Notes on Finnish Nonfinite Clauses[*]

Paul Kiparsky
Stanford University

Dear Lauri: This brief description of the morphosyntax of Finnish nonfinite clauses does not meet your high standards of formalization and exhaustive data coverage, but I offer it in the hope that it will be an interim step towards one that does. I draw attention to the close match of the morphology of their participial and infinitival heads with their syntax, and to the sentential properties of propositional participial complements (*referatiivinen lauseenvastike*), which unlike other types of participial clauses have external arguments rather than nominal specifiers and verbal rather than adjectival heads. As always in Finnish syntax, structural cases play a big role in the analysis. I argue that they are decomposed into features which are defined at three levels of grammar.

1 Participles and Infinitives

1.1 The Morphological Data in Summary

Finnish nonfinite verb forms assign case to their objects like finite verbs, but unlike finite verbs they they are inflected for case and have either genitive or controlled PRO subjects. Three convergent morphosyntactic criteria divide them into PARTICIPLES and INFINITIVES.[1] *(1)* Participles distinguish the verbal inflectional categories of voice and aspect, infinitives do not. *(2)* Participles head nominalized clauses that function as heads of propositional complements and adjuncts, and of adjectival and adverbial modifiers (relative clauses), whereas infinitives head nominalized VPs, functioning as arguments when they bear direct cases, and as adjuncts when they bear bear oblique cases. *(3)* Participles can have overt subjects, marked with genitive case, while infinitive complements require obligatory control.

(1)

	1. Participles	*2.* Infinitives
Functional verbal categories	Voice and aspect	No voice or aspect
Syntactic function	Adjectival or nominal	Nominal
Subject	Genitive	Obligatory control (PRO)

Participles and infinitives can each be divided into two types, DIRECT and OBLIQUE, according to whether they bear structural case or oblique ("inherent") case. DIRECT PARTICIPLES function as predicates and modifiers (non-finite relative clauses), and in addition head nonfinite propositional clauses that function as direct arguments equivalent to finite *that*-clauses, gerunds, and ECM constructions. (2) shows the participle stems of *tuo-* 'bring'.

---

[1]See Manninen 2012 for arguments that these verb forms and the clauses that they head are nonfinite.

(2)

	Active	Passive
Non-Perfect	*tuo-va*	*tuo-ta-va*
Perfect	*tuo-nut*	*tuo-tu*

(3a-d) illustrate the adjectival (relativizing) function of the participles in (2). The modal construction with a genitive subject (3e,f) is restricted to the non-perfect passive participle.[2]

(3)   a. **tule-va**   ja **mene-vä** hallitus
       come-PTC.NOM and go-PTC.NOM government.NOM
       'the incoming and the departing government'

      b. **usko-tta-va**   asian-tunti-ja
         believe-PASS-PTC.NOM thing-know-er.NOM
         'a/the credible expert'

      c. **men-nyt**   vuosi
         go-PERF.PTC.NOM year.NOM
         'the past year'

      d. valtuusto-lle   **tuo-tu**   esitys
         commission-ALLAT bring-PERF.PASS.PTC proposal.NOM
         'a/the proposal brought to the commission'

      e. Linksysi-n reiti-tt-im-i-ssä   on **mado-n men-tä-vä**   reikä.
         Linksys-GEN route-CAUS-INSTR-PL-INESS be.3SG worm-GEN go-PASS-PTC.NOM hole.NOM
         'Linksys' routers have a hole that a worm can go through'

      f. **yhde-n maat-ta-va**   sänky
         one-GEN lie-PASS-PTC.NOM bed.NOM
         'a/the bed for one person to lie in'

Direct participles also combine with the copula into periphrastic forms.

(4)   a. on tuo-va 'is to bring'

      b. on tuo-ta-va 'is to be brought'

      c. on tuo-nut 'has brought'

      d. on tuo-tu 'has been brought'

OBLIQUE participles, traditionally called "SECOND INFINITIVES" for historical reasons, but participial by the three criteria in (1), bear inessive case or instrumental case ("instructive" in Finnish grammatical terminology), and form temporal adjunct clauses.

---

[2]In the glosses, PTC = Participle, INF = Infinitive, PERF = Perfect, PASS = Passive, NOM = Nominative. Unmarked categories such as Non-Perfect aspect, Active voice, and Singular number are generally not glossed. Examples here and below come from literary and colloquial internet sources, complemented for the sake of clarity of exposition with constructed sentences (mostly about bears). I am grateful to Arto Anttila and Lauri Karttunen for sharing their acceptability judgments; I take full responsibility for any errors.

(5) Oblique participle forms (adjuncts)

		Active	Passive
Non-Perfect	Inessive	*tuo-de-ssa*	*tuo-ta-e-ssa*
	Instrumental	*tuo-de-n*	—
Perfect	Partitive	*tuo-tu-a*	—

The inessive is added both to the active stem and to the passive stem. The instrumental case is restricted to the active stem, and has, in addition to its temporal use (6c), also a manner or means interpretation (6d). The perfect counterpart, also active, is supplied by the partitive of the perfect passive *-(t)tu-* participle, see (6e,f).[3] The active participles can have a genitive subject, see (6a,c,e).[4]

(6) a. Kehu   las-ta   tois-ten   las-ten   **kuul-le-ssa**.
        praise-IMP child-PART other-PL.GEN child-PL.GEN hear-PTC-INESS
        'Praise a child while the other children hear.'

     b. Mi-hin   suoja-udu-taan **kuul-ta-e-ssa**   yleinen   vaaramerkki?
        what-ILLAT cover-INCH-PASS hear-PASS-PTC-INESS general.ACC$_{NOM}$ danger-sign.ACC$_{NOM}$
        'Where does one take cover on hearing the general alarm signal?'

     c. Vanhemma-t saa-vat riidel-lä las-ten-kin   **kuul-le-n**.
        parent-PL.NOM may-3PL fight-INF child-PL.GEN-TOO hear-PTC-INSTR
        'It's OK for parents to fight even in earshot of the children.'

     d. Istu-i-mme jala-t   maa-ta   **koske-tta-e-n**.
        sit-PAST-1PL foot-PL.NOM ground-PART touch-CAUS-PTC-INSTR
        'We sat with our feet touching the ground.'

     e. Ainei-sto   hävi-te-tään   heti   se-n **tul-tu-a**   tarpee-ttoma-ksi.
        material-ACC$_{NOM}$ disappear-CAUS-PASS immediately it-GEN become-PTC-PART need-less-TRANSL
        'The material is destroyed as soon as it is no longer needed.'

     f. Se-n   **kuul-tu-a**   Minttu pyörä-ht-i   ympäri.
        it-ACC$_{GEN}$ hear-PTC-PART Minttu turn-MOMENT-PAST.3SG around
        'When she heard that, Minttu suddenly turned around.'

