent discussions of ergative case (though see Rezac et al. 2014) and I will therefore not address them in this paper.

Inherent cases are assigned to a DP when it merges with (a projection of) a head that assigns a particular theta role. One implementation of this account was developed in a series of works by McGinnis (1996, 1998, 2002), whereby there are two inherent cases, dative and ergative, which are assigned by two different kinds of v°, each associated with a theta-role assigned to its specifier: a lower one $v°_{goal}$, which assigns dative case to a goal argument (corresponding to Appl in more recent work), and a higher one $v°_{ag}$, which assigns ergative case to the agent.[3] This is sketched in (1).

(1)



Dependent case, on the other hand, is assigned to a caseless DP when it is sufficiently local to other caseless DPs by a process referred to as 'case competition.' According to Baker (2015), for example, the relevant locality domain is the phase, so case competitors must be close enough that no phase head separates them from each other.[4] Baker argues that accusative is assigned

[3] As has been pointed out in subsequent work, external arguments seem to be associated with more theta-roles than simply 'agent.' I will abstract over this distinction as it does not affect the arguments I will make.

[4] This ignores the distinction in Baker's system between languages with a v° that introduces a hard phase and a v° that introduces a soft phase. This is meant to account for the fact that, in some languages (such as Sakha), only

to the lower of two DPs within the complement of C°, ergative is assigned to the higher of two DPs in the complement of C°, and dative is assigned in the same configuration within VP/ApplP. In an accusative language, then, the interaction between the subject and object that gives rise to accusative case on the latter is schematized in (2a). In (2b) is represented how accusative and dative interact in such a system: the indirect object, being the higher of the two arguments in the domain of dependent dative, is assigned dative case, and then the direct object, as the lower of two caseless arguments in the domain of dependent accusative, is assigned that case. The same interactions in an ergative case system are schematized in (3).

(2) a. [$_{CP}$ C° [$_{TP}$ S T [$_{vP}$ _ v° [$_{VP}$ V DO$_{ACC}$]]]]

b. [$_{CP}$ C° [$_{TP}$ S T [$_{vP}$ _ [v° [$_{VP}$ IO$_{DAT}$ [V DO$_{ACC}$]]]]]]

(3) a. [$_{CP}$ C° [$_{TP}$ S$_{ERG}$ T [$_{vP}$ _ v° [$_{VP}$ V DO]]]]

b. [$_{CP}$ C° [$_{TP}$ S$_{ERG}$ T [$_{vP}$ _ [v° [$_{VP}$ IO$_{DAT}$ [V DO]]]]]]

Given that the inherent case account of ergative case requires only the presence of a v° assigning an agentive theta role, it predicts that ergative case should be permitted on agentive intransitive subjects, as is found in languages such as Basque (Levin 1989) and Hindi (Mohanan 1994). On the other hand, the dependent account of ergative case predicts that the presence of ergative marking should be insensitive to the theta-role a noun is assigned, and only track whether or not a lower caseless noun in present in the same case domain. This has been argued to be instantiated by applicativized unaccusatives in Shipibo (Baker 2014) and Nez Perce (Deal 2019), where the theme of an unaccusative verb is assigned ergative case by virtue of an applicativized noun being added to the structure. The primary evidence for whether ergative case should be analyzed as dependent or inherent therefore boils down to whether ergative case tracks the thematic role of the argument that bears it, or whether it tracks the presence of a structurally-lower absolutive noun phrase. As we will see in §3, in Koryak it is the latter that ergative marking depends on.

2.2 Successive Cyclicity

As has been known at least since Ross (1967), A'-movement can relate two syntactic positions arbitrarily far from each other, as shown by paradigms like (4).

(4) a. Who$_i$ did John see _$_i$?

b. Who$_i$ did Mary say that John saw _$_i$?

c. Who$_i$ did Bill hear that Mary said that John saw _$_i$?

d. …

caseless internal arguments that clearly move out of the VP interact for dependent case with the subject, whereas in others (such as Cuzco Quechua and, as we will see, Koryak), all caseless internal arguments do.

However, as predicted by Chomsky (1973)'s Strict Cycle Condition and Chomsky (1977)'s Subjacency Condition, there has accumulated a significant amount of evidence that A'-movement does not merely involve the position at which the moved element in is externally merged and the position at which it is pronounced, but also the specifiers of all of the intervening phase heads between those two positions.[5] If C and v° heads are the only phasal ones in the clausal spine, the movement path of the *wh*-word in (4c) is really as in (5).[6]

(5) [$_{CP}$ Who did Bill [$_{vP}$ _ hear [$_{CP}$ _ that Mary [$_{vP}$ _ said [$_{CP}$ _ that John [$_{vP}$ _ saw _]]]]]]?

The successive cyclicity of movement was first proposed as a way of capturing the island effects discovered in Ross (1967), but much clearer evidence of reflexes of moved elements along their movement paths has been uncovered since the original proposal. Perhaps the earliest evidence came from complementizer selection in modern Irish (McCloskey 1979 et. seq.), in which every clause between the place where A'-movement has begun and ends (inclusive) bears the complementizer *a*, glossed as PART (6a), which does not appear in clauses without it: as (6b) shows, clauses not along the path of A'-movement instead get the complementizer *goN*. Other evidence has come from Chamorro (Chung 1982), where all verbs along the path of *wh*-movement display *wh*-agreement (7), and Belfast English (Henry 1995), where all of the clauses along the path of A'-movement have T-to-C movement (8), among many others (Clements 1984; Torrego 1984; Georgopoulos 1985; Barss 1986; McDaniel 1989; Haïk 1990; Horvath 1997; Fox 1999; McCloskey 2001; Bruening 2006; Cozier 2006; Van Urk and Richards 2015; Korsah and Murphy 2016; Davis 2019).

(6) a. [$_{CP}$ [Aon bhliain déag]$_i$ is dóigh liom [$_{CP}$ a deireadh
eleven years PART + COP.PRS likely to.me PART say.PST.HAB
m'athair [$_{CP}$ a bhí sé $_i$ nuair …]]]
my.father PART was he when
'It's eleven years old that I think that my father used to say that he was when…'
McCloskey (2003, ex. 11)

b. … [$_{CP}$ gur dóigh liom [$_{CP}$ go ndeireadh m'athair [$_{CP}$ go raibh sé
goN + COP.PRS likely to.me *goN* say.PST.HAB my.father *goN* was he
aon bhliain déag nuair …]]]
eleven years when
'…that I think that my father used to say that he was eleven years old when…' (ibid. ex. 13)

(7) a. H<um>allum si Maria [na ha-panak si Juan i patgun].
<AGR>assume Maria COMP AGR-spank Juan the child
'Maria assumes that Juan spanked the child.' Chung (1994, ex. 3)

b. Hayi$_i$ h<in>alomña si Maria [p<um>anak $_i$ i patgun]?
who <WH>assume Maria <WH>spank the child
'Who does Maria assume spanked the child?' (ibid. ex. 4)

[5]This is an anachronistic formulation, as the original one was stated in terms of bounding nodes.
[6]For simplicity I ignore the movement of the subject from [Spec,vP] to [Spec,TP].

(8) a. I wonder [$_{CP}$ what$_i$ did John think [$_{CP}$ would he get $\_i$.]] Henry (1995, p. 108)
b. [$_{CP}$ John thought [$_{CP}$ he would get a bicycle.]][7]

The phenomena providing evidence for the successive-cyclic hypothesis are diverse, coming from complementizer allomorphy (6), *wh*-agreement (7), head movement (8), stranding (McCloskey 2001; Davis 2019), resumption (Van Urk and Richards 2015), and scope reconstruction (Barss 1986; Fox 1999). No data in favor of this hypothesis, however, have come the distribution of morphological case borne by nominals.

Given that, in current Minimalist (Chomsky 2000, 2001) thinking, the location of the stop-off points of successive cyclic movement is taken to be the phase edges, overt evidence for successive-cyclicity is crucial for determining the location of phase heads. Evidence (including the data from reconstruction and pronominal copies discussed in the previous paragraph) has coalesced around C° and v° being phase heads (see van Urk (2019) for a recent survey), though there remains some skepticism about the phasehood of the latter (Keine 2016, 2017; Dayal 2017), and evidence for the phasehood of T° in relative clauses has also been forthcoming Deal (2016).

3 Dependent Case in Koryak

3.1 Preliminaries

Koryak is a Chukotko-Kamchatkan language spoken in the northern Kamchatka Krai and eastern Magadan Oblast in the Russian Far East. It is endangered[8] and highly understudied, lacking a full descriptive grammar: all generalizations reported here are therefore from fieldwork, which was carried out on the Chawchuven (reindeer-herding) dialect with speakers in Petropavlovsk-Kamchatskiy and Palana during the summers of 2018 and 2019, as well as over Skype since 2016. There are, however, a few dictionaries, the most comprehensive of which is Zhukova (1967), as well as a sketch grammar (Moll 1960), partial descriptions of two of the dialects (Zhukova 1972, 1980), and a monograph-length corpus study of negation (Mal'ceva 2014).

Koryak case-marking follows an ergative pattern with no splits: transitive verbs that do not assign their complements a lexical case have their subject in the ergative case and their object in the absolutive case regardless of tense, aspect, mood, finiteness, or status as a matrix or embedded clause, as in (9). Additionally, the language has 'free' word order: non-quantificational nominals from the same clause may be in any position with respect to each other and the elements of the extended verbal projection without impacting the truth conditional meaning of the sentence. For example, all six possible orders of the words in the sentence in (9a) are acceptable with the given meaning.

[7] Constructed based on the description.

[8] As many speakers either are nomads or live in villages that are very difficult to access, the number of speakers is unknown, but is perhaps around 500 (Alexander King, p.c.) For the same reason, the current state of preservation of the language is unknown, though it is probably moribund: most speakers I have worked with are 70 years old or older as of 2020, and I am not aware of any fluent native speakers younger than 50.

(9) a. ɣəm-nan t-ə-nu-ne-w ʔəvənʔ-u AOR
1SG-ERG 1SG.S/A-EP-eat-3.O-3PL berry-ABS.PL
'I ate berries.'[9]

b. ɣəm-nan t-ə-je-nu-ŋ-ne-w ʔəvənʔ-u FUT.PFV
1SG-ERG 1SG.S/A-EP-FUT-eat-FUT-3.O-3PL berry-ABS.PL
'I will eat berries.'

c. ɣəm-nan t-ə-je-nu-jk-ə-ne-w ʔəvənʔ-u FUT.IMPF
1SG-ERG 1SG.S/A-EP-FUT-eat-IPFV-3.O-3PL berry-ABS.PL
'I will be eating berries.'

d. ɣəm-nan m-ə-nu-ne-w ʔəvənʔ-u IMP.PFV
1SG-ERG 1SG.S/A.IMP-EP-eat-3.O-3PL berry-ABS.PL
'I should/must eat berries.'

e. ju-kkə ɣəm-nan əməŋ ʔəvənʔ-u, əllə-ʔa ∅-ena-kətʔajŋa-j PST.CVB
eat-PST.CVB 1SG-ERG all berry-ABS.PL mother-ERG 2/3.S/A.IND-1SG.O-scold-AOR
'After I ate all the berries, my mother scolded me.'[10]

3.2 Koryak Ergative is Dependent

As discussed in previous section, the two theories of ergative case make different predictions concerning the syntactic environments in which ergative case arises. Specifically, dependent case theory predicts that ergative external arguments should only be found in the presence of caseless internal arguments, whereas inherent case theory makes no such prediction. I will show that a variety of case- and argument-structural-alternations found in Koryak are consistent with the predictions of dependent case theory.

Koryak is not an active-stative language, as there is no split between unaccusatives and unergatives in the case-marking of intransitive subjects (10). Consequently, there are no verbs that take an ergative subject but no complement, as the inherent treatment of ergative would predict.[11]

[9] Aorist morphology is never overt on transitive verbs.

[10] Lit. 'I having eaten all of the berries...'

[11] We know that *sing* in Koryak is unergative because it cannot form a passive participle using the circumfix *ɣe- -lin* (1a), unlike unaccusative (1b) and transitive verbs (1c), which can. The availability of passive participle formation in only a subclass of intransitive verbs is a crosslinguistically common diagnostic of unaccusativity (Williams 1981; Hoekstra 1984; Haspelmath 1994; Deal 2019).

(1) a. *ɣ-aŋaŋja-len ʔujemtewilʔ-ə-n
RES.PTCP-sing-3.RES.PTCP person-EP-ABS.SG
intended: 'a person that has sung'

b. ɣe-viʔ-ə-lin qoja-ŋa
RES.PTCP-die-EP-3.RES.PTCP reindeer-ABS.SG
'a reindeer that has died'

c. ɣa-nm-ə-len ʔeɣəlŋ-ə-n
RES.PTCP-die-EP-3.RES.PTCP wolf-EP-ABS.SG
'a wolf that has been killed'

(10) a. {ʔojat͡ɕek / *ʔojat͡ɕek-a} ∅-aŋaŋja-j
{man-ABS / *man-ERG} 2/3.S/A.IND-sing-AOR
'The man sang.'

b. {ʔətʔ-ə-n / *ʔətʔ-a} ∅-viʔ-i
{dog-EP-ABS / *dog-ERG} 2/3.S/A.IND-die-AOR
'The dog died.'

Relatedly, some verbs assign their objects a lexical case, as in (11a-11b). In the former, the object in the narrative case, and in the latter, it is in the dative case. Crucially, both subjects are absolutive, as are the subjects of all verbs that have a non-absolutive object. In fact, although there are verbs that have more than one possible case-frame, like *peŋŋ-* 'attack' (12), and one of its diatheses allows each a lexical-case object (12a) and an ergative subject (12b), the two may not occur simultaneously (12c).[12]

(11) a. ɣəmmo t-ə-k-emŋol-ə-ŋ-∅ kəmiŋ-ə-kjit
1SG.ABS 1SG.S/A-EP-PRS-miss-EP-PRS-1SG.S child-EP-NARR
'I miss my son.'

b. qojalqot ∅-ko-ŋoʔ-ə-ŋ-∅ pet͡ɕɣ-ə-ŋ
Qojalqot.ABS.SG 2/3.S/A.IND-PRS-want.for-EP-PRS-3SG.S food-EP-DAT
'Qojalqot wants for food.'