INFINITIVES are aspectless and voiceless. Like participles, they are divided by their case inflection into a direct and an oblique type, which together cover approximately the territory of English infinitives and gerunds. The direct form of the infinitive in /-ta-/,[5] the traditional "FIRST INFINITIVE", makes direct propositional arguments that function as subjects and objects.

(7) a. Halus-i-n   **ampu-a** karhu-n.
        want-PST-1SG shoot-INF bear-ACC$_{GEN}$
        'I wanted to shoot a/the bear'

---

[3]This is one of several uses of the Partitive as an inherent case rather than as a structural case.

[4]In anticipation of the upcoming discussion I gloss morphosyntactic Accusative Case with a subscript showing the morphological case that expresses it. For example, the object in (6b) and (6e) bears abstract morphosyntactic Accusative Case, realized as morphological nominative case by the rules to be stated in (21) below. This will become important shortly, but until then the reader may ignore the subscripts.

[5]Marked by an abstract consonant *-C*, see (9). The *-C* is realized in phonologically regular ways, including gemination of a following consonant, which is not indicated in the orthography or in the examples given here.

b. **Ymmärtä-ä** o-n **anta-a** antee-ksi.
understand-INF be-3SG give-INF pardon-TRANSL
'To understand is to forgive.'

With the translative singular case ending, infinitives in /-ta-/ head purpose clauses similar to *for to*-infinitives. They have an obligatory possessive suffix that identifies the person/number of its controlled null (PRO) subject.

(8) Ot-i-n aikalisä-n **tuo-da-kse-ni** kuri-a peli-i-mme.
take-PAST-1SG timeout-**acc_gen** bring-INF-TRANSL-1SG discipline-PART game-ILLAT-1PL

'I took a timeout in order to bring discipline to our game.'

"Third infinitives" in *-ma* are inflected with oblique cases and make adverbial clauses with functions determined by those cases.

(9) Oblique ("third") infinitives in *-ma*

Illative *-Vn*   *tuo-ma-an* 'to bring'
Elative *-sta*   *tuo-ma-sta* 'from bringing'
Adessive *-lla*   *tuo-ma-lla* 'by bringing'
Abessive *-tta*   *tuo-ma-tta* 'without bringing'
Instructive *-n* *tuo-ma-n* (archaic, e.g. *pitää tuoman* 'is obliged to bring')

An ending homonymous with the "third infinitive" in *-ma*, and etymologically related to it, also functions as a relativizer. In this function, it is by our criteria really a participle (traditionally called the "agent participle"), with all the participial hallmarks: it allows passive voice and perfect aspect, heads attributive relative clauses, takes a genitive subject, and triggers possessive agreement.

(10) a. (Minä) nä-i-n Mati-n **tuo-ma-n** karhu-n.
(I) see-PST-1SG Matti-GEN bring-PTC-ACC_GEN bear-ACC_GEN
'I saw the bear that Matti brought.'

b. (Sinu-n_i) **tuo-ma-lla-si_i** karhu-lla ol-i upea talja.
you-GEN bring-PTC-ADESS-2SG bear-ADESS be-PAST.3SG fine.ACC_NOM pelt.ACC_NOM
'The bear that you brought had a magnificent pelt.'

c. Karhu o-n minu-n_i **tuo-ma-ni_i**.
bear.NOM be-3sg me-GEN bring-PTC-1SG
'The bear is brought by me.'

The *-ma-* participle can also be affixed with the privative suffix /-ttoma-/ (nom. *-ton*) to furnish the negation of the adjectival uses of the other participles:

(11) a. *parantu-ma-ton* (1) 'incurable', (2) 'uncured', respectively negating *parantu-va* 'healing, convalescing' and *parantu-nut* 'cured'

b. *taipu-ma-ton* (1) 'inflexible', (2) 'not bending', (3) 'unbent', respectively negating *taipu-va* 'flexible' (e.g. *taipuva lanka* 'a flexible wire'), 'bending, curved' (e.g. *taipuva liike* 'an oblique movement'), and *taipunut* 'bent' (e.g. *taipunut lanka* 'bent wire')

c. *syö-mä-tön* (1) 'not having eaten', (2) 'not eaten', (3) 'without eating' (*syömätön päivä* 'a day without eating'), the first two meanings respectively negating *syönyt* 'having eaten' and *syöty* 'eaten'

1.2 The Syntactic Data in Summary

In addition to the three basic properties in (1), the various infinitival and participial clauses are distinguished by a range of other syntactic properties. For our purposes the most important ones are:

(12) a. the case of the head,

b. the occurrence of possessive agreement on the head,

c. the order of adverbs with respect to the head,

d. the possibility of extraction from the clause,

e. transparency of the nonfinite clause to partitive and nominative case marking on its direct object by the superordinate clause, and

f. the normal order of the nonfinite clause with respect to the superordinate clause,

g. the possibility of independent temporal reference in the nonfinite and superordinate clauses.

These properties are determined for a given nonfinite verb form by its specific syntactic function in the matrix sentence. Descriptively, nonfinite clauses function as: *(A) direct arguments*, viz. subjects and direct objects, *(B) oblique arguments* and *VP adverbials*, primarily adverbs that express goal, manner, or means, *(C) adjunct adverbials* of time and purpose, and *(D)* attributive modifiers corresponding to relative clauses.

What follows is a synopsis of the basic syntactic data to be accounted for, organized according to these four functions.

(13) Functions and properties of nonfinite clauses in Finnish

(A) Direct arguments	(A1) *ampu-va, -nut, -ttu*	(A2) *ampu-a*
Type of head	Direct participle /-va, -nut, -ttu/	Direct infinitive /-taC/
Function of clause	Subject, object	Subject, object
Marking of clausal head	/-n/	—
Clausal subject	Genitive	PRO
Genitive Subject incorporation?	No	—
Extraction possible?	Marginally	Yes
Transparent to partitive rule?	Depends on scope and factivity	Yes
Transparent to nominative rule?	Yes	Yes
Order w.r.t. main clause	Follows main clause	Follows main clause
Independent temporal reference	Yes	No

(B) Oblique comps, VP adverbs	(B1) *ampu-e-n*	(B2) *ampu-ma-an, -lla, . . .*
Type	Oblique participle /-te-/	Oblique infinitive /-ma-/
Function	Manner and circumstance	Goal and means
Marking of clausal head	Obl. (instr.)	Obl. (illat., adess., . . .)
Clausal subject	Genitive	PRO
Genitive Subject incorporation?	Yes	—

Extraction possible?	No	No
Transparent to partitive rule?	Depends on scope and factivity	Yes
Transparent to nominative?	Optionally	Yes
Order w.r.t. main clause	Variable	Variable
Independent temporal reference	Yes	No

C. Adjunct adverbials	(C1) *ampu-e-ssa*	(C2) *ampu-a-kse-ni*
Type	Oblique participle /-te-/	Direct infinitive /-ta-/
Function	Temporal clauses	Purpose clauses
Marking of clausal head	Oblique (local cases, partitive)	Oblique (translative case)
Clausal subject	Genitive	PRO
Genitive Subject incorporation?	Yes	—
Extraction possible?	No	No
Transparent to partitive rule?	Yes	Yes
Transparent to nominative rule?	Yes	—
Order w.r.t. main clause	Variable	Variable
Independent temporal reference	Yes	No

D. Attributive modifiers	(D1) *ampu-va, -nut, -ttu, -ma*
Type	Direct ptc. /-va, -nut, -ttu, -ma/
Function	Relative clauses
Case of clausal head	Agrees with modified N
Clausal subject	Genitive
Genitive Subject agreement?	No
Extraction possible?	No
Transparent to partitive rule?	No
Transparent to nominative rule?	No
Order w.r.t. main clause	Prenominal
Independent temporal reference	Yes

"Variable" word order as per the table does not include contrastive focus fronting, which can apply to all clauses. It is of course affected by discourse information structure (functional sentence perspective).

We begin with the participial and infinitival complement clauses in set A.

2 Direct Arguments: Propositional Complements (Data Set A)

2.1 Case Assignment

The clause types in (13A) are subject and object complements with propositional force. Participial complements (13A1) function as objects of verbs such as "say", "think", "want", and as subjects of intransitive verbs such as "appear" and "become evident". The examples in (14) demonstrate the construction of participial complement clauses. The *-n* suffix of the participle is glossed for now as *-C*; I will argue later that it is a Complementizer and not a Case ending.

(14) a. Ties-i-n   heidä-n tappa-nee-n   / tappa-va-n karhu-n.
       know-PST-1SG they-**GEN** kill-PERF.PTC-C / kill-PTC-C   bear-**ACC**_{**GEN**}
       'I knew that they had killed / were (would be) killing a/the bear'

      b. E-n   tien-nyt   heidä-n tappa-nee-n   / tappa-va-n karhu-n   / karhu-a.
       Not-1SG know-PERF.PTC they-GEN kill-PERF.PTC-C / kill-PTC-C   bear-**ACC**_{**GEN**} / bear-**PART**
       'I didn't know that they had killed / were (would be) killing a/the bear'

      c. Ties-i-n   metsä-ssä tape-tu-n   karhu-n   / karhu.
       know-PST-1SG forest-ILL   kill-PERF.PASS.PTC-C bear-**ACC**_{**GEN**} / bear-**ACC**_{**NOM**}
       'I knew a bear to have been killed in the forest'

      d. Nyt tiede-tään   tape-tu-n   karhu   / *karhu-n.
       now know-PRES.PASS kill-PERF.PASS.PTC-C bear-**ACC**_{**NOM**} / bear-**ACC**_{**GEN**}
       'It is now known that a bear has been shot'

      e. Eilen   ilmen-i   ammu-tu-n   karhu   / *karhu-n.
       Yesterday turn-OUT-PST.3SG shoot-PERF.PASS.PTC-C bear-**ACC**_{**NOM**} / bear-**ACC**_{**GEN**}
       'It turned out yesterday that a bear was shot'

I assume that structural cases are represented by values of the cross-classifying features [±H(ighest) R(ole)] and [±L(owest) R(ole)] (see e.g. Kiparsky 2001). At the level of argument structure, these features represent grammatical relations/functions. Abstract structural Case features are assigned to Theta-roles (lambda-abstractors) according to their depth in Semantic Form. This yields the four basic abstract grammatical relations distinguished in the typological literature.

(15) a. [+HR,+LR]   Intransitive Subject (S)
      b. [+HR,–LR]   Transitive subject (A)
      c. [–HR,+LR]   Direct Object (O)
      d. [–HR,–LR]   Indirect object (D)

At the morphosyntactic level, the features define structural Cases. The syntax constructs the optimal match between the abstract Case array built on a Semantic Form and the morphosyntactic structural Case features of syntactic arguments. Structural Cases are most simply treated as purely differential entities, marked only with the negative values of the features:

(16) a. Nominative: [   ]
      b. Ergative: [–LR]
      c. Accusative: [–HR]
      d. Dative: [–HR,–LR]

For example, assume that a language has a verb "show", decomposed into "cause to be able to see", and that it has Nominative, Accusative, and Dative (but not Ergative) structural Case. The Semantic Form (17a) provides three Theta-roles, which are assigned abstract Case and optimally matched with structural Case as shown in (17b):

(17) a. $\lambda z\lambda y\lambda x[x$ CAUSE [CAN [y SEE z]]]

$$\overset{\lambda z}{\begin{bmatrix} -HR \\ +LR \end{bmatrix}} \quad \overset{\lambda y}{\begin{bmatrix} -HR \\ -LR \end{bmatrix}} \quad \overset{\lambda x}{\begin{bmatrix} +HR \\ -LR \end{bmatrix}}$$

b.

$$[-HR] \quad \begin{bmatrix} -HR \\ -LR \end{bmatrix} \quad [\quad]$$

A language's repertoire of morphosyntactic structural Case is determined by its morphology and functional categories. Arguments can get morphosyntactic Case features from case morphology, from the agreement relations they enter into, and/or from the structural positions they occupy. (This is the major locus of differences between languages.)

From this perspective, diatheses ("relation-changing processes") are operations on the feature [±HR].

(18)   a. Passive: demotes (existentially binds) [+HR] (valency reduction).

   b. Antipassive: demotes [–HR] (all but the highest Theta-role, intransitivization).

   c. Causative: adds/promotes [+HR] (valency increase).

   d. Applicative: adds/promotes [–HR] a non-highest Theta-role (transitivization).

For example, Finnish passive morphology existentially binds the [+HR] role and assigns it the feature [+Human], without "promoting" the object, which remains morphosyntactically Accusative (e.g. (21c)).[6]

The abstract Nominative (subject) argument of a participial clause, as in any adnominal context, is always genitive. The unmarked morphosyntactic expression of abstract Accusative (object) arguments is Partitive Case (Vainikka & Maling 1996: 186 ff.). Partitive Case is invariably assigned to complements of nonverbal categories, such as adjectives, numerals, quantifiers, and interjections, to all negated objects, and to objects of a proper subclass of atelic verbal predicates. The marked morphosyntactic expression of abstract Accusative Case, restricted to the objects of a certain class of verbs in affirmative contexts, is morphosyntactic Accusative Case, which is morphologically expressed on nouns as genitive or nominative depending on the syntactic context, and on personal pronouns as accusative.