(12) a. kajŋ-ə-n ∅-peŋŋ-e ʔəlva-ŋ
bear-EP-ABS.SG 2/3.S/A.IND-attack-AOR wild.reindeer-DAT
'The bear attacked the wild reindeer.'

b. kajŋ-a ∅-peŋŋ-ə-nen ʔəlve-ʔəl
bear-ERG 2/3.S/A.IND-attack-EP-3SG.A>3.O wild.reindeer-ABS.SG
'The bear attacked the wild reindeer.'

c. *kajŋ-a ∅-peŋŋ-ə-nen ʔəlva-ŋ
bear-ERG 2/3.S/A.IND-attack-EP-3SG.A>3.O wild.reindeer-DAT
intended: 'The bear attacked the wild reindeer.'

This is exactly what is predicted by the dependent account of ergative case, as ergative only appears on a subject when the verb has an absolutive complement. Other verbal roots take different case frames depending on what verbalizer they combine with. In (13), we see the root *jimɣəmɣ-* with two possible verbalizers: the bounder verbalizer *-et* in (13a), and the light verb *lŋ* 'consider' in (13b), in the former, the internal argument is marked with a lexical case (allative)[13], barring the subject from being ergative, whereas it is absolutive in the latter, where the subject is required to be ergative.

[12]The sentence in (12a) is not an antipassive, which are marked by the prefix *ine-* and assign locative case to the internal argument of the verb, as shown in (15b).

[13]For certain psych-predicates like *jimɣəmɣ-*, there is inter- and intra-speaker variation as to whether the internal argument gets allative or dative case. Speakers who accept both report no difference in meaning between the two, and there is no difference in the case-marking of the subject between that correlates with allative vs. dative object marking.

(13) a. ɣəmmo t-ə-ku-jimɣəmɣ-et-ə-ŋ-∅ ləqlaŋ-wəjal-etəŋ
1SG.ABS 1SG.S/A-EP-PRS-fear-VBLZ-EP-PRS-1SG.S winter-storm-ALL
'I am afraid of winter storms.'

b. ɣəm-nan jimɣəmɣ-u t-ə-ku-lŋ-ə-ŋ-ne-w ləqleŋ-kin
1SG-ERG fear-NFIN 1SG.S/A-EP-PRS-consider-EP-PRS-3.O-3PL.O winter-ADJ
wəjal-o
storm-ABS.PL
'I am afraid of winter storms.'

Embedded complement clauses in Koryak do not, as a general rule, trigger ergative case on the subject of the embedding verb, providing further evidence that ergative case on a subject is due to the presence of a lower absolutive nominal.[14]

(14) a. kətawut tumɣ-ə-tum ∅-iv-i, əno omk-ə-t͡ɕəko-ŋqo
suddenly friend-EP-ABS.SG 2/3.S/A.IND-say-AOR that forest-EP-IN-ABL
∅-t͡ɕepŋəto-j kajŋ-ə-n
2/3.S/A.IND-appear-AOR bear-EP-ABS.SG
'Suddenly, the friend said that a bear had appeared from inside the forest.' Vdovin and Jajletkan (1949, 211)

b. kali-k ɣət͡ɕt͡ɕi ɣa-kalit͡ɕit-iɣi, əno kanikul-ə-k tuj-u
book-LOC 2SG.ABS UW.PST-write-2SG.UW.P that vacation-EP-LOC 2NSG-ABS.PL

[14]Whether or not a verb takes an ergative subject with a complement clause depends on the choice of verb, and this seems to track whether or not the verb subcategorizes for an absolutive nominal complement when its complement is not clausal. For example, the verb *liɣi lŋ-* 'know'/'remember' is an example of a verb that takes an ergative subject with a complement clause, and also subcategorizes for an absolutive complement when its complement is not clausal (1). I take this to indicate that the complement clauses are dominated by an additional nominal layer when they are the complement of a verb that subcategorizes for a nominal. Evidence for this comes from the fact that questioning the clausal complement of verbs that takes an ergative subject with a clausal complement uses a nominal *wh*-word, as in (2a), to which (1a) was elicited as an answer, whereas questioning the clausal complement of a verb that takes an absolutive subject in such a circumstance requires an adverbial *wh*-word (2b).

(1) a. ɣəm-nan liɣi t-ə-ku-lŋ-ə-ŋ-ə-n-∅ əno ə-nan təttes met?a-ŋ janot
1SG-ERG know 1SG.S/A-EP-PRS-consider-EP-PRS-EP-3.O-SG that 3SG-ERG very beautiful-ADV before
∅-ko-jɣ-ə-ŋvo-ŋ-nen qoja-w
∅-PRS-lasso-EP-HAB-PRS-3SG.A>3.O reindeer-ABS.PL
'I remember that he was very good at lassoing reindeer.'

b. ɣəm-nan liɣi t-ə-ku-lŋ-ə-ŋ-ə-n-∅ aŋja-n woten-pəŋlo-n
1SG-ERG know 1SG.S/A-EP-PRS-consider-EP-PRS-EP-3.O-SG answer-ABS.SG this-question-POSS
'I remember the answer to this question.'

(2) a. jənnə ɣə-nan liɣi ∅-ku-lŋ-ə-ŋ-ə-n-∅ apappo-kjet?
what.ABS.SG 2SG-ERG know 2/3.S/A.IND-PRS-consider-EP-PRS-EP-3.O-SG grandfather-NARR
'What do you remember about your grandfather? '

b. jeqin ɣ-iw-lin-∅ eŋpit͡ɕ qaj-ə-kmiŋ-in, tite ɣe-jɣulel-lin-∅ ə-nan, əno
how UW.PST-say-3.UW.PST-SG father.ABS.SG DIM-EP-boy-POSS when UW.PST-find.out-3.UW.PST-SG 3SG-ERG that
ənno ɣa-tva-len-∅ majovka-k?
3SG.ABS UW.PST-be-3.UW.PST-SG mayovka-LOC
'What did the boy's father say when he found that that [the boy] had been at a *mayovka*?' Vdovin and Jajletkan (1949, 231)

∅-ja-jal-la-ŋ-tək
2/3.S/A.IND-FUT-come-PL-FUT-2NSG.S/O
'In the book you wrote that you would come [home] during the vacation.' Vdovin and Jajletkan (1949, 21)

The evidence for the connection between ergative subjects and absolutive objects has so far come only from static restrictions on verbs' case-frames.[15] I will now show that the same facts can be observed in argument-structural alternations like antipassivization, causativization, noun incorporation, and dative shift.[16]

The first relevant general pattern is that modifying a verb so that it no longer has an absolutive-marked internal argument causes it to lose ergative case-marking on the subject. Such modifications include antipassivization (15b), which is marked by the prefix *ine-* on the verb and triggers locative case on the internal argument, and noun incorporation (16b). In both cases, these modifications result in the object no longer serving as a case competitor for the subject: in (15b), this is due to the lexical status of the locative case, and in (16b), this is either due the two nominals not being sufficiently local to each other, or because an incorporated nominal is not of the right size or category to serve as a case competitor (for example, it might be an NP rather than a DP).

(15) a. ɣəm-nan t-ekmit-ə-n wala stoʎ-ə-ʎq-ə-ŋqo
1SG-ERG 1SG.S/A-take-EP-3SG.O knife.ABS.SG table-EP-SUP-EP-ABL
'I took the knife from the table.'

b. ɣəmmo t-in-ekmit-ə-k wala-k
1SG.ABS 1SG.S/A-AP-take-EP-1SG.S knife-LOC
'I took/armed myself with a knife.'

[15]Faruk Akkuş (p.c.) raises the issue of cognate objects of unergative verbs: in a language with dependent ergative case, we might expect an alternation between an absolutive subject when a cognate object is not present, and an ergative one when an object is present. However, as the contrast between the (a) and (b) sentences in (1) and (2) exemplify, cognate objects of unergative verbs are not licensed in Koryak.

(1) a. ʔətʔəŋa ∅-ko-ml-av-ə-ŋ-∅
Hythynga.ABS.SG 2/3.S/A.IND-PRS-dance-VBLZ-EP-PRS-3.S.IND
'Hythynga is dancing.'

b. *ʔətʔəŋa-na-k ∅-ko-ml-aw-ŋ-ə-nen melɣ-ə-taɲŋ-en
Hythynga-OBL.SG-ERG 2/3.S/A.IND-PRS-dance-VBLZ-PRS-EP-3SG.A>3.O fire-EP-stranger-POSS
məl-aw-ɣəjŋ-o
dance-VBLZ-NMLZ-ABS.PL
intended: 'Hythynga is dancing Russian dances.'

(2) a. ɣəmmo t-a͡tɕt͡ɕeqla-k
1SG.ABS 1SG.S/A-sneeze-1SG.S
'I sneezed.'

b. *ɣəm-nan t-a͡tɕt͡ɕeqla-n-∅ a͡tɕt͡ɕeqla-n
1SG-ERG 1SG.S/A-sneeze-3.O-SG sneeze-ABS.SG
intended: 'I sneezed a sneeze.'

[16]A subset of these phenomena have been noted as arguments for a dependent case account of ergative and/or dative in the related languages Alutor (Podobryaev 2013) and Chukchi (Baker and Bobaljik 2018).

(16) a. jejɣut͡ɕewŋəlʔ-ə-jək na-ko-jəlŋ-ə-ŋ-na-w kali-w
student-EP-OBL.NSG.ERG INV-PRS-read-EP-PRS-3.O-3PL book-ABS.PL
'The students are reading books.'

b. jejɣut͡ɕewŋəlʔ-u ∅-ko-kale-jəlŋ-al-la-ŋ-∅
student-ABS.PL 2/3.S/A.IND-PRS-book-read-VBLZ-PL-PRS-3.S.IND
'The students are reading books.'

Valency-increasing processes like causativization have the opposite effect: causativizing an intransitive verb results in the causer getting ergative case and the causee staying absolutive. In (17a), the intransitive verb *ɣajmat-* 'want' has an absolutive subject. When this verb is causativized in (17b), the causee is still absolutive, and the causer is assigned ergative case.

(17) a. ənno ∅-ko-ɣajm-at-ə-ŋ-∅ kale-jəlŋ-at-ə-k
3SG.ABS 2/3.S/A.IND-PRS-want-VBLZ-EP-PRS-3.S.IND book-read-VBLZ-EP-INF
'He wants to read books.'

b. ənno ɣə-nan ∅-j-ə-ɣajm-av-ə-n kale-jəlŋ-at-ə-k
3SG.ABS 2SG-ERG 2/3.S/A.IND-CS-want-VBLZ-EP-3SG.O book-read-VBLZ-EP-INF
'You made him want to read books.'

At first glance, this fact seems consistent with the inherent case account of ergative, as we can take the causative head to be a variety of v° that assigns inherent ergative to its specifier. However, if a verb with no arguments, such as an unaccusative with an incorporated internal argument, is causativized, the causer gets absolutive case. This is illustrated in (18), where the causative prefix *j-* attaches to a constituent made of the verb *vi?-* 'die' and its incorporated internal argument *qoja-* 'reindeer'. The result of this is a causative with only its subject as a full noun phrase, and this subject must be absolutive.[17]

(18) {təʔəl-ɣəjŋ-ə-n / *təʔəl-ɣəjŋ-a}
{sick-NMLZ-EP-ABS.SG / *sick-NMLZ-ERG}
∅-j-ə-qoja-veʔ-at-ə-tko-j
2/3.S/A.IND-CS-EP-reindeer-die-VBLZ-EP-PLRACT-AOR
'A disease caused reindeer to die.'

Finally, a valency decreasing process like noun incorporation can also feed a process that adds an absolutive argument to a verb like dative shift. The sentence in (19a) is a standard transitive

[17]This is not because inanimate nouns are banned from being transitive subjects, as in Jacaltek or Halkomelem (Craig 1977; Gerdts 1988; Aissen 2003), which the sentence in (1a) shows. Indeed, the sentence in (18) is acceptable with an ergative subject if the verb bears transitive agreement and the object is interpreted as a raised possessor, as in (1b).

(1) a. kəteɣ-a ɣa-mal-ə-n-ɣət͡ɕɣol-aw-len-∅ ʔew-nalɣ-ə-n
wind-ERG UW.PST-quickly-EP-CS-high-VBLZ-3.UW.PST-SG wolf-hide-EP-ABS.SG
'The wind quickly lifted up the wolf hide.' Stebnickij (1940, 15)

b. təʔəl-ɣəjŋ-a ∅-j-ə-qoja-veʔ-at-ə-tko-nen *pro*$_{3pl}$
sick-NMLZ-ERG 2/3.S/A.IND-CS-EP-reindeer-die-VBLZ-EP-PLRACT-3SG.A>3.O 3PL.ABS
'A disease caused their reindeer to die.'

clause with an ergative subject and an absolutive object. In (19b) an applied argument bearing inherent dative case is added, which does not change the case marking on either the subject or the object.[18] When the object is incorporated into the verb (19c), the subject loses its ergative case marking, but if the applied argument subsequently undergoes dative shift (19d), thereby being marked with absolutive case, the subject reappears as ergative. What these alternations show is that whether or not the subject gets ergative case tracks whether or not there is a lower absolutive argument.[19]

(19) a. ɣəm-nan t-ə-t͡ɕvi-n utt-ə-ut
1SG-ERG 1SG.S/A-EP-cut-3SG.O tree-EP-ABS.SG
'I chopped down a tree.'

b. ɣəm-nan t-ə-t͡ɕvi-n utt-ə-ut akəka-na-ŋ
1SG-ERG 1SG.S/A-EP-cut-3SG.O tree-EP-ABS.SG son-OBL.SG-DAT
'I chopped down a tree for my son.'

c. ɣəmmo t-utt-ə-t͡ɕvi-k akəka-na-ŋ
1SG.ABS 1SG.S/A-tree-EP-cut-1SG.S son-OBL.SG-DAT
'I chopped down a tree for my son.'

d. ɣəm-nan t-utt-ə-t͡ɕvi-n akək
1SG-ERG 1SG.S/A-tree-EP-cut-3SG.O son.ABS.SG
'I chopped down a tree for my son.'

The evidence presented above from argument structural alternations argues in favor of a dependent account of ergative case in Koryak rather than inherent case one, as the presence of ergative case on the subject seems to exactly track whether or not there is a lower argument with absolutive case. This complements the data concerning case-frame restrictions discussed previously, which came to the same conclusion.

3.3 Some Instances of Dative in Koryak are Dependent

Having argued that all instances of ergative in Koryak represent dependent case, I will now defend a more limited claim about datives: some instances of dative case are the result of dependent case. The evidence for this comes from a split in the class of dative-marked nominals between ones that

[18] The status of the dative on the applied argument as inherent is discussed in §3.3.

[19] Unfortunately, the applied argument of an unaccusative (1a) cannot undergo dative shift whether the resulting internal argument bears absolutive or ergative (1b). Consequently, the arguments against inherent ergative drawn from raising to ergative in applicativized unaccusatives in Shipibo (Baker 2014) and Nez Perce (Deal 2019) do not find support in the Koryak data.

(1) a. ogorod-ə-k ovoɕa-w ∅-ko-ɲŋa-la-ŋ-∅ mojk-ə-ŋ
garden-EP-LOC vegetable-ABS.PL 2/3.S/A.IND-PRS-grow-PL-PRS-3.S.IND 1NSG-EP-DAT
'Vegetables are growing for us in the garden.'

b. *ogorod-ə-k {ovoɕa-w / ovoɕa-ta} na-ko-ɲŋa-la-mək muj-u
garden-EP-LOC {vegetable-ABS.PL / vegetable-ERG} INV-PRS-grow-PL-1NSG.S/O 1NSG-ABS.PL
intended: 'Vegetables are growing for us in the garden.'

can trigger verbal ϕ-agreement and those that cannot: the former occur only in the presence of an absolutive-marked theme. I will call this the 'dative agreement generalization' (DAG). The effects of this generalization are exemplified in (20). In (20a), we find object agreement with the dative-marked second person pronoun, rather than the absolutive DP in object position. If there is no absolutive-marked theme (20b), the dative argument cannot be agreed with. The behavior in (20) is extremely restricted, and for most speakers is limited to the verb *jəl-* 'give'.[20] This means that not every verb with an absolutive theme and a dative goal can have that dative agreed with, as shown by the unacceptability of second person object agreement with the dative on the verb *tŋiv-* 'send' in (20c), as well as on the applicativized pronoun *tojkəŋ* 'to you all' in (20d).[21]

(20) a. t-ə-jəl-ɣi ɣənk-ə-ŋ kewl-əpa-ŋa
1SG.S/A-EP-give-2SG.O 2SG-EP-DAT blood-soup-ABS.SG
'I gave you blood soup.'

b. {t-ə-t͡ɕejm-ev-ə-k / *t-ə-t͡ɕejm-ew-ɣi} ɣənk-ə-ŋ
{1SG.S/A-EP-close-VBLZ-EP-1SG.S / 1SG.S/A-EP-close-VBLZ-2SG.O} 2SG-EP-DAT
'I approached you.'

c. {t-ə-ɲŋiv-ə-n / *t-ə-ɲŋiw-ɣi} ɣənk-ə-ŋ akək
{1SG.S/A-EP-send-EP-3SG.O / 1SG.S/A-EP-send-2SG.O} 2SG-EP-DAT son.ABS.SG
'I sent my son to you.'

d. {t-ə-ko-p-aɲ-ŋ-ə-n /
{1SG.S/A-EP-PRS-boil-VBLZ-PRS-EP-3SG.O /
*t-ə-ko-p-al-la-ŋ-tək} kinuŋi tojk-ə-ŋ
*1SG.S/A-EP-PRS-boil-VBLZ-PL-PRS-2NSG.S/O} meat.ABS.SG 2NSG-EP-DAT
'I am boiling meat for you all.'

Some data involving the verb *iv-* 'say'/'tell', which can take a variety of case frames, initially look problematic for the generalization I proposed. Consider the sentences in (21). In (21a), we find an absolutive-marked agent and a dative-marked goal, and the verb is banned from agreeing with the goal, in line with the DAG. In (21b), we find an ergative-marked subject and an absolutive-marked goal, which trivially satisfies this generalization. The sentence in (21c), which is acceptable only to some speakers, is where the issue arises. Here, we have an agreed-with dative

[20] One of my consultants also allows dative agreement with the verb *jəqeviv-* 'give as a gift'. Crucially, this verb also has an absolutive internal argument in addition to the agreed-with dative.

i. % qet͡ɕɣəlqot-ə-na-k ∅-ine-n-qevi-v-i ɣəmk-ə-ŋ nalɣ-ə-n
Qechghylqot-EP-OBL.SG-ERG 2/3.S/A.IND-1SG.O-CS-gift-VBLZ-AOR 1SG-EP-DAT hide-EP-ABS.SG
'Qechghylqot gave me an animal hide as a gift.'

The highly restricted inventory of verbs that can target datives for agreement is a property of the Chukotkan language family as a whole: Mel'čuk (1988) reports that Alutor *jəl-* 'give as a wife' is the only verb that can agree with a dative goal, and the Chukchi verb *jl-* 'give' is the only one that Dunn (1999) cites as permitting object agreement with an allative goal (according to Dunn, unlike Koryak and Alutor, Chukchi does not have a dative case.) According to Bobaljik and Wurmbrand (2002), by contrast, the arguably distantly related Itelmen has much more widespread agreement with datives and other obliques.

[21] Note that the agreement possibilities remain unchanged if the dative-marked nominal and the absolutive-marked one switch linear positions.

goal, but no absolutive theme, which the DAG requires. Notably, (21c) is sometimes translated into Russian with the clausal complement headed by a nominal like 'story' or 'news' (while (21a) is rejected on such a reading), suggesting that the embedded clause is part of a complex nominal triggering dative on the goal. Support for the complex nominal analysis of the embedded clause comes from the fact that the proposed nominal head can be overt, as in (22).

(21) a. ɣəmmo {t-iv-ə-k / *t-iw-ɣi} ɣənk-ə-ŋ, əno
1SG.ABS {1SG.S/A-tell-EP-1SG.S / *1SG.S/A-tell-2SG.O} 2SG-EP-DAT that
qoja-wjep-ə-l?-o ∅-jal-la-j
reindeer-herd-EP-S/O.PTCP-ABS.PL 2/3.S/A.IND-arrive-PL-AOR
'I told you that the reindeer herders arrived.'

b. ɣəm-nan t-iw-ɣi ɣə͡tɕ͡tɕi, əno qoja-wjep-ə-l?-o
1SG-ERG 1SG.S/A-tell-2SG.O 2SG.ABS that reindeer-herd-EP-S/O.PTCP-ABS.PL
∅-jal-la-j
2/3.S/A.IND-arrive-PL-AOR
'I told you that the reindeer herders arrived.'

c. % ɣəm-nan t-iw-ɣi ɣənk-ə-ŋ, əno qoja-wjep-ə-l?-o
1SG-ERG 1SG.S/A-tell-2SG.O 2SG-EP-DAT that reindeer-herd-EP-S/O.PTCP-ABS.PL
∅-jal-la-j
2/3.S/A.IND-arrive-PL-AOR
'I told you the story/news/message that the reindeer herders arrived.'

(22) % ɣəm-nan t-iw-ɣi ɣənk-ə-ŋ e͡tɕɣəp, əno
1SG-ERG 1SG.S/A-tell-2SG.O 2SG-EP-DAT news.ABS.SG that
qoja-wjep-ə-l?-o ∅-jal-la-j
reindeer-herd-EP-S/O.PTCP-ABS.PL 2/3.S/A.IND-arrive-PL-AOR
'I told you the news that the reindeer herders arrived.'

The hallmark of a dependent case is its reliance on the presence of a local caseless nominal. The data I have presented in this subsection shows that there is a split in the class of dative-marked nouns regarding whether or not they can control object agreement on the verb, and has further shown that the ones that can be agreed with have a local absolutive internal argument (though this is not sufficient for a dative-marked noun to be agreed with on its own, as (20c) and (20d) illustrate). That the split in the class of datives concerns their ability to trigger verbal agreement is not trivial: it has been known since Bobaljik (2008) that agreement is sensitive to the the case hierarchy proposed in Marantz (1991): if a language allows agreement with a nominal with one of the cases on the hierarchy *Unmarked* < *Dependent* < *Lexical/Oblique*, it also allows agreement with nominals with all of the cases to the left of that case on the hierarchy. Other than the limited class of datives discussed in this subsection, Koryak allows agreement with nouns bearing ergative, which I have already argued to be a dependent case, and absolutives, which is the unmarked case in an ergative language, but not with lexical case or oblique nouns.[22] We therefore have evidence from two directions that the dative-marked nouns that can be agreed with have a dependent case.

[22]The sentences in (11) above are unacceptable with object agreement with the lexically case-marked object:

Koryak turns out to be a language like Nepali, where any noun with a dependent case (in Nepali, absolutive and ergative) can control verbal agreement under the right syntactic circumstances (Bickel and Yādava 2000). Koryak fills in the crosslinguistic picture by allowing agreement with the full range of possible dependent cases.

3.4 Summary

In this section, I have provided evidence that Koryak has two dependent cases: ergative and dative. Ergative was argued to always be a dependent case based on a variety of arguments both from the static distribution of ergative subjects across the class of lexical verbs, as well as the distribution of ergative subjects in argument-structure alternations. Dative, I have argued, is instead a dependent case in only a limited number of circumstances, primarily involving the verb *jəl-* 'give'. The evidence for this came from the fact that only when a dative-marked noun occurred with an absolutive internal co-argument could it control agreement, as is predicted if agreement can only target dependent and unmarked cases in Koryak.

4 Evidence from Movement

4.1 Introduction

In §3, I showed evidence from monoclausal environments for taking ergative to always be a dependent case, and for taking dative to be a dependent case in a limited set of circumstances. For the most part, these arguments are familiar from work on other languages in the dependent case literature, though Koryak may be unusual in terms of how many of these arguments can be advanced for it. In this section, I will present a novel argument for the dependent nature of ergative and (some) dative, coming from patterns of case assignment on nominals that *wh*-elements have moved across them. In particular, I will show that an absolutive *wh*-word that has moved into or through one or more new case domains causes the case on otherwise-caseless noun phrases in that case domain to change. These new cases, I will argue, have exactly the properties of dependent cases discussed above. These unexpected dependent cases are triggered by the moving *wh*-word in positions other than its final landing site, providing a new kind of evidence for the hypothesis first proposed in Chomsky (1973) that *wh*-movement is successive-cyclic. I will first discuss movement out of an embedded finite clause, which causes ergative to appear on a matrix subject that would otherwise have absolutive. After that, I will consider movement from the non-finite complements of object control verbs, which causes dative marking on objects that would otherwise be absolutive.

(1) a. *ɣəmmo t-ə-k-emŋol-ə-ŋ-ə-n-∅ kəmiŋ-ə-kjit
1SG.ABS 1SG.S/A-EP-PRS-miss-EP-PRS-EP-3.O-SG child-EP-NARR
intended: 'I miss my son.'

b. *qojalqot ∅-ko-ŋoʔ-ə-ŋ-nen pet͡ɕɣ-ə-ŋ
Qojalqot.ABS.SG 2/3.S/A.IND-PRS-want.for-EP-PRS-3SG.A > 3.O food-EP-DAT
intended: 'Qojalqot wants for food.'

4.2 Movement Triggering Ergative

Koryak is an overt wh-movement language: unless an island boundary intervenes, standard information-seeking questions have the *wh*-word at their left edge (23-24a). Consider the sentences in (23), which are the reading comprehension questions following a passage on the early history of flight in the textbook Vdovin and Jajletkan (1949, 144); these sentences have *wh*-words of various grammatical functions, all of which are at the left edge of the sentence. Speakers report that leaving a *wh*-word in situ causes the sentence to be interpreted as an echo-question (24b).

(23) a. jənnə jiŋe-l?-et-kin-∅ ɣa-n-toŋv-aw-len-∅
what.ABS.SG fly-S/O.PTCP-VBLZ-ADJ-SG UW.PST-CS-be.created-VBLZ-3.UW.PST-SG
krjakutnoj-ə-na-k?
Krjakutnoj-EP-OBL.SG-ERG
'What thing for flying did Krjakutnoj invent?'

b. jeqin ɣ-ew-ŋəvo-lena-w ?ujemtewil?-u, tite ət͡ɕɣ-ə-nan
how UW.PST-say-INC-3.UW.PST-3PL person-ABS.PL when 3NSG-EP-ERG
ɣe-jɣul-el-lin-∅, əno krjakutnoj ɣe-jiŋe-lin-∅?
UW.PST-learn-VBLZ-3.UW.PST-SG that Krjakutnoj.ABS.SG UW.PST-fly-3.UW.PST-SG
'What did people say when they found out that Krjakutnoj had flown?'

c. miŋki et?u ɣa-n-toŋv-aw-len-∅ jiŋe-kin-∅ kəm?uk?
where more UW.PST-CS-be.created-VBLZ-3.UW.PST-SG fly-ADJ-SG ball.ABS.SG
'Where else have they invented the hot-air balloon?'

d. jeq-e ∅-ko-n-kamlel-weje-w-ŋəvo-ŋ-nen
what-ERG 2/3.S/A.IND-PRS-CS-around-flow-VBLZ-HAB-PRS-3SG.A>3.O
propeʎʎer?
propeller.ABS.SG
'What rotates the propeller?'

e. jekkin-∅ samoʎot-ə-k ∅-ko-tva-ŋ-∅ lə?enaŋ?
why-SG airplane-EP-LOC 2/3.S/A.IND-PRS-be-PRS-3.S.IND rudder.ABS.SG
'Why is there a rudder on an airplane?'