The above three-level distinction must be made in one way or another in order to describe the case marking of objects in Finnish, but there are several ways of doing it, some of which differ in their theoretical assumptions, others only terminologically. The grammatical function "object" is here identified as abstract Accusative Case, specified on Theta-grids as as [–HR]. This is based on the idea that grammatical relations and structural cases are defined by the same features but at different levels of grammar (Semantic Form and argument structure). Abstract Accusative Case is realized as morphosyntactic Partitive or Accusative, as mentioned in the preceding paragraph. Morphosyntactic Accusative is treated in two different ways by Finnish grammarians. Some call it accusative case, and consider genitive-marked, nominative-marked, and accusative-marked objects to be different "forms" of accusative case.[7] Others (notably Hakulinen et al. 2004) identify morphosyntactic Accusative as a distinct grammatical function "total object", and refer to its respective morphological case realizations as accusative object, genitive object, and nominative object.

Theory and terminology aside, what is important and uncontroversial here is that genitive, nominative, and accusative as object markers are not just allomorphs of a single morphological case. All are identical with existing morphological cases that have independent uses, and their distribution as object markers is governed by complex *syntactic* conditions, not by morphological context as would be expected of allomorphs (see particularly (20b) below).

(19) and (20) provide a synopsis of structural object case in Finnish.

---

[6]On Finnish passives, see Manninen & Nelson 2004. In Kiparsky 2013 I propose a typology of passives from this point of view.

[7]E.g. *nominatiivin kaltainen akkusatiivi*, *nominatiivimuotoinen akkusatiivi*, *nominatiiviakkusatiivi*, or *päätteetön akkusatiivi* "nominative-like (or nominative-shaped) accusative", "nominative-accusative", "endless accusative".

(19) Abstract Accusative Case is realized

      a. as morphosyntactic Accusative Case on the complement of an affirmative quantitatively determinate VP,

      b. as morphosyntactic Partitive Case elsewhere (in any other type of VP, and on the complement of any nonverbal category).

(20) Morphosyntactic Accusative is realized

      a. as morphological accusative on personal pronouns (except *se* "it", which patterns morphologically with demonstrative and interrogative pronouns),

      b. otherwise as morphological genitive if the object is singular and the clause has a subject that agrees with the predicate (Vainikka & Brattico 2014, Anttila & Kim 2017).

      c. otherwise as morphological nominative.

Clause types with nominative objects by (20b) include imperatives, bare infinitives ("to see Naples and to die"), passives (which in Finnish do not involve "promotion" of the object), and clauses with "quirky case" subjects.[8]

It is because of these complexities that I add to morphosyntactic Accusative in the glosses a subscript showing the morphological case by which it is expressed, as already mentioned. For example, the objects of thesentences in (21) bear abstract and morphosyntactic Accusative Case, realized in (21a) as morphological genitive case, in (21b) as morphological nominative case, and in (21c) as morphological accusative case.

(21) (a) Hän   ampu-i   karhu-n   (b) ammu   karhu!   (c) häne-t   näh-dään
        he.NOM shoot-PST.3SG bear-ACC$_{GEN}$ shoot-IMPER bear-ACC$_{NOM}$ he-ACC$_{ACC}$ see-PASS

        'he shot the/a bear'   'shoot the/a bear!'   'he is seen'

To further help the reader, I capitalize the names of the abstract and morphosyntactic Cases (e.g. Accusative) and use lower case for the names of morphological cases (accusative, nominative, genitive).

As if matters are not already complicated enough, the assignment of Partitive and Accusative morphosyntactic Case by (19) as well as the condition (20b) on morphological case assignment can be evaluated both within a participial clause and within the larger clause that contains it. The object of the participial clause can take its cue *either* from the participle that governs it, *or* from the main clause. This is the source of the case variation we have seen in (14). Thus, in sentence (14b), the object can be Partitive because of the negation in the main clause, or Accusative (realized as morphological genitive case) because the participial clause is affirmative. In (14c), the morphosyntactically Accusative object is realized either (and in fact preferably) as morphological accusative because the main clause has an agreeing subject, but it can also be morphological nominative because its own clause is subjectless. In (14d) and (14e), the morphosyntactically Accusative object is morphologically nominative because neither the main verb nor the participle has

---

[8]Weather verbs count as having a subject even though it is mostly missing, e.g. *eilen (taivas) satoi pysyvän lumen* 'yesterday (the sky) precipitated a permanent snow', where the Accusative *lumen* is morphologically genitive.

an agreeing subject. For an in-depth study of these intricate data and the structural factors that condition the variation of morphological object case in nonfinite clauses see Anttila and Kim (2017), which argues for a bottom-up cyclic (stratal) model of structural case assignment.[9] An alternative also worth exploring is that the variation is due to optional RESTRUCTURING of nonfinite clauses in the sense of Wurmbrand (2014, 2015).

With respect to case assignment, then, participial complement clauses are neither fully opaque domains, nor totally transparent ones, but complexly translucent.

2.2 The Sentential Character of Participial Propositional Clauses

In this section I argue that participial propositional clauses are structurally analogous to finite sentences in several respects. Their genitive subjects are true external arguments, except that they are not nominative because they cannot agree with the non-finite verbal predicate. Genitive subjects of other nonfinite clauses, on the other hand, pattern more like genitive possessors of nominals. I argue that the genitive subjects of participial propositional clauses are external arguments, structurally higher than possessors of NPs, that the clauses are CPs rather than NPs, and that their participial predicate is truly verbal, not adjectival like most participles.

The first argument that the genitive subject of a participial propositional clause is an external argument and not a possessor is that it does not possessor-agree with the participle. Possessor-agreement is a hallmark of genitive possessors of nouns (22a), and also of genitive subjects of other participles, such as specifiers of oblique participles ("second infinitives") (22b), and of agent participles (22c). The genitive possessor is normally omitted, unless it is emphasized, but the possessive suffix is required regardless.