(24) a. mikə-ne-k ɣət͡ɕt͡ɕi ∅-ko-ja-ŋawtəŋ-ŋ-ə-ŋ-∅?
who-OBL.SG-LOC 2SG.ABS 2/3.S/A.IND-PRS-DES-marry-DES-EP-PRS-3.S.IND
'Who do you want to marry?'

b. # ɣət͡ɕt͡ɕi ∅-ko-ja-ŋawtəŋ-ŋ-ə-ŋ-∅ mikə-ne-k?
2SG.ABS 2/3.S/A.IND-PRS-DES-marry-DES-EP-PRS-3.S.IND who-OBL.SG-LOC
intended: 'Who do you want to marry?' (ok as: You want to marry WHO?)

Consider a sentence like (25), which features a matrix verb (*valom-* 'hear') that takes a finite clausal complement. The matrix subject is absolutive, which, following the diagnostics discussed above, indicates that there is no lower absolutive argument in the matrix clause.

(25) ɣəmmo t-ə-valom-ə-k, əno ʔewŋəto-na-k
1SG.ABS 1SG.S/A-EP-hear-EP-1SG.S that Hewngyto-OBL.SG-ERG
∅-j-ə-t͡ɕim-aw-nin kojŋ-o
2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O cup-ABS.PL
'I heard that Hewngyto broke cups.'

However, consider what happens to the matrix clause when the embedded (absolutive) object *wh*-moves into the matrix clause (26), which speakers judge felicitous as part of a question-answer pair with (25): instead of being absolutive, the matrix subject is required to be ergative. Additionally, the matrix verb gets object agreement marking consistent with the ϕ-features of the moved *wh*-word, as (27), which differs from (25) only in having a dual, rather than a plural, *wh*-word, further supports.

(26) jej-u$_i$ {ɣə-nan / *ɣət͡ɕt͡ɕi} ∅-valom-na-w, əno
what-ABS.PL {2SG-ERG / *2SG.ABS} 2/3.S/A.IND-hear-3.O-3PL that
ʔewŋəto-na-k ∅-j-ə-t͡ɕim-aw-nin t_i
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O
'What all did you hear that Hewngyto broke?'

(27) a. jej-i$_i$ {ɣə-nan / *ɣət͡ɕt͡ɕi} ∅-valom-na-t, əno
what-ABS.DU {2SG-ERG / *2SG.ABS} 2/3.S/A.IND-hear-3.O-3DU that
ʔewŋəto-na-k ∅-j-ə-t͡ɕim-aw-nin t_i
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O
'What two things did you hear that Hewngyto broke?'

b. ɣəmmo t-ə-valom-ə-k, əno ʔewŋəto-na-k
1SG.ABS 1SG.S/A-EP-hear-EP-1SG.S that Hewngyto-OBL.SG-ERG
∅-j-ə-t͡ɕim-aw-nin kojŋ-ə-t
2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O cup-EP-ABS.DU
'I heard that Hewngyto broke two cups.'

I will argue that the obligatory ergative found in the *wh*-movement sentences is due to the moved absolutive *wh*-word triggering ergative by case competition in the matrix clause in addition to the embedded clause. This argument has two premises: first, that these sentences indeed instantiate long-distance (rather than local) *wh*-movement, and second, that the trigger of case competition is the moved *wh*-word, rather than something in the matrix clause. I consider the first premise to be solid given that speakers accept these sentences as appropriate question-answer pairs, as well as the fact that the *wh*-words trigger agreement and dependent ergative case in the embedded clause. Questioning the second point, however, is not unreasonable, especially given the fact that the verb *valom-* can take an absolutive object and an ergative subject, where the object is a theme (28).

(28) ɣəm-nan t-ə-valom-ə-n et͡ɕɣəp əno ʔewŋəto-na-k
1SG-ERG 1SG.S/A-EP-hear-EP-3SG.O news.ABS.SG that Hewngyto-OBL.SG-ERG
∅-j-ə-t͡ɕim-aw-nin ŋət͡ɕt͡ɕeq kojŋ-ə-t
2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O two cup-EP-ABS.DU
'I heard the news that Hewngyto broke two cups.'

This line of argumentation is further strengthened by the fact that some speakers accept sentences like (21c), repeated below as (29), which, as I argued, feature an unpronounced internal argument triggering case competition. It's possible, then, that sentences like (27a) have a silent nominal in them that triggers ergative case on the subject.

(29) % ɣəm-nan t-iw-ɣi ɣənk-ə-ŋ, əno qoja-wjep-ə-l?-o
1SG-ERG 1SG.S/A-tell-2SG.O 2SG-EP-DAT that reindeer-herd-EP-S/O.PTCP-ABS.PL
∅-jal-la-j
2/3.S/A.IND-arrive-PL-AOR
'I told you the story/news/message that the reindeer herders arrived.'

Now, positing that sentences like (26) and (27a) have a covert nominal in object position that is triggering dependent ergative on the subject is a strange move to make: given that the equivalent sentences without *wh*-movement, (25) and (27b), are perfectly acceptable without ergative marking on the subject, this analysis of (26) and (27a) means that the covert nominal is only forced to appear when long-distance *wh*-movement has taken place. Even if we were to accept this, however, there is even stronger evidence against the ergative on the subject being due to a covert nominal in the matrix clause: just as in English, clausal complements to noun phrases like *(the news) that Hewngyto broke two cups* are islands in Koryak, as shown by the unacceptability of (30). It is therefore not possible to claim that the sentences where a clause with *valom-* has had an absolutive *wh*-word move into it, forcing the subject to be ergative, involve an obligatory covert noun in object position.[23]

(30) *jənnə$_i$ ɣə-nan ∅-valom-ə-n et͡ɕɣəp, əno
what.ABS.SG 2SG-ERG 2/3.S/A.IND-hear-EP-3SG.O news.ABS.SG that
?ewŋəto-na-k ∅-tul?-en-nin t_i?
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-steal-VBLZ-3SG.A>3.O
intended: 'What$_i$ did you hear the news that Hewngyto stole t_i?'

Another possible way of rejecting the proposal that the obligatory ergative subject in (26) and (27a) is due to the movement of the embedded absolutive *wh*-word into the matrix clause is by tying it to the status of these sentences as questions. On this view, the fact that the left periphery

[23]In addition to allowing an absolutive theme, *valom-* also allows an absolutive source (i). I do not have data that shows whether this construction allows extraction out of the embedded clause, though we might expect it not to, since it looks rather like the equivalent of English constructions like *believe X that Y*, which do not allow extraction from Y (cf. **Who$_i$ do you believe Mary that John saw t_i?*)

i. ɣəm-nan t-ə-valom-ə-n kəjaw əno ?ewŋəto-na-k
1SG-ERG 1SG.S/A-EP-hear-EP-3SG.O Kyjaw.ABS.SG that Hewngyto-OBL.SG-ERG
∅-omma͡tɕajp-ə-nen meʎʎo
2/3.S/A.IND-hug-EP-3SG.A>3.O Melljo.ABS.SG
'I heard (from) Kyjaw that Hewngyto hugged Melljo.'

In principle, it could be that sentences like (26) and (27a) obligatorily have an absolutive *source* triggering ergative on the subject. I do not have an explicit argument against this proposal, but note that someone arguing for it would be faced with the unenviable task of trying to explain what the relationship between long-distance *wh*-movement and the presence of a source is.

of this clause has an interrogative C° would be enough to force the matrix subject to bear ergative case. Such a proposal would be falsified by data showing that questions where the *wh*-word does not move into the matrix clause allow the subject to be absolutive, such as the sentences in (31): in (31b), the *wh*-word only undergoes partial *wh*-movement to the [Spec,vP] of the embedded clause, and in the echo question in (31c), the *wh*-word stays in its base position. These sentences show that the obligatory ergative subjects seen above cannot be attributed simply to a requirement of clauses containing a question operator, but must be tied to the presence of the moved *wh*-word in the higher clause.[24]

(31) a. meki ∅-valom-e, əno ʔewŋəto-na-k
who.ABS.SG 2/3.S/A.IND-hear-AOR that Hewngyto-OBL.SG-ERG
ɣa-ɲ-t͡ɕim-aw-lina-w ŋajej-o kojŋ-o?
UW.PST-CS-break-VBLZ-3.UW.PST-3PL that-ABS.PL cup-ABS.PL
'Who heard that Hewngyto broke those cups?'

b. ɣət͡ɕt͡ɕi ∅-valom-e əno ʔewŋəto-na-k jej-u
2SG.ABS 2/3.S/A.IND-hear-AOR that Hewngyto-OBL.SG-ERG what-ABS.PL
ɣa-ɲ-t͡ɕim-aw-lina-w t_i?
UW.PST-CS-break-VBLZ-3.UW.PST-3PL
'What all did you hear that Hewngyto broke?'

c. ɣət͡ɕt͡ɕi ∅-valom-e əno ʔewŋəto-na-k
2SG.ABS 2/3.S/A.IND-hear-AOR that Hewngyto-OBL.SG-ERG
ɣa-ɲ-t͡ɕim-aw-lina-w jej-u?
UW.PST-CS-break-VBLZ-3.UW.PST-3PL what-ABS.PL
'You heard that Hewngyto broke WHAT ALL?'

In order to confirm that the change in case on the matrix subject is due to the fact that the moving element is an absolutive nominal, rather than simply any element moving out of an embedded clause, we might like to see evidence that non-absolutives moving out of embedded clauses do not trigger a case change on the matrix subject.[25] Unfortunately, extraction from a finite clause is limited to absolutives: extraction of a non-absolutive results in unacceptability regardless of the case effects. This is exemplified in (32) for datives.[26] We will see in the next subsection, however,

[24]The sentence in (31b) also shows that covert movement does not force the matrix subject to be ergative, which follows from the fact that dependent case is a PF, rather than an LF, phenomenon.

[25]See §7.2 for a sketch of an account (based on Rackowski and Richards (2005)) on which anything, not just an absolutive, moving out of a lower clause might be expected to trigger case competition on the subject.

[26]It does seem possible to extract non-nominals from embedded clauses, as shown by (1), where the adverbial *wh*-word is extracted from the embedded clause. We can be sure that *kojaqlaŋ* 'why' has undergone long-distance extraction since it copies the verbal morphology found in its clause: in this case, it bears 3rd person plural morphology, which is compatible only with the embedded clause. Note that the matrix subject is not forced to be ergative when this verb has moved cross-clausally, just as the dependent account of movement-case interactions predicts.

(1) ∅-ko-jaq-la-ŋ-$∅_i$ təŋaŋawət ∅-iv-i, əno kəmiŋ-u
2/3.S/A.IND-PRS-why-PL-PRS-3.S.IND Tyngangawyt.ABS 2/3.S/A.IND-say-AOR that child-ABS.PL
∅-ko-tejŋ-al-la-ŋ-∅ t_i
2/3.S/A.IND-PRS-cry-PL-PRS-3.S.IND
'Why did Tyngangawyt say that the children were crying?'

It is worth being careful about the lack of ergative case on the subject of the embedding verb, however, as I have

that non-absolutives are extractable out of infinitives, and there, as predicted by the dependent case analysis, they do not trigger case effects.

(32) a. *mek-na-ŋ$_i$ ɣətɕ͡tɕi ∅-valom-e əno ʔewŋəto-na-k
who-OBL.SG-DAT 2SG.ABS 2/3.S/A.IND-hear-AOR that Hewngyto-OBL.SG-ERG
∅-jəl-nin urvaq t$_i$
2/3.S/A.IND-give-3SG.A>3.O shirt.ABS.SG
intended: 'Who did you hear that Hewngyto gave a shirt to?'

b. *mek-na-ŋ$_i$ ɣə-nan ∅-valom-ə-n əno ʔewŋəto-na-k
who-EP-OBL.SG-DAT 2SG-ERG hear-EP-3(SG).O that Hewngyto-OBL.SG-ERG
∅-jəl-nin urvaq t$_i$
2/3.S/A.IND-give-3SG.A>3.O shirt.ABS.SG
intended: 'Who did you hear that Hewngyto gave a shirt to?'

So far, all of the example sentences brought to bear on this discussion have come from question-forming *wh*-movement, although that is not the only phenomenon involving movement of a nominal that can potentially cross a clause boundary: if my proposal is correct, we might also expect to find similar data involving cross-clausal scrambling or long distance relativization of an absolutive noun phrase. Unfortunately, the first of the two appears to be untestable, as no speaker that I have worked with has accepted sentences with a noun phrase scrambled out of a finite clause. However, a few of my consultants accept cross-clausal relativization, which shows the case effects seen with question-forming *wh*-movement: when the relative pronoun ***meŋin*** moves into the higher clause in the relative clause, it forces the subject to bear ergative case.[27]

(33) a. ʔujemtewilʔ-ə-n [meŋin$_i$ ɣəm-nan t-ə-valom-ə-n [əno ɣə-nan
person-EP-ABS.SG which.ABS.SG 1SG-ERG 1SG.S/A-EP-hear-EP-3SG.O that 2SG-ERG
∅-kətʔajŋa-n t$_i$]] wutku ∅-ku-junet-ə-ŋ-∅
2/3.S/A.IND-scold-3SG.O here 2/3.S/A.IND-PRS-live-EP-PRS-3.S.IND
'The person who I heard you scolded lives here.'

b. *ʔujemtewilʔ-ə-n [meŋin$_i$ ɣəmmo t-ə-valom-ə-k [əno ɣə-nan
person-EP-ABS.SG which.ABS.SG 1SG.ABS 1SG.S/A-EP-hear-EP-1SG.S that 2SG-ERG
∅-kətʔajŋa-n t$_i$]] wutku ∅-ku-junet-ə-ŋ-∅
2/3.S/A.IND-scold-3SG.O here 2/3.S/A.IND-PRS-live-EP-PRS-3.S.IND
intended: 'The person who I heard you scolded lives here.'

not been able to reliably extract *nominal wh*-elements from the complement of *iv-* 'say'. Consequently, it is not possible to be certain that the same case effect found with *valom-* 'hear' would be found with this verb, though my analysis certainly predicts that it would.

[27]Most speakers I have consulted about long-distance relativization do not allow it regardless of the case effects. This is somewhat surprising since long-distance relativization involves long-distance *wh*-movement, which, as we have seen, is permitted in the language. This behavior is not unique to Koryak, however, as there are languages that treat *wh*-movement and relativization differently; as Polinsky (2017) shows, Koryak's close relative Chukchi allows ergative-marked noun phrases to undergo *wh*-movement, but does not allow them to be the pivot of a relative clause (note that this is not the case in Koryak). Additionally, while Dutch robustly allows long-distance question-forming *wh*-movement (Strik 2008; Schippers 2010), long distance relativization is reported to be found only in some dialects (Barbiers et al. 2005).

4.3 Triggering New Datives

In previous section, I showed how moving an absolutive *wh*-word into a higher case domain results in the external argument of the verb in that case domain bearing ergative case. As I have argued, there is also evidence for taking at least some instances of dative to also be dependent cases: those datives arise on the goal argument of the verb 'give', which has two absolutive internal arguments. If dative can be a dependent case and dependent case can be triggered by *wh*-movement, we should then expect that *wh*-moved absolutive nominals can also trigger dependent dative on the absolutive internal argument of object control verbs like *jəmitətvat-* 'teach', whose internal argument is absolutive-marked when no movement has crossed it, as shown in (34a). As (34b) shows, this expectation is correct: when the absolutive *wh*-word *jeju* 'what all' crosses the matrix object, that object bears dative case.

(34) a. ɣəm-nan t-ə-ku-n-mit-ə-tv-aɲ-ŋ-ə-na-w
1SG-ERG 1SG.S/A-EP-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PRS-EP-3.O-3PL
{jejɣut͡ɕewŋəlʔ-u / *jajɣot͡ɕawŋəlʔ-ə-ŋ} kali-k predloženija-w
{student-ABS.PL / student-EP-DAT} write-INF sentence-ABS.PL
'I am teaching the students to write sentences.'[28]

b. jej-u$_i$ ɣə-nan ∅-ku-n-mit-ə-tv-aɲ-ŋ-ə-na-w
what-ABS.PL 2SG-ERG 2/3.S/A.IND-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PRS-EP-3.O-3PL
{jajɣot͡ɕawŋəlʔ-ə-ŋ / *jejɣut͡ɕewŋəlʔ-u} kali-k t_i?
{student-EP-DAT / student-ABS.PL} write-INF
'What all are you teaching the students to write?'

Some speakers also use an additional verb for 'teach', *jəɣəjulev-*, which shows the same case effects as *jəmitətvat-*, as exemplified in (35). As I have considerably more data for *jəmitətvat-* than for *jəɣəjulev-*, I will restrict my discussion to the former for the rest of this section.

(35) a. ɣəm-nan t-ə-ku-n-ɣəjul-ew-ŋ-ə-n {kaʎaʔaŋ /
1SG-ERG 1SG.S/A-EP-PRS-CS-learn-VBLZ-PRS-EP-3(SG).O Kaljahang.ABS.SG /
*kaʎaʔaŋ-ə-na-ŋ} tejk-ə-k ʔeʎut͡ɕ-u
Kaljahang-EP-OBL.SG-DAT make-EP-INF doll-ABS.PL
'I am teaching Kaljahang to make dolls.'

b. jeq-ujit͡ɕv-ineŋ-u$_i$ ɣə-nan ∅-ku-n-ɣəjul-ew-ŋ-ə-n
what-play-TOOL-ABS.PL 2SG-ERG 2/3.S/A.IND-PRS-CS-learn-VBLZ-PRS-EP-3(SG).O
{kaʎaʔaŋ-ə-na-ŋ / *kaʎaʔaŋ} tejk-ə-k t_i?
Kaljahang-EP-OBL.SG-DAT / Kaljahang.ABS.SG make-EP-INF
'What kind of toys are you teaching Kaljahang to make?'

We might wonder whether a sentence like (34b) really involves long-distance movement of *jeju* from the complement of *kalik* to the matrix [Spec,CP], or whether the *wh*-word is actually an

[28] For reasons that are unclear to me, the data regarding 'teach' seems to be subject to some intraspeaker variation. In particular, there are certain speakers for whom the judgment in (34a) occasionally alternates with a judgment whereby both the absolutive and dative are grammatical. If this represents the coexistence of two grammars within these speakers (as opposed to confusion about the sentences or L2 interference), the more permissive grammar is part of the same as the one that derives the facts seen with *wiŋŋet-* 'help', as described in §7.1.

argument of the higher verb 'teach', as in something like 'What are you teaching the students?'[29] However, as (36) shows, *jəmitətvat-* cannot select a theme as its complement and mark the goal with dative case. A close look at the structure of the verb in question, which is derived by taking the adjectival root 'be skilled' (37a), verbalizing it with the inchoative verbalizer *-tvi* (37b)[30], and subsequently causativizing it (37c), shows that the unacceptability of (36) is not unexpected, as it literally means 'to make someone skilled at something' (cf. *#I made reading skilled at the students.*)

(36) *inenɣəjulevət͡ɕ?-ə-ne-k
teacher-EP-OBL.SG-ERG
∅-ku-n-mit-ə-tv-aɲ-ŋ-ə-nin
2/3.S/A.IND-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PRS-EP-3SG.A>3.O
kale-jəlŋ-at-ɣəjŋ-ə-n jajɣot͡ɕawŋəl?-ə-jək-ə-ŋ
book-read-VBLZ-NMLZ-EP-ABS.SG student-EP-OBL.NSG-EP-DAT
intended: 'The teacher is teaching reading to the students.'

(37) a. n-ə-mit-qin-∅ kale-jəlŋ-at-ə-k
ADJ-EP-skilled-ADJ-SG book-read-VBLZ-EP-INF
'(He/She is) skilled at reading.'

b. mit-ə-tvi-k kale-jəlŋ-at-ə-k
skilled-EP-INCH.VBLZ-INF book-read-VBLZ-EP-INF
'to become skilled at reading'

c. j-ə-mit-ə-tv-at-ə-k kale-jəlŋ-at-ə-k
CS-EP-skilled-EP-INCH.VBLZ-VBLZ-EP-INF book-read-VBLZ-EP-INF
'to teach someone to read (lit. to make someone skilled at reading)'

A counterproposal to my claim that the dative case is on the matrix object is due to the movement of an absolutive *wh*-word past it is that the dative is actually due to this sentence's being a question. In the previous section, we saw that this was not tenable for ergative on the subject, and the sentence in (38) shows the same thing for the dative-marked object: this sentence is a *wh*-question, but the object of 'teach' is required to be absolutive.

(38) mikə-ne-k ∅-ku-n-mit-ə-tv-aw-ŋ-ə-nin
who-OBL.SG-ERG 2/3.S/A.IND-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PRS-EP-3SG.A>3.O
{qaj-ə-kmiŋ-u / *qaj-ə-kmeŋ-ə-ŋ} j-ə-ɲŋ-ev-ə-k utt-u?
{DIM-EP-child-ABS.PL / *DIM-EP-child-EP-DAT} CS-EP-grow-VBLZ-EP-INF tree-ABS.PL
'Who is teaching the children to plant trees?'[31]

I argued that dependent datives are those can trigger verbal agreement (cf. 20a, repeated below as 39a), whereas and inherent/lexical dative cannot trigger verbal agreement (cf. 20b, repeated below as 39b).

[29]This, of course, leaves the existence of the infinitive *kalik* 'to write' a mystery.

[30]The verbalizer *-at*, which the causative prefix in (37c) requires the verb-word to bear, causes the final vowel of *-tvi* to delete, giving the surface form *-tv* seen in (37c).

[31]The speaker who provided this sentence uses the verbalizer *-ev* rather than *-et* for this verb, giving (after applying the relevant phonological rules) *kunmitətvawŋənin* rather than *kunmitətvaŋŋənin*, which all other speakers I have consulted produce.

(39) a. t-ə-jəl-ɣi ɣənk-ə-ŋ kewl-əpa-ŋa
1SG.S/A-EP-give-2SG.O 2SG-EP-DAT blood-soup-ABS.SG
'I gave you blood soup.'

b. {t-ə-t͡ɕejm-ev-ə-k / *t-ə-t͡ɕejm-ew-ɣi} ɣənk-ə-ŋ
{1SG.S/A-EP-close-VBLZ-EP-1SG.S / 1SG.S/A-EP-close-VBLZ-2SG.O} 2SG.DAT
'I approached you.'

The prediction, then, is that if the dative case that occurs on objects that an absolutive DP has moved past is dependent, then that object should be eligible for agreement. The sentence in (34b) does not show this, as 3rd person datives are never agreed with. However, local person datives can be agreed with, and replacing the object of 'teach' with a 2nd person pronoun, as in (40), results in the matrix verb agreeing with this dative-marked object.

(40) jaq-ujit͡ɕv-inaŋ-u$_i$ na-ko-n-met-ə-tv-al-la-ŋ-tək
what-play-TOOL-ABS.PL INV-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PL-PRS-2NSG.S/O
{tojk-ə-ŋ / *tuj-u} tejk-ə-k t$_i$
2NSG-EP-DAT / *2NSG-ABS.PL make-EP-INF
'What toys are they teaching you all to make?'[32]

4.4 Summary

In this section I have shown that the movement of an absolutive *wh*-element across another absolutive noun causes that noun to bear a case it would otherwise not have: ergative for absolutive subjects, and dative for absolutive objects. I have also shown that there is no possible other characterization of the conditions under which this change in nouns' case marking takes place. In the next section, I will provide an analysis of these facts by combining the theories of dependent case and successive-cyclic movement.

5 Analysis

The analysis I propose falls out straightforwardly from combining dependent case theory with a version of successive cyclicity. In particular, I will show that adopting a theory of successive-cyclic movement in which (at least) C° and v° are phase heads, and stipulating that *each* step in a nominal's movement chain is one that dependent case can be triggered from, account for all of the data under discussion. Let's begin with the derivation of ergative case on the subject of a transitive verb where no movement takes place. Recall from (9) that the subject of a verb whose complement is absolutive is invariably marked with ergative case, as exemplified in (41), repeated from (9a) above.

(41) ɣəm-nan t-ə-nu-ne-w ʔəvənʔ-u
1SG-ERG 1SG.S/A-EP-eat-3.O-3PL berry-ABS.PL
'I ate berries.'

[32]The difference between the shape of the word for 'which toys', *jaqujit͡ɕvinaŋu* in this example and *jequjit͡ɕvineŋu* in (35b) is due to interspeaker variation in the harmony class that the root *ujit͡ɕv-* 'play' belongs to.

Following Marantz (1991), I take dependent case to be assigned to at least one of two caseless nominals in a dependent case domain. Whether dependent case is assigned to the higher argument or to the lower argument (or to both, as in tripartite languages) in a particular domain is determined on a language-specific basis: dependent accusative is assigned to the lower of two arguments of a transitive verb, whereas dependent ergative is assigned to the higher of the two.[33] Following Baker (2015), I take phase heads to demarcate the upper and lower bounds of dependent case domains: C° demarcates the upper bound of the ergative case domain and the lower bound of the dative case domain, and v° demarcates the upper bound of the dative case domain and the lower bound of the ergative case domain.[34] The object is generated as the complement of the verb (42a), and then moves to the specifier of the vP, where it triggers ergative case on the matrix subject.[35] To make the diagrams simpler, I have omitted the TP projection as well as the movement of the external argument from the specifier of vP to the specifier of TP, and simply represent the external argument between C° and vP.

(42) a. [$_{CP}$ [C° I [$_{vP}$ [v° [$_{VP}$ ate berries]]]]] *domain of ERG*

b. [$_{CP}$ [C° I$_{ERG}$ [$_{vP}$ berries [v° [$_{VP}$ ate _]]]]] *domain of ERG*

Now let us consider extraction from the complement of *valom-* 'hear', shown in (43a) (repeated from (26) above). Recall that, in this case, the movement of an absolutive *wh*-word from the embedded clause forces the matrix subject to bear ergative case.

(43) a. jej-u$_i$ {ɣə-nan / *ɣətɕ͡tɕi} ∅-valom-na-w, əno
what-ABS.PL {2SG-ERG / 2SG.ABS} 2/3.S/A.IND-hear-3.O-3PL that
ʔewŋəto-na-k ∅-j-ə-t͡ɕim-aw-nin t_i
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O
'What all did you hear that Hewngyto broke?'

b. ɣəmmo t-ə-valom-ə-k, əno ʔewŋəto-na-k
1SG.ABS 1SG.S/A-EP-hear-EP-1SG.S that Hewngyto-OBL.SG-ERG
∅-j-ə-t͡ɕim-aw-nin kojŋ-o
2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A>3.O cup-ABS.PL
'I heard that Hewngyto broke cups.'