(22)   a. (minu-n$_i$) karhu-ni$_i$
           (my-GEN) bear.NOM-1SG

        b. (minu-n$_i$) ampu-e-ssa-ni$_i$ karhu-n
           me-GEN   shoot-INF-ILLAT-3SG bear-ACC$_{GEN}$
           'as I shot the/a bear'

        c. (teidä-n$_i$)   ampu-ma-nne$_i$ karhu
           (you.pl-GEN) shoot-INF-2PL   bear.NOM
           'the/a bear that I shot'

Possessor agreement does *not* apply in participial propositional clauses:

(23)   a. Ties-i-t   minu-n$_i$ ampu-va-n   (*ampu-va-ni$_i$)   karhu-n.
           know-PST-2SG me-GEN   shoot-PERF.PTC-C (shoot-PERF.PTC.C-1SG) bear-ACC$_{GEN}$
           'You know that I (have) shot the/a bear'

b. Selvis-i   teidä-n$_i$ ampu-nee-n   (*ampu-nee-nne$_i$)   karhu-n.
transpire-PST-2PL you.PL-C shoot-PERF.PTC-C (shoot-PERF.PTC.C-2PL) bear-ACC$_{GEN}$
'it became clear that you had shot the/a bear'

In the first and second persons, the possessive suffix can be used provided the pronoun is omitted. Following Toivonen 2000, I assume this is not agreement plus obligatory pronoun deletion but rather pronoun incorporation, or pronominal inflection. The point is that in (22) the possessive suffix is fine even if the pronoun is omitted, as it normally is, unless it is emphasized. Since possessor agreement otherwise takes place between a genitive specifier and its nominal head, the systematic lack of possessor agreement in participial propositional complements like (23) supports the claim that the genitive subject of participial complements is not a genitive specifier of a participial nominal, but a subject-like external argument.

A second argument is that the genitive subject of propositional participial clauses can be raised into the main clause, as in (24b), whereas possessive genitives cannot be so raised in Finnish. A fortiori, such raised subjects cannot possessor-agree with the participle either.

(24)   a. Ilmen-i   he-i-dän ol-lee-n   suku-a bin Ladeni-lle.
appear-PAST.3SG they-PL-GEN be-PERF.PTC.-C kin-PART bin Laden-ALLAT
'It turned out that they were related to bin Laden.'

   b. He   ilmen-i-vät ol-lee-n   suku-a bin Ladeni-lle.
they-NOM appear-PAST.3PL be-PERF.PTC.-C kin-PART bin Laden-ALLAT
'They turned out to have been related to bin Laden.'

A third argument that the genitive subject of participial complements is not a specifier of the participle comes from extraction. In Finnish, possessors cannot be extracted:

(25)   a. Si-llä   väite-tään saa-du-n selv-i-lle   auringo-n sijainti   pilvi-en   läpi.
it-ADESS claim-PASS get-PTC-C clear-PL-ALL sun-GEN   location.NOM cloud-GEN.PL through
'It is claimed that the sun's location has been detected with it through the clouds.'

   b. *Mi-n-kä$_i$ si-llä   väite-tään saa-du-n selv-i-lle e_i sijainti   pilvi-en   läpi?
what-GEN-Q it-ADESS claim-PASS get-PTC-C clear-PL-ALL   location.NOM cloud-GEN.PL through
'What is the location of claimed to have been detected with it through the clouds?'

Neither can genitive specifiers of tenseless nonfinite complements such as the third infinitive (26a) and the oblique participle ("second infinitive") (26b) (by the Left Branch Condition, Ross 1967: 127).

(26)   a. *Kene-n$_i$ väit-i-t e_i ampu-ma-n   karhu-n   paina-nee-n   500 kilo-a?
who-GEN   claim-PST-2SG   shoot-INF-ACC$_{GEN}$ bear-ACC$_{GEN}$ weigh-PERF.PTC-C 500 kg-PART
'The bear shot by whom did you claim weighed 500 kg?'

   b. *Kene-n$_i$ itk-i-t e_i ampu-e-ssa   karhu-n?
who-GEN   claim-PST-2SG   shoot-INF-INESS bear-ACC$_{GEN}$
'Who did you weep while he shot the/a bear?'

In contrast, subjects can be extracted from participial object complements as readily as objects can:

(27) a. Kene-n väit-i-t   ampu-nee-n   hän-tä?
         who-GEN claim-PST-2SG shoot-PERF.PTC-C he-part
         'who did you claim shot at him?'

      b. Ke-tä   väit-i-t   häne-n ampu-nee-n?
         who-PART claim-PST-2SG he-GEN shoot--PERF.PTC-C
         'who did you claim he shot at?'

As expected, there is no extraction from subject clauses:

(28) a. *Kene-n ilmen-i   ampu-nee-n   hän-tä?
         who-GEN become-clear.PST.3SG shoot-PERF.PTC-C he-PART
         'who did it become apparent had shot at him?'

      b. *Ke-tä   ilmen-i   häne-n ampu-nee-n?
         who-PART become-clear-PST.2SG he-GEN shoot-PERF.PTC-C
         'who did it become apparent he had shot at?'

    Fourth, the structural genitive subject of the participial propositional clause is diagnosed by the obligatory morphological genitive realization of the Accusative object in examples such as (29).

(29) Tiede-tään   Mati-n   näh-nee-n karhu-n   (*karhu).
     know-PAST.PASS Matti-GEN see-PART-C bear-ACC_{GEN} (bear-ACC_{NOM})

     'It is known that Matti has seen a/the bear'

If the participial propositional clause counted as structurally subjectless, the object would receive the nominative form of Accusative case by (20), since the main clause is certainly subjectless. For the object to get the genitive form of Accusative case, the genitive subject *Matin* of the participial clause (29) must be a structural subject. In contrast, (20) diagnoses "quirky" genitive subjects such as the one in (30) as non-structural. They induce the nominative (short) form of the object's Accusative Case:

(30) Häne-n pitä-ä   ampu-a karhu.
     He-GEN must-3SG shoot-INF bearACC_{NOM}

     'He has to shoot a/the bear'

    A fifth argument that the genitive argument in participial propositional clauses is a structural subject and not a possessor is that it can be a generic null subject pro_{arb}. In Finnish pro_{arb} can be a subject (Hakulinen & Karttunen 1973) but it cannot be a possessor (Vilkuna 1989): contrast (31a) and (31b). So, the fact that participial propositional clauses can have generic pro_{arb} subjects, as in (31c), supports the claim that they have structural subjects and not possessors. Moreover, they can be subjectless under the same conditions as subjects of finite clauses. For example, gerunds can have the impersonal passive form, see (31d).