The sentence in (43a) is derived by successive-cyclic movement of *what* triggering ERG on the subjects of both clauses when it is in their respective [Spec,vP], and not triggering any dependent cases when it is in the specifier of the clauses' CPs. This is schematized in (44): the *wh*-word first starts in the embedded object position (44a), then moves to the specifier of the embedded vP, where it triggers ergative on the embedded subject (44b). The *wh*-word then moves to the specifier

[33]Note that Yuan (2018) argues for Inuktitut that dependent ergative is assigned to the lower of the two arguments of a transitive verb after the object has moved above the subject.

[34]Note that this differs from the simpler implementation of dependent case that I sketched out in (2.1). The motivation for this is addressed in §6.

[35]The motivations for this step of movement in non-interrogative sentences are addressed in §6.

of the embedded CP, where it triggers no dependent case as there are no other caseless noun phrases in the relevant domain (44c), then to the matrix [Spec,vP], where it triggers dependent ergative on the matrix subject by virtue being the lower of two caseless nominals in one dependent case domain (44d). Finally, it undergoes a case-neutral movement to the matrix [Spec,CP] (44e).[36]

(44) a. [$_{CP}$ [C°$_{wh}$ you [$_{vP}$] [v° [$_{VP}$ hear [$_{CP}$ [that Hewngyto [$_{vP}$] [v° [$_{VP}$ broke what]]]]]]]]]

domain of ERG *domain of ERG*

b. [$_{CP}$ [C°$_{wh}$ you [$_{vP}$] [v° [$_{VP}$ hear [$_{CP}$ [that Hewngyto$_{ERG}$ [$_{vP}$ what] [v° [$_{VP}$ broke _]]]]]]]]]

domain of ERG *domain of ERG*

c. [$_{CP}$ [C°$_{wh}$ you [$_{vP}$] [v° [$_{VP}$ hear [$_{CP}$ what [that Hewngyto$_{ERG}$ [$_{vP}$ _] [v° [$_{VP}$ broke _]]]]]]]]]

domain of ERG *domain of ERG*

d. [$_{CP}$ [C°$_{wh}$ you$_{ERG}$ [$_{vP}$ what] [v° [$_{VP}$ hear [$_{CP}$ _ [that Hewngyto$_{ERG}$ [$_{vP}$ _] [v° [$_{VP}$ broke _]]]]]]]]]

domain of ERG *domain of ERG*

e. [$_{CP}$ what [C°$_{wh}$ you$_{ERG}$ [$_{vP}$ _] [v° [$_{VP}$ hear [$_{CP}$ _ [that Hewngyto$_{ERG}$ [$_{vP}$ _] [v° [$_{VP}$ broke _]]]]]]]]]

Unlike in (43a), (43b) the absolutive wh-word moves only as far as the embedded [Spec,vP] (45b), triggering ergative case only on the embedded subject, and leaving the matrix subject absolutive.

(45) a. [$_{CP}$ [C° you [$_{vP}$] [v° [$_{VP}$ hear [$_{CP}$ [that Hewngyto [$_{vP}$] [v° [$_{VP}$ broke cups]]]]]]]]]

domain of ERG *domain of ERG*

b. [$_{CP}$ [C° you [$_{vP}$] [v° [$_{VP}$ hear [$_{CP}$ [that Hewngyto$_{ERG}$ [$_{vP}$ cups] [v° [$_{VP}$ broke _]]]]]]]]]

Consider now the derivation of sentences with dependent dative case. In the simpler case, when *wh*-movement is not implicated, such a sentence involves the ditransitive verb *jəl-* 'give', as schematized in (46), repeated from (20a) and (39a) above.

(46) t-ə-jəl-ɣi ɣənk-ə-ŋ kewl-əpa-ŋa
1SG.S/A-EP-give-2SG.O 2SG-EP-DAT blood-soup-ABS.SG
'I gave you blood soup.'

Both internal arguments are generated without case (47a), but the presence of two caseless nominals in the domain of dependent dative causes the higher of the two to be marked with dative case (47b). After this occurs, the object moves to the specifier of vP, where it triggers dependent ergative on the subject (47c).

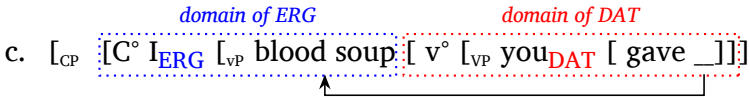
(47) a. [$_{CP}$ [C° I [$_{vP}$] [v° [$_{VP}$ you [gave blood soup]]]]]

domain of ERG *domain of DAT*

b. [$_{CP}$ [C° I [$_{vP}$] [v° [$_{VP}$ you$_{DAT}$ [gave blood soup]]]]]

domain of ERG *domain of DAT*

[36]The diagrams in (44) has the attracting *wh* feature only on the matrix C°, and not on any of the intervening phase heads. This representation was chosen for simplicity, and should not be taken to be an endorsement of any particular view of how the individual steps of successive-cyclic movement are triggered. See Heck and Müller (2003) and sources therein for various relevant proposals.



The same configuration arises as a result of an intermediate step of *wh*-movement in sentences like (48a) (repeated from (34b) above), where movement of the absolutive *wh*-movement to the left periphery of the matrix clause results in the matrix object bearing dative case, rather than the absolutive that it bears when *wh*-movement has not taken place (48b).

(48) a. jej-u$_i$ ɣə-nan ∅-ku-n-mit-ə-tv-aɲ-ŋ-ə-na-w
what-ABS.PL 2SG-ERG 2/3.S/A.IND-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PRS-EP-3.O-3PL
{jajɣo͡tɕawŋəlʔ-ə-ŋ / *jejɣu͡tɕewŋəlʔ-u} kali-k t_i
{student-EP-DAT / *student-ABS.PL} write-INF
'What all are you teaching the students to write?'

b. ɣəm-nan t-ə-ku-n-mit-ə-tv-aɲ-ŋ-ə-na-w
1SG-ERG 1SG.S/A-EP-PRS-CS-skilled-EP-INCH.VBLZ-VBLZ-PRS-EP-3.O-3PL
{jejɣu͡tɕewŋəlʔ-u / *jajɣo͡tɕawŋəlʔ-ə-ŋ} kali-k predloženija-w
{student-ABS.PL / *student-EP-DAT} write-INF sentence-ABS.PL
'I am teaching the students to write sentences.'

The derivation of (48a) is schematized in (49). The *wh*-word is first generated as the complement of the embedded verb (49a), and then moves to the specifier of the embedded vP, where it presumably triggers ergative case on the embedded PRO subject (49b).[37] It then moves to the embedded [Spec,CP], which is part of the same dependent case domain as the caseless matrix object. Since dative is assigned to the higher of the two caseless nominals in its domain, the matrix object gets marked with dative case (49c). From there, the *wh*-word moves to the specifier of the matrix vP, triggering ergative case on the matrix subject (49d), and then to the specifier of the matrix CP, case-inertly (49e).[38]

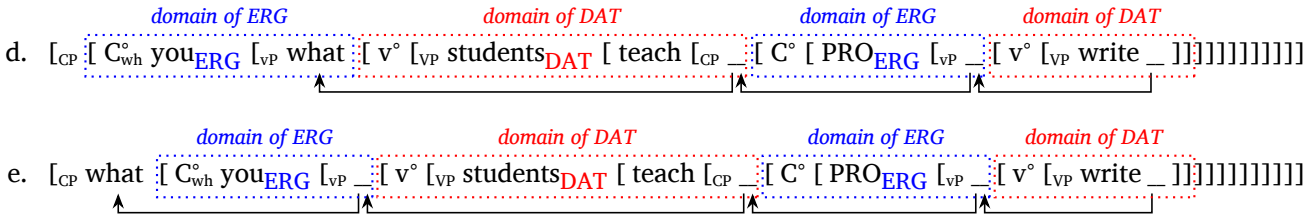
(49) a. [CP [C°wh you [vP [v° [VP students [teach [CP [C° [PRO [vP [v° [VP write what]]]]]]]]]]]

b. [CP [C°wh you [vP [v° [VP students [teach [CP [C° [PROERG [vP what [v° [VP write _]]]]]]]]]]]

c. [CP [C°wh you [vP [v° [VP studentsDAT [teach [CP what [C° [PROERG [vP _ [v° [VP write _]]]]]]]]]]]

[37] None of the tests that I am aware of that have been used to diagnose the case that PRO bears in languages like Icelandic (Sigurðsson 1991) or Russian (Franks 1995) are applicable in Koryak, so we can neither confirm nor deny that the PRO is actually assigned ergative case.

[38] Note that it is necessary for the moving *wh*-word to already be in the embedded [Spec,CP] when material from the higher clause merges, in order to prevent the matrix object from moving out of the VP, and thus becoming ineligible for dependent dative. This may speak in favor of having a *wh*-feature on intervening C heads in long-distance *wh*-movement.



6 The Position of Direct Objects

6.1 Background

I have so far assumed that dependent ergative on a subject is triggered by a caseless element in [Spec,vP]. I have not yet defended this, though it is necessary to do so: in the simplest version of the theory of dependent case, where the case domains are defined as extending from phase to phase, the fact that the object is generated within the VP, whereas the subject is generated outside of v° (Kratzer 1996; Wurmbrand 2001), means that the object must move at least as high as [Spec,vP] in order for the subject to be marked ergative (or, in an accusative language, for the object to be marked accusative.) Now, in some languages with dependent case, such as Sakha (Turkic), object movement to [Spec,vP] is easy to diagnose since the presence of accusative on the object depends on its position with respect to low adverbs: if the object follows such an adverb (50a), it must, all else being equal, bear nominative case. However, if it precedes such adverbs, having moved out of the VP, it must be marked accusative (50b).

(50) a. Masha [VP türgennik salamaat-(#y) sie-te]
Masha quickly porridge-ACC eat-PST.3SG.SBJ
'Masha ate porridge quickly.'[39] Baker and Vinokurova (2010, 602)

b. Masha salamaat-*(y) [VP türgennik _ sie-te]
Masha porridge-ACC quickly eat-PST.3SG.SBJ
'Masha ate the porridge quickly.' (ibid.)

Despite the relationship between VP-internality of objects and dependent case in Sakha, there exist languages, like Cuzco Quechua (Quechuan), where the object must bear accusative case marking, even if occurs between the goal and the verb, having remained inside the VP (51). As we saw in §3.1, Koryak is like Cuzco Quechua: regardless of the position of the arguments relative to each other and the verb, the subject of a transitive verb with an absolutive object is marked with ergative case.

(51) Juan wawakuna-man miski-*(ta) qunpuni.
Juan children-DAT candy-ACC give.HAB.3SG.SBJ
'Juan gives candy to the children.' Baker (2015, 146)

Baker's solution to this is to appeal to a distinction between hard and soft phases, where a hard phase behaves as expected (it delimits a spellout domain and is a barrier to syntactic operations

[39] Accusative marking on a VP-internal object requires it to be focused.

triggered from outside of it), whereas a soft phase delimits a spellout domain, but does not constitute a barrier to outside syntactic operations. This allow case calculus, for example, to ignore soft phase boundaries, but not hard ones. By positing that languages can vary parametrically as to the hardness of their phases, Baker is able to account for the difference between Sakha and Cuzco Quechua by positing that Sakha has a hard phase introduced by v°, whereas the Cuzco Quechua v° introduces a soft phase, allowing a VP-internal nominal to compete for case with the subject and thereby be assigned accusative. As a result of this, the dependent case domain for dative is included within the dependent case domain for accusative, as schematized in the derivation in (52). Once the v° has merged with the VP, case competition for dative takes place, which is assigned to the higher of the two noun phrases in VP. Subsequently, the rest of the structure merges up to C°, which triggers a second round of case competition, this time for accusative, which is assigned to the lower of the caseless DPs in TP. Since v° introduces a soft phase in Cuzco Quechua, the direct object is eligible to receive accusative case.

(52) a. [v° [$_{VP}$ children$_{DAT}$ [candy gives]]]
domain of DAT

b. [$_{CP}$ C° [$_{TP}$ Juan [T [$_{vP}$ _ [v° [$_{VP}$ children$_{DAT}$ [candy$_{ACC}$ gives]]]]]]]
domain of ACC *domain of DAT*

6.2 The Problem

Given that the ergative of Koryak seems to pattern like the accusative of Cuzco Quechua, it is tempting to posit that the phase introduced by v° in Koryak is also a soft phase. However, this makes an incorrect prediction about movement triggering ergative case. If the soft phase approach to the Koryak v° is correct, the *wh*-word in the specifier of CP should trigger ergative on the matrix subject in the absence of a matrix internal argument, as schematized in (53). As the sentences in (54) show, this is not correct: the movement of an absolutive *wh*-word to the specifier of the embedded CP cannot cause the matrix subject to bear ergative case. We are therefore forced to posit that v° introduces a hard phase in Koryak (31b also showed this).

(53) [$_{CP}$ [C° DP$_{ERG}$ [$_{vP}$ _ [v° [$_{VP}$ V° [$_{CP}$ DP$_{wh_i}$] [C° DP$_{ERG}$ [$_{vP}$ _ [v° [$_{VP}$ V° _]]]]]]]]]]
domain of ERG *domain of DAT*

(54) a. ɣəmmo t-ə-ku-t͡ɕetkejuŋ-ə-ŋ-∅ jeq-qevi-jət͡ɕʔ-u
1SG.ABS 1SG.S/A-EP-PRS-think-EP-PRS-3.S.IND which-gift-contents-ABS.PL
m-ə-jəl-ne-w ʔewŋəto-na-ŋ ənək-eto-ʔəlwəje-ŋ
1SG.S/A.IMP-EP-give-3.O-3PL Hewngyto-OBL.SG-DAT 3SG.POSS-birth-day-DAT
'I am wondering what gifts I should give Hewngyto for his birthday.'

b. *ɣəm-nan t-ə-ku-t͡ɕetkejuŋ-ŋ-ə-ne-w jeq-qevi-jət͡ɕʔ-u
1SG-ERG 1SG.S/A-EP-PRS-think-EP-PRS-3.O-3PL which-gift-contents-ABS.PL
m-ə-jəl-ne-w ʔewŋəto-na-ŋ ənək-eto-ʔəlwəje-ŋ
1SG.S/A.IMP-EP-give-3.O-3PL Hewngyto-OBL.SG-DAT 3SG.POSS-birth-day-DAT
intended: 'I am wondering what gifts I should give Hewngyto for his birthday.'