(31) a. Siellä ∅ voi   tanssi-a.
         there *pro* can-3SG dance-INF
         'One can dance there.'

b. *On   mukava katsel-la ∅ valokuv-i-a.
    be-3SG nice   look-at-INF *pro* photo-PL-PART
    'It's nice to look at one's photos.'
    (OK only without an implied possessor: 'It's nice to to look at photos.')

c. Siellä väite-t-ään   ∅ voi-va-n tanssi-a.
    there   claim-PAST.PASS *pro* can-PTC-C dance-INF
    'It is claimed that one can dance there.'

d. Siellä väite-tt-iin   voi-ta-va-n   tanssi-a.
    there   claim-PAST.PASS can-PASS-PTC-C dance-INF
    'It was claimed that there is dancing there.'

Having established that propositional participial complements have a subject that bears structural case, we can build an argument that they are CPs. Structural case must be assigned, or licensed, by something. What could that assigner or licenser be? We can eliminate the possibility that the subject gets its genitive by agreement with the *-n* ending of the participle. Although the ending of the participle looks like a genitive, it is not a genitive at least synchronically. First, the participle ends in invariant *-n* even if the subject is genitive plural; the participle may not get the genitive plural ending:

(32) Huomas-i-n heidä-n ampu-nee-n   / *ampu-ne-i-den   karhu-n
     notice-PST-1SG they-GEN shoot-PERF.PTC-C / shoot-PERF.PTC-PL-GEN bear-ACC_{GEN}
     'I noticed that they had shot a/the bear'

Secondly, the participle has the same form even if the subject is not genitive but has oblique (quirky) case (see (33)).

(33) Tiede-tään   häne-llä ole-va-n   (*ole-va-lla)   avain
     know-PAST.PASS he-ADESS be-PRES.PTC-C (be-PRES.PTC-ADESS) key-ACC_{NOM}
     'It is known that he has a/the key'

So the subject and the participle's *-n* are not in any kind of agreement relation.

The second source of the subject's genitive case to consider is that it comes from 'ECM' style case-marking by the matrix verb. This alternative too can be easily eliminated. The genitive case of the complement's subject cannot be assigned by the verb of the matrix clause because it is always genitive even if the matrix verb requires some different case on its object. For example, *huomat-* 'notice' assigns regular structural case to its object: genitive alternating with accusative in personal pronouns, and with nominative in subjectless sentences. But its clausal complements always have inherent genitive subjects.

(34) a. Huomas-i-t   minu-n saapu-nee-n
         notice-PST-2SG I-GEN   arrive-PERF.PTC-C
         'You noticed that I had arrived'

     b. Huomas-i-t minu-t   / karhu-n
         know-PST-2SG me-ACC_{ACC} / bear-ACC_{GEN}
         'You knew me / a/the bear'

And *odotta-* 'wait' assigns partitive case to its object. But its clausal complements always have inherent genitive subjects.

(35)   a. Odot-i-t   minu-n saapu-va-n.
              wait-PST-2SG I-GEN   arrive-PRES.PTC-C
             'You expected me to arrive'

         b. Odot-i-t   si-tä.
              wait-PST-2SG it-**PART**
             'You expected it'

Furthermore, intransitive verbs like *selvit-* 'become clear' never assign any case to objects. But they also have complements with genitive subjects:

(36)   a. Selvis-i   hänen ampu-nee-n   karhu-n
              become-clear-PST-3SG he-GEN shoot-PERF.PTC-C bear-**ACC**_{GEN}
             'it became clear that he had shot the bear'

         b. Se   (*se-n) selvis-i
              It-**NOM** (it-**GEN**) become-clear-PST-3SG
             'It became clear.'

The conclusion is that the genitive case on the subject of the participial complement cannot come from the matrix verb by some kind of 'ECM' case marking.

The remaining possibility is that the genitive case is assigned by a complementizer. The natural candidate for the complementizer is the invariant ending *-n* of the participle, which we have been glossing as -C. This appears to be the element that confers a full clausal complement status on the participle and allows it to function as an argument.

Treating propositional participial clauses as CPs has the added benefit that the complementizer can be the locus of their selectional restrictions. Unlike English gerunds, Finnish propositional participial clause never function as external arguments. That is, they can be objects of transitive verbs such as "say", "think", "want", "prove", "remember" and "hear", and subjects of presentational intransitives like "appear" and "become evident", as in (23), but they cannot be subjects of such predicates as "be obvious", "prove", "mean", or "please".

(37) *Mati-n ampu-nee-n   karhu-n   suututt-i   Liisa-a.
       Matti-GEN shoot-PERF.PTC-C bear-ACC_{GEN} anger-PST.3SG Liisa-PART
      'That Matti had shot the/a bear angered Liisa'

This could be accounted for by assigning it the abstract Case feature [+LR], which makes it incompatible with transitive subjects (external arguments), which are valued [–LR].

If propositional participial complements are full CP clauses, they are extended verbal projections and their heads should be verbs. The verbal character of participial complements is confirmed by their rejection of compounding, see (38a,b). In Finnish verbs do not usually undergo compounding, wheras adjectives and nouns do so regularly. This criterion converges with the earlier ones in drawing the boundary between propositional participial complements and other participles, such as participial modifiers like (38c) and adjuncts (type C1 temporal clauses) like (38d).

(38) a. Saate-taan mainit-a testamenttaaja-n puoliso-n ole-va-n läsnä.
     can-PASS   mention-INF testator-GEN   spouse-GEN be-PTC-C present
     'It can be mentioned that the testator's spouse is present.'

    b. *Saate-taan mainit-a testamenttaaja-n puoliso-n läsnä-ole-va-n.
     can-PASS   mention-INF testator-GEN   spouse-GEN present-be-PTC-C
     'It can be mentioned that the testator's spouse is present.'

    c. Pelkkä läsnä-ole-va-n puoliso-n vakuutus ei riitä.
     mere   present-be-PTC-GEN spouse-GEN assurance.NOM not.3SG suffice.INF
     'The mere declaration by a/the spouse who is present is not sufficient.'

    d. Piere-skele-tte-kö puoliso-n läsnä-ol-le-ssa?
     fart-FREQ-PL2-Q   spouse-GEN present-be-PTC-INESS
     'Do you fart in the presence of your spouse?'

    e. Puoliso-n läsnä-ol-o on tärkeä-ä.
     spouse-GEN present-be-NOM be.3SG important-PART
     'The presence of a/the spouse is important.'

If we assume a lexicalist syntax, the complementizer is morphologically attached, and not a syntactic functional head to which the verb head-moves. This explains the lack of subject/object extraction asymmetries noted at (27), since extraction of subjects is blocked by syntactic complementizers but allowed in the absence of syntactic complementizers, e.g. *Who do you think (*that) came* (the "*that*-trace effect", Perlmutter 1971, Rizzi 1982, Lasnik and Saito 1992, Pesetsky 1982, 2015).