If v° introduces a hard phase, the fact that the subject of a transitive verb is always marked ergative requires that we postulate obligatory movement of an absolutive noun phrase out of the VP and above v°. Now, given that word order is highly unconstrained and that we don't know what syntactic mechanisms are involved in building verb-words (which could give us a clue as to how high the lexical verb is), there are no obvious diagnostics for establishing whether or not the object has moved out of the VP. On the other hand, this also means that the word order data is *consistent* with the hypothesis that the object moves out of the VP: whatever linear position the object is in with respect to the other words in the clause, there is a syntactic structure consistent with it whereby the object has moved out of the vP.

At this point, we could simply postulate that an absolutive object has to move out the VP, and accept that it is an unmotivated stipulation that is necessary to get this analysis working. However, there is some evidence from the pattern of agreement in clauses with the ditransitive verb *jəl-* 'give' that suggests that the absolutive argument must move outside the vP. I sketch this out in the next subsection (a full account of this can be found in Abramovitz in prog.).

6.3 Agreement in Ditransitives

As we saw above, Koryak does not allow agreement with dative-marked arguments unless the dative case is dependent, and (for the most part) the only verb that controls such a pattern of agreement is *jəl-* 'give'. However, whether or not the verb agrees with the dative argument depends on the person specification of the two arguments. In particular, if one of the internal arguments of the verb, but not both of them, is a speech-act participant (SAP), the SAP argument is agreed with (55-56). However, if both or neither of the arguments are SAPs, the absolutive theme must be agreed with (57-58).

(55) a. ɣəm-nan t-ə-jəl-ɣi ənk-ə-ŋ ɣə͡tɕ͡tɕi
1SG-ERG 1SG.S/A-EP-give-2SG.O 3SG-EP-DAT 2SG.ABS
'I gave you to him.'

b. ə-nan ∅-ine-jəl-i ənk-ə-ŋ ɣəmmo
3SG-ERG 2/3.S/A.IND-1SG.O-give-AOR 3SG-EP-DAT 1SG.ABS
'He gave me to him.'

(56) a. ɣəm-nan t-ə-jəl-ɣi ɣənk-ə-ŋ urvaq
1SG-ERG 1SG.S/A-EP-give-2SG.O 2SG-EP-DAT shirt.ABS.SG
'I gave a shirt to you.'

b. ə-nan ∅-ine-jəl-i ɣəmk-ə-ŋ urvaq
3SG-ERG 2/3.S/A.IND-1SG.O-give-AOR 1SG-EP-DAT shirt.ABS.SG
'He gave a shirt to me.'

(57) a. jequ = ʔam ɣəmmo ɣənk-ə-ŋ ne-jəl-ɣəm?
why = FOC 1SG.ABS 2SG-EP-DAT INV-give-1SG.O
'Why did they give me to you?'

b. ə-nan {ne-jəl-ɣi / *∅-ine-jəl-i} ɣətɕ͡tɕi ɣəmk-ə-ŋ
3SG-ERG {INV-give-2SG.O / *2/3.S/A.IND-1SG.O-give-AOR} 2SG.ABS 1SG-EP-DAT
'He gave you to me.'

(58) {t-ə-jəl-ə-n / *t-ə-jəl-ne-w} əjk-ə-ŋ kali-kal
1SG.S/A-EP-give-EP-3SG.O / *1SG.S/A-EP-give-3.O-3PL 3NSG-EP-DAT book-ABS.SG
'I gave a book to them.'

Given that either of the two internal arguments can, in principle, be agreed with, we cannot appeal to case-discrimination by the probe to account for why it prefers to agree with the absolutive when there is no asymmetry in SAP-hood between them. Further, assuming Baker (1985)'s Mirror Principle, the relevant probe is quite high in the syntactic structure: object agreement is the rightmost morpheme on the verb, and both tense and aspect morphology are inside of it; in line with Bobaljik (2000)'s work on closely the closely related Chukchi, I take the relevant probe to be on or just above T°. Consequently, it is not possible to argue that the probe is located below the dative-marked argument but above the absolutive-marked one. Since the absolutive argument is syntactically lower than the dative, the pattern that we find seems to be exactly the opposite of what we would expect: instead of the probe defaulting to the closer argument, it defaults to the one that is further away.[40] Positing an obligatory step of movement of the absolutive to [Spec,vP] (59) causes the agreement pattern to fall out unproblematically: the probe can be specified to search for a participant argument, and, in the absence of one, will agree with the closest nominal. By the same principle, if there are two participant arguments, it will agree with the closest one.

(59) a. *domain of ERG* *domain of DAT*
[$_{CP}$ [C° I [$_{vP}$ [v° [$_{VP}$ you [gave blood soup]]]]]]

b. *domain of ERG* *domain of DAT*
[$_{CP}$ [C° I [$_{vP}$ [v° [$_{VP}$ you$_{DAT}$ [gave blood soup]]]]]]

c. *domain of ERG* *domain of DAT*
[$_{CP}$ [C° I$_{ERG}$ [$_{vP}$ blood soup [v° [$_{VP}$ you$_{DAT}$ [gave _]]]]]]

6.4 Summary

In this section, I have shown that we cannot analyze the Koryak v° as an introducer of a soft phase. Since an absolutive object invariably triggers ergative on a higher coargument object, however, it is necessary to posit a step of movement by the absolutive DP out of the VP. I have argued that evidence from the pattern of agreement in ditransitives supports exactly the step of movement necessary for a hard-phase approach to v° to work. This provides indirect evidence for positing an obligatory step of movement for which there is no direct evidence from linear order.

[40] A similar problem is found in both of the other living Chukotkan languages (Chukchi and Alutor,) though the data are slightly different (Bárány 2020).

7 Consequences

7.1 A Curious Extraction Restriction Solved

The proposal advanced in §5, that moving *wh*-words trigger dependent case competition along their movement paths, solves a problem concerning extraction from the complement of the verb *wiŋŋet-* 'help' that is otherwise unexplained. The problem boils down to the following: whereas this verb can take three possible case frames when its complement is a transitive verb, absolutive-dative (60a), ergative-absolutive (60b), or ergative-dative (60c), the movement of an absolutive *wh*-word from the complement of 'help' into the left periphery of the matrix clause requires it to have the ergative-dative case frame (61).[41]

(60) a. ʔewŋəto ∅-wiŋŋet-i meʌʌo-na-ŋ kali-k pismo-n
Hewngyto.ABS.SG 2/3.S/A.IND-help-AOR Melljo-OBL.SG-DAT write-INF letter-ABS.SG
'Hewngyto helped Melljo write the letter.'

b. ʔewŋəto-na-k ∅-wiŋŋen-nin meʌʌo kali-k pismo-n
Hewngyto-OBL.SG-ERG help-3SG.A>3.O Melljo.ABS write-INF letter-ABS.SG
'Hewngyto helped Melljo write the letter.'

c. ʔewŋəto-na-k ∅-wiŋŋen-nin meʌʌo-na-ŋ kali-k pismo-n
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-help-3SG.A>3.O Melljo-OBL.SG-DAT write-INF letter-ABS.SG
'Hewngyto helped Melljo write the letter.'

(61) a. *jənnə$_i$ ʔewŋəto ∅-wiŋŋen-nin meʌʌo-na-ŋ kali-k t$_i$
what.ABS.SG Hewngyto.ABS 2/3.S/A.IND-help-3SG.A>3.O Melljo-OBL.SG-DAT write-INF
intended: 'What did Hewngyto help Melljo write?'

[41] The ergative-dative case frame of the matrix verb in (60c) at first appears to violate the dative agreement generalization discussed in §3.3, as we find there an agreed-with dative that does not have an absolutive co-argument. In fact, for most speakers, this is only a possibility if the complement of 'help' is transitive. When it is intransitive, as in (1), only the absolutive-dative and ergative-absolutive case frames are permitted, showing that the presence of a lower absolutive noun is in fact necessary for an agreeing dative.

(1) a. ɣəmmo t-ə-ku-wiŋŋet-ə-ŋ kəmeŋ-ə-ŋ kemetʔa-jp-ə-k
1SG.ABS 1SG.S/A-EP-PRS-help-EP-PRS child-EP-DAT clothes-put.on-EP-INF
'I am helping the child get dressed.'

b. ɣəm-nan t-ə-ku-wiŋŋeŋ-ŋ-ə-n kəmiŋ-ə-n kemetʔa-jp-ə-k
1SG-ERG 1SG.S/A-EP-PRS-help-PRS-EP-3SG.O child-EP-ABS.SG clothes-put.on-EP-INF
'I am helping the child get dressed.'

c. *ɣəm-nan t-ə-ku-wiŋŋeŋ-ŋ-ə-n kəmeŋ-ə-ŋ kemetʔa-jp-ə-k
1SG-ERG 1SG.S/A-EP-PRS-help-PRS-EP-3SG.O child-EP-DAT clothes-put.on-EP-INF
intended: 'I am helping the child get dressed.'

b. *jənnə$_i$ ʔewŋəto-na-k ∅-wiɲɲen-nin meʌʌo
what.ABS.SG Hewngyto-OBL.SG-ERG 2/3.S/A.IND-help-3SG.A > 3.O Melljo.ABS.SG
kali-k t$_i$
write-INF
intended: 'What did Hewngyto help Melljo write?'

c. jənnə$_i$ ʔewŋəto-na-k ∅-wiɲɲen-nin
what.ABS.SG Hewngyto-OBL.SG-ERG 2/3.S/A.IND-help-3SG.A > 3.O
meʌʌo-na-ŋ kali-k t$_i$
Melljo-OBL.SG-DAT write-INF
'What did Hewngyto help Melljo write?'

We might wonder whether what is in play here is not movement-triggered dependent case, but instead a relationship between the case borne by the subject of a control verb and the islandhood of the complement of that verb. However, such an approach would be in the unenviable position of having to countenance a type of island that banned movement of absolutive nominals out of itself, but allowed movement of seemingly any other elements: in (62), we see that a dative-marked nominal can be *wh*-moved across 'help' when it has an ergative-absolutive case frame, in (63) we see that a locative-marked noun phrase can be moved across it when it has an absolutive-dative case frame, and in (64) we see that the *wh*-verb *jeq-* 'do what?' can be moved across it when it has either an ergative-absolutive or an absolutive-dative case frame.

(62) mek-ə-na-ŋ$_i$ ɣəmək-ʔətʔ-a ne-wiɲɲet-ɣəm ɣəmmo jet-ə-k t$_i$
who-EP-OBL.SG-DAT 1SG.POSS-dog-ERG INV-help-1SG.O 1SG.ABS come-EP-INF
'Whose house (lit. who) did my dogs help me go to?'

(63) jaq-tetradj-ə-k$_i$ ɣə͡tɕt͡ɕi ∅-wiɲɲet-i qojalqot-ə-na-ŋ kali-k
which-notebook-EP-LOC 2SG.ABS 2/3.S/A.IND-help-AOR Qojalqot-EP-OBL.SG-DAT write-INF
tajkəjo-n t$_i$
exercise-ABS.SG
'Which notebook did you help Qojalqot write the exercise in?'

(64) a. jeq-ə-k$_i$ ʔewŋəto-na-k ∅-wiɲɲen-nin meʌʌo t$_i$
do.what-EP-INF Hewngyto-OBL.SG-ERG 2/3.S/A.IND-help-3SG.A > 3.O Melljo.ABS.SG
'What did Hewngyto help Melljo do?'

b. jeq-ə-k$_i$ ʔewŋəto ∅-wiɲɲet-i meʌʌo-na-ŋ t$_i$
do.what-EP-INF Hewngyto.ABS.SG 2/3.S/A.IND-help-AOR Melljo-OBL.SG-DAT
'What did Hewngyto help Melljo do?'

The approach developed in this paper suffices to account for the case-frame restrictions on *wh*-movement without recourse to case-sensitive islands: instead of certain case frames banning the extraction of absolutives from the complement of 'help', all case frames allow such extraction, but the cases borne by the arguments can change over the course of the derivation due to dependent case interactions with the moving element. The structure that gives rise to the declarative sentence in (60a) is given in (65). Note that in (60a), the dative does not trigger agreement, which indicates that it is either lexical or inherent, and therefore present upon merger of the object.

(65) a. [$_{CP}$ [C°$_{wh}$ H. [$_{vP}$ [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ [C° [PRO [$_{vP}$ [v° [$_{VP}$ write letter]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

b. [$_{CP}$ [C°$_{wh}$ H. [$_{vP}$ [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ [C° [PRO$_{ERG}$ [$_{vP}$ letter [v° [$_{VP}$ write _]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

The derivation sketched in (66) shows how the ergative-dative case frame in (61c) can arise from the configuration that produces (60a). After moving to the embedded [Spec,vP] and triggering ergative on the subject (66b), the *wh*-word moves to the specifier of the embedded CP (66c). Here, unlike in previous derivations we have seen, no dependent case interaction takes place, as the object of 'help' already has an inherent/lexical dative. From there, the *wh*-word moves to the specifier of the matrix vP, where it triggers ergative on the matrix subject (66d), and subsequently, case-inertly, to the specifier of the matrix CP (66e).