(39) *Kuka luule-t että tul-i?
     who   think-2SG that come-PAST.3SG
     'Who do you think came?'

Although propositional participial complements are sentential constituents (CPs), they still do not have *all* the functional structure that finite clauses have. They are incompatible with negation (in the standard language at least), as in (40a), and as far as I know in all dialects with tense/mood, such as the potential in (40b).

(40) a. *Ilmen-i ei ammu-tu-n karhu-a
     turn-out-PST.3SG not.3SG shoot-PERF.PTC-C bear-PART
     'No bear turned out to have been shot'

    b. *Sano-i-t ampu-ne-tu-n karhu-n
     say-PST-2SG shoot-POT-PERF.PTC-**COMP** bear-ACC$_{GEN}$
     'You said that a bear had probably been shot'

We will assume that participial clauses are Tns/AspPs and that the *-n* is a complementizer that allows them to function as propositional arguments. So the morphology of each type of nonfinite verb faithfully mirrors the functional categories of the phrase it heads. The syntax could be built from the morphology, just as well as the other way round.

(41) Infinitive clauses: [VP]
    Oblique participial clauses: [Tns/AspP [VoiceP [VP]]]
    Propositional part. clauses: [CP   [Tns/AspP [VoiceP [VP]]]]
    Finite clauses: [CP [PolP [MoodP [Tns/AspP [VoiceP [VP]]]]]]

2.3 Propositional Infinitive Complements

Infinitival object clauses (data set A2) are simple in comparison. They are obligatory control constructions, always transparent to the case marking rules. That is, case is determined by the main clause, as shown in (42).

(42) The first infinitive, bare form, subject control (data set A2):

    a. Halus-i-n   ampu-a karhu-n.
       want-PST-1SG shoot-INF bear-**ACC**GEN
       'I wanted to shoot a/the bear'

    b. Lupas-i-n   he-i-lle   ampu-a karhu-n.
       promise-PST-1SG them-ALLAT shoot-INF bear-**ACC**GEN
       'I promised them to shoot a/the bear'

    c. E-n   halun-nut   ampu-a karhu-a (*karhu-n).
       not-1SG want-PERF.PTC shoot-INF bear-**PART** (*bear-**ACC**GEN)
       'I didn't want to shoot / shoot at a/the bear'   (part. object)

    d. Halut-tiin   ampu-a karhu.
       want-PAST.PASS shoot-INF bear-**ACC**NOM
       'One /we wanted to shoot a/the bear'   (nom. object)

In (42c), the object must be partitive due to the negation in the main clause, and in (42d), the object must be partitive case due to the subjectless verb in the main clause.

The same pattern of obligatory transparency to object case assignment holds in complements with object control, also having the bare form of the first infinitive. This construction is restricted to a small group of verbs, principally *antaa* 'let, give', *suoda, sallia* 'allow', and optionally *käskeä* 'command' (Penttilä 1963: 483).

(43) The first infinitive, bare form, object control (A2):

    a. Anno-i-n heidä-n ampu-a karhu-n.
       let-PST-1SG them-**GEN** shoot-INF bear-**GEN**
       'I let them shoot a/the bear'

    b. E-n   anta-nut   heidä-n ampu-a karhu-a.
       not-1SG let-PERF.PTC them-**GEN** shoot-INF bear-**PART**
       'I didn't let them shoot a/the bear'   (downstairs partitive object)

    c. Heidä-n anne-ttiin   ampu-a karhu.
       them-**GEN** let-PAST.PASS shoot-INF bear-**NOM**
       'They were allowed to shoot a/the bear'   (downstairs nominative object)

    d. *E-n anta-nut   ammu-ta karhu-a.
       not-1SG let-PERF.PTC shoot-INF bear-**PART**
       'I didn't let a/the bear be shot'   (no passive infinitives!)

Recall that infinitives have no voice (see (1)), hence the passive (43d) is ungrammatical.

Curiously, the NP following these verbs (*heidän* in (43a)) is a morphologically invariant genitive, and does not show that usual morphological accusative/genitive/nominative variation by (20).

This might suggest that it is actually a downstairs subject genitive like the subject genitives of the previous section. However, its behavior with the reflexive *itse*, which requires an antecedent in the same clause, clearly shows that it is an object of the main clause. The reflexive *itse* is grammatical in (44a), just as in vanilla object control sentences like (44b):

(44) a. Anno-i-n itse-ni   näh-dä   karhu-n.
          let-PST-1SG self-(GEN)-1SG shoot-INF bear-ACC_GEN
          'I let myself see a/the bear.'

      b. Pakot-i-n itse-ni   näke-mää-n karhu-n.
          force-PST-1SG self-(NOM)-1SG see-INF   bear-ACC_GEN
          'I forced myself to see a/the bear.'

But the clause-bounded reflexive *itse* is not allowed in (45a,b,c), where it belongs syntactically to the lower clause.

(45) a. *Sano-i-n itse-ni   näh-nee-n   karhu-n.
          say-PAST-1SG self.GEN-1SG see-PERF.PTC.C bear-ACC_GEN
          'I wanted myself to see a/the bear.'

      b. *Halus-i-n itse-ni   näh-dä karhu-n.
          let-PAST-1SG self.GEN-1SG see-INF bear-ACC_GEN
          'I wanted myself to see a/the bear.'

      c. *Nuku-i-n   itse-ni   näh-de-ssä   karhu-n.
          sleep-PAST.PASS self.GEN)-1SG see-PTC-INESS bear-ACC_GEN
          'I slept while myself saw a/the bear.'

Historically, the invariant genitive object of (43) has been considered the remnant of a now lost dative case. However, Inaba 2015 provides weighty evidence against its native origin from a dative, and suggests that it arose in 15th-16th century translations from Swedish. Whatever its origin, it does arguably have the thematic role of an indirect object, with the clausal object complement expressing the theme role. Other constructions with invariant genitives in dative function are those in (46) (Penttilä 1963: 343-4).

(46) a. Siellä   on   lapse-n hyvä   nukku-a.
          there-ADESS be-3SG child-GEN good-NOM sleep-INF
          'That's a good place for a/the child to sleep.'

      b. Minu-n käy   hyvin.
          Me-GEN go.3SG well
          'I'm doing well.'

For the sake of completeness and in order to further document the difference in case assignment and possessive agreement between participial complement clauses and other non-finite constructions, I conclude with a brief review of data sets B, C, and D.