(66) a. [$_{CP}$ [C°$_{wh}$ H. [$_{vP}$ [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ [C° [PRO [$_{vP}$ [v° [$_{VP}$ write what]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

b. [$_{CP}$ [C°$_{wh}$ H. [$_{vP}$ [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ [C° [PRO$_{ERG}$ [$_{vP}$ what [v° [$_{VP}$ write _]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

c. [$_{CP}$ [C°$_{wh}$ H. [$_{vP}$ [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ what [C° [PRO$_{ERG}$ [$_{vP}$ _ [v° [$_{VP}$ write _]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

d. [$_{CP}$ [C°$_{wh}$ H.$_{ERG}$ [$_{vP}$ what [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ _ [C° [PRO$_{ERG}$ [$_{vP}$ _ [v° [$_{VP}$ write _]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

e. [$_{CP}$ what [C°$_{wh}$ H.$_{ERG}$ [$_{vP}$ _ [v° [$_{VP}$ Melljo$_{DAT}$ [help [$_{CP}$ _ [C° [PRO$_{ERG}$ [$_{vP}$ _ [v° [$_{VP}$ write _]]]]]]]]]]

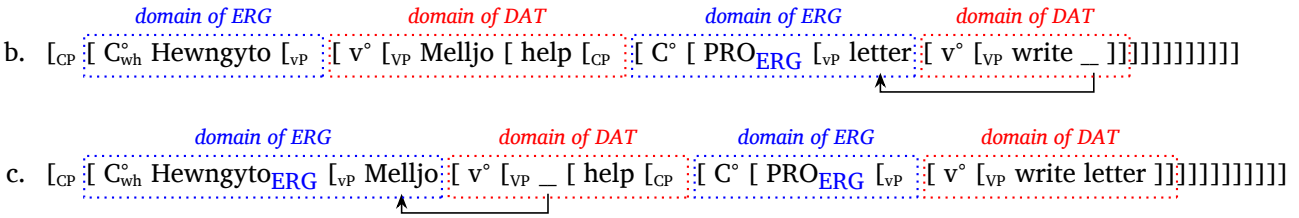
domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

The structure that gives rise to the declarative sentence in (60b), where 'help' takes an ergative-absolutive case frame, is schematized in (67). Here, both objects move to their respective CPs to trigger ergative on their respective subjects.[42]

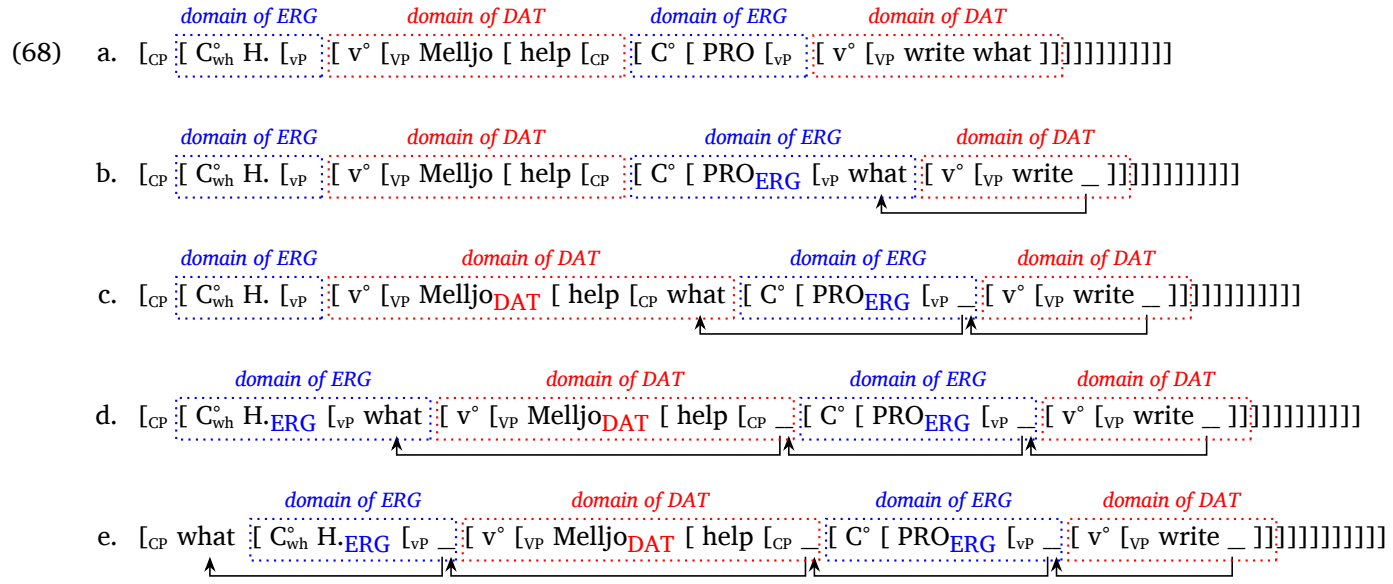
(67) a. [$_{CP}$ [C°$_{wh}$ Hewngyto [$_{vP}$ [v° [$_{VP}$ Melljo [help [$_{CP}$ [C° [PRO [$_{vP}$ [v° [$_{VP}$ write letter]]]]]]]]]]

domain of ERG *domain of DAT* *domain of ERG* *domain of DAT*

[42]We might wonder whether any of the case frames for 'help' instantiates a raising-to-object structure rather than the object control structure I have represented here. This is in principle possible: I have yet to find syntactic diagnostics that are able to distinguish raising from control in Koryak. If it is raising, either that raising must occur prior to movement of the object out of the VP, so that the raised nominal does not get assigned ergative case, or the case on the raised element must be able to be overwritten when it moves into the matrix clause.



In (68, we can see how the derivation of the sentence in (61c) proceeds from the same initial structure. The *wh*-word first moves to the specifier of the embedded vP (68b), and from there to the specifier of the embedded CP (68c), where it triggers dependent dative on the matrix object. From there, it moves to the matrix vP (68d), triggering ergative on the matrix subject, and subsequently to the matrix [Spec,CP] (68e).[43]



7.2 Against Other Approaches

One of fundamental aspects of the dependent case system is that dependent case only arises when neither of the two nominals that are in the same case domain has case-marking. This correctly predicts the fact that the subjects of verbs that take a non-absolutive complement are never marked ergative, as shown above in (11-12). We have seen in (62-64) that the movement of non-absolutives across an absolutive noun phrase does not have the same effect. This provides evidence against a possible counterproposal inspired by Rackowski and Richards (2005), who argue on the basis of data from Tagalog that extraction out of a phase requires agreement with that phase as an 'unlocking' mechanism. Given that CPs do not generally trigger object agreement, as seen by the fact that verbs like *valom-* 'hear' can take intransitive agreement when they have a CP complement, this account would have the CP be nominalized just in case long-distance extraction would take place out of it so as to be an acceptable target for agreement. This nominalized CP would then be the case competitor for the other arguments in the clause. The fact that the case

[43]The same caveat mentioned in footnote 38 applies here: it is necessary for the moving *wh*-word to already be in the embedded [Spec,CP] when material from the higher clause merges, in order to prevent the matrix object from moving out of the VP, and thus becoming ineligible for dependent dative.

interactions are sensitive to the case of the moving element shows that this cannot be right, as the case of the moving element has no reason to interact with whether or not (or how) the clause is unlocked. Furthermore, the claim that the clause must be agreed with runs into the immediate problem that, as we saw in (26) and (27a), repeated below as (69a) and (69b), the matrix verb actually agrees with the moving *wh*-word.

(69) a. jej-u$_i$ {ɣə-nan / *ɣətɕ͡tɕi} ∅-valom-na-w, əno
what-ABS.PL {2SG-ERG / *2SG.ABS} 2/3.S/A.IND-hear-3.O-3PL that
ʔewŋəto-na-k ∅-j-ə-t͡ɕim-aw-nin t_i
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A > 3.O
'What all did you hear that Hewngyto broke?'

b. jej-i$_i$ {ɣə-nan / *ɣətɕ͡tɕi} ∅-valom-na-t, əno
what-ABS.DU {2SG-ERG / *2SG.ABS} 2/3.S/A.IND-hear-3.O-3DU that
ʔewŋəto-na-k ∅-j-ə-t͡ɕim-aw-nin t_i
Hewngyto-OBL.SG-ERG 2/3.S/A.IND-CS-EP-break-VBLZ-3SG.A > 3.O
'What two things did you hear that Hewngyto broke?'

Accounting for these facts on an inherent theory of ergative and dative case would also not be possible.[44] The primary insight of inherent case theory is that there is a relationship between the thematic role a noun is assigned and the case-marking that it bears. There is no way that this can be reconciled with this paper's primary empirical contribution, that the case that a noun bears is in part dependent on the case marking of the noun phrases that came to be local to it over the course of the derivation. At best, an inherent analysis of these cases would have to be supplemented with a component that duplicates the analysis presented here, conceding the point that dependent case is a necessary mechanism for accounting for the distribution of morphological case.

7.3 Case and (Successive-Cyclic) A'-Movement Crosslinguistically

An obvious question that this analysis raises that I have thus far left unaddressed concerns the seeming rarity of the phenomenon discussed here: if Universal Grammar permits dependent case competition to be triggered at every step along a nominal's movement chain, why has this not been noticed before? After all, case-marking and A'-movement are among the most widely-studied syntactic phenomena, so we would expect similar facts to have already been brought to light.

It is worth noting that the proposal I advance is not intended to apply to all languages, so it may be that whatever allows a language to have dependent case triggered by successive-cyclic movement is quite rare. As an example of a language where these two do not interact, consider the Russian facts in (70). Here, the movement of a nominative *wh*-word from the embedded into the matrix clause results in them both remaining nominative.[45] Were dependent case triggered by moving a caseless noun phrase into same case domain as the matrix subject, we would expect one of the two noun phrases (presumably the lower one), to bear accusative case, contrary to fact.

[44]Note that here I restrict my attention to the agreed-with datives, as I assume that dative-marked applicativized noun phrases (20d), for example, are assigned an inherent case.

[45]Note the *that-trace* effect in (70b), which is unacceptable with an overt complementizer.

(70) a. ja dumaju, čto Vasja živët v ètom dome.
I.NOM think.1SG.PRS that Vasya live.3SG.PRS in.this.house
'I think that Vasya lives in this house.'

b. {kto / *kogo} {ty / *tebja} dumaeš _ živët
who.NOM / who.ACC you.NOM / you.ACC think.2SG.PRS live.3SG.PRS
v ètom dome?
in.this.house
'Who do you think lives in this house?'

Although it is clear that there are not the kind of interactions we find in Koryak in all languages, patterns like the *wh*-movement-fed case assignment are not quite as rare as they may seem. There are well-known cases where an A'-moving element bears case-marking it would not have without that movement. For example, in Hungarian, when a focused noun phrase moves out of an embedded clause across a verb that can take a nominal complement, that noun phrase gets the case that would be assigned to the noun. We see this with accusative and sublative in (71). Furthermore, É. Kiss (1987, 140) reports that non-nominatives do not get their case overwritten when focus-moving cross-clausally.[46] If accusative in Hungarian patterns like a dependent case, and nominative is the absence of case, then the sentence in (71a) can be seen as the counterpart in an accusative language of the Koryak facts we have seen: a caseless noun gets assigned dependent (accusative) case at an intermediate step of movement (the embedded [Spec,CP]) where it is c-commanded by another caseless noun.[47]

(71) a. Péter-{t/*∅} mondtam, hogy jön.
Peter-{ACC/*NOM} say.1SG.PST COMP come.3SG
'It was Peter I said would come.' Eszter Ronai, p.c., based on Coppock (2004)

b. Péter-{re/*∅} gondoltam, hogy jöhetne.
Peter-{SUBL/*NOM} think.1SG.PST COMP come.3SG.POT
'It was Peter I thought could come.' Eszter Ronai, p.c.

One variety of English, discussed in Kayne (1984), also has a pattern reminiscent of the Koryak pattern described in this paper. For speakers for whom the distinction between *who* and *whom* is one of case, Kayne reports that a subject *wh*-word extracted across a predicate with a thematic subject (*say, tell, believe*) may be marked with the accusative *whom*, while it must be nominative if the predicate has an expletive subject (*be obvious*). If we assume that expletive subjects do not count as case competitors in English, the data shown here also fall out on an analysis where dependent case is triggered at an intermediate step of A'-movement: when the moved caseless *wh*-word is in the specifier of the intermediate CP (or possibly of the matrix vP), if it is c-commanded

[46]While É. Kiss reports that the overwriting of nominative case in focus-movement constructions is preferred though not required, the native-speaker-linguist of Hungarian that I consulted rejected the sentences where the nominative was not overwritten.

[47]Presumably the sublative in (71b) is a lexical case, and so would not be assigned by case competition. Rather, it is assigned to the moving element because it is sufficiently local to the verb 'think' when it is in the intermediate [Spec,CP].

by a non-expletive subject, it is sufficiently local to that subject to receive dependent accusative.[48]

(72) a. %the people whom$_i$ you say / they tell me / I believe t_i are extremely bright
b. *the people whom$_i$ it is obvious t_i like you

8 Conclusion

In this paper, I have described a novel pattern involving the interaction of *wh*-movement and case marking, whereby the case that a noun bears is dependent on whether or not an absolutive *wh*-word has moved past it. Specifically, a subject that would otherwise be absolutive receives ergative case, and an object that would otherwise be absolutive receives dative case. I have analyzed it by appealing two proposals, configurational case assignment and successive-cyclic movement, which have not before been argued to interact. This analysis therefore serves as a novel argument for both the existence of configurational case assignment as well as the existence of intermediate landing sites of *wh*-movement. The discussion of Hungarian and English has shown that there are patterns from other (well-studied) languages that are plausibly derived by the same interactions that I have argued are found in Koryak. Further investigation into languages that have both dependent case and long-distance movement will hopefully uncover more such cases.

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[48] Yuan (2018) argues that the distribution of clause-internal object movement predicts the differing degrees of ergativity across the Eskimo-Aleut languages. In particular, she argues that the moving object is responsible for triggering ergative morphology on the subject, rather like the Koryak *wh*-movement facts. It is less clear, however, that this movement is an A'-movement like ones in Koryak and, potentially, Hungarian and English.

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