3   Oblique Complements and VP Adverbials (Data Set B)

Constructions B1 and B2 in (13) comprise complements and VP adverbials with oblique participles and oblique infinitives. In type B1, the subject of participles can be an overt genitive nominal (47a). It is omitted if it is identical to the matrix subject (presumably a case of anaphoric control rather than functional control). Case usage is variable, but the trend seems to be that the Accusative object is regularly a morphological genitive if the main clause has an overt subject (47b), and otherwise either genitive (47c,e) or nominative (47d,f).

(47) Participial adverbial of manner or circumstance, instrumental of 2nd participle (B1):

    a. Humalainen mies   ahdistel-i   nais-ta   kaikk-i-en nähd-e-n.
        drunk.NOM   man.NOM harass-PAST.3SG woman-PART all-PL-**GEN** see-PTC-INSTR
        'A/the drunk man harassed a/the woman with everyone seeing.'

    b. Kävel-i-mme maatila-n poikki pitä-e-n   piene-n   tauo-n.
        walk-PAST-1PL farm-GEN across hold-PTC-INSTR little-ACC$_{GEN}$ break-ACC$_{GEN}$
        'We walked across the farm, taking a little break.'

    c. Vede-ttiin   rata   nelisen kerta-a läpi, väli-ssä   aina pitä-en
        pull-PAST-PASS trackACC$_{NOM}$ about four time-PART through, between-INESS always hold-PTC-INSTR
        piene-n   tauo-n.
        little-ACC$_{GEN}$ break-ACC$_{GEN}$
        'We traversed the track four times, taking a little break each time.'

    d. Laskeudu-taan   vasema-lle pitä-en   pieni   tauko.
        'Descend-PRES.PASS left-ALLAT   hold-PTC-INSTR little-ACC$_{NOM}$ break-ACC$_{NOM}$
        'One descends to the left, taking a little break.'

    e. Oikea   kaista jatku-u   teh-de-n   mutka-n.
        right.NOM lane.NOM continue-3SG make-PTC-INSTR bend-ACC$_{GEN}$
        'The right lane continues, making a bend.'

    f. Perjantai-na men-nään   Frankfurti-in teh-de-n   mutka   Luxemburgi-n
        Friday-ESS   go-PRES.PASS Frankfurt-ILLAT make-PTC-INSTR bend-ACC$_{NOM}$ Luxemburg-GEN
        kautta.
        via
        'We leave on Friday for Frankfurt, with a detour via Luxemburg.'

Like other adverbial clauses, these can also precede the main clause. My intuition is that they are then more likely to act as a separate domain of case assignment, but I have not been able to find enough corpus data to confirm this.

The corresponding oblique infinitive constructions (B2), which express goal and means, cannot have an overt subject, and are transparent domains of case assignment. Goal complements with the illative of the oblique infinitive (B2) are controlled by the lowest direct argument ([+LR]) – that is, by the subject of intransitive matrix clauses (48) and by the object of transitive matrix clauses (49):

(48)   a. Matti rupes-i   ampu-ma-an karhu-n.
          Matti begin-PST-3SG shoot-INF-ILL bear-**ACC$_{GEN}$**
          'Matti began to shoot the/a bear'

b. Matti ei rupea ampu-ma-an karhu-a.
Matti not-3SG begin shoot-IINF-ILL bear-**PART**
'Matti does/will not begin to shoot the/a bear'

(49) Object control

a. Pakot-i-n häne-t ampu-ma-an karhu-n.
force-PST-1SG him/her-**ACC** shoot-INF-ILLAT bear-**ACC**_{**GEN**}
'I forced them to shoot a/the bear'

b. E-n pakotta-nut hän-tä ampu-ma-an karhu-a.
not-1SG force-PAST.PTC him/her-**PART** shoot-INF-ILLAT bear-**PART**
'I didn't force them to shoot (at) a/the bear' (part. object)

c. *Pakot-i-n ammu-tta-ma-an karhu-n.
force-PST-1SG shoot-PASS-INF-ILLAT bear-**ACC**_{**GEN**}
'I forced a/the bear to be shot' (no passive infinitives!)

d. Matti pakote-ttiin ampu-ma-an karhu.
Matti-**ACC**_{**NOM**} force-PAST.PASS shoot-INF-ILLAT bear-**ACC**_{**NOM**}
'Matti was forced to shoot a/the bear' (nom. object)

Means adverbials with adessive of the oblique infinitive (B2) are always controlled by the subject ([+HR]):

(50) a. Voit-i-n mitali-n ampu-ma-lla karhu-n.
win-PST-1SG medal-**GEN** shoot-INF-ADESS bear-**ACC**_{**GEN**}
'I won the/a medal by shooting a/the bear'

b. E-n voitta-nut mitali-a ampu-ma-lla karhu-a.
not-1SG win-PAST.PTC medal-**PART** shoot-INF-ADESS bear-**PART**
'I didn't win the/a medal by shooting (at) a/the bear' (part. object)

c. Mitali voite-ttiin ampu-ma-lla karhu.
medal-**ACC**_{**NOM**} win-PAST.PASS shoot-INF-ADESS bear-**ACC**_{**NOM**}
'A/the medal was won by shooting a/the bear' (nom. object)

Negated means adverbials are expressed by the inherently negative abessive case on the infinitive, which obligatorily triggers partitive case on the clausal object.

(51) Means adverbial, abessive of the oblique infinitive (B2):

a. Voit-i-n mitali-n ampu-ma-tta karhu-a.
win-PST-1SG medal-**GEN** shoot-INF-ABESS bear-**PART**
'I won the/a medal without shooting (at) a/the bear' (part. object)

b. E-n voitta-nut mitali-a ampu-ma-tta karhu-a.
not-1SG win-PAST.PTC medal-**PART** shoot-INF-ABESS bear-**PART**
'I didn't win the/a medal without shooting (at) a/the bear' (part. object)

c. Mitali voite-ttiin ampu-ma-tta karhu-a.
Medal-**ACC**_{**NOM**} win-PAST.PASS shoot-INF-ABESS bear-**PART**
'A/the medal was won without shooting (at) a/the bear' (part. object)

4 Adjunct Adverbials (Data Set C)

The adjunct adverbials in data set C have genitive subjects in participles and obligatory control in infinitives, just as we have seen in the other data sets. Infinitives are transparent to case assignment, as before.

(52) Infinitival adjuncts: purpose clauses (C2)

    a. Näh-dä-kse-mme karhu-n   mei-dä-n pitä-ä   matkusta-a Lappi-in.
       see-INF-TRANSL-1PL bear-**ACC**$_{\text{GEN}}$ we-GEN   must-3SG travel-INF   Lapland-ILL
       'In order to see a/the bear we must travel to Lapland'

    b. E-n   tul-lut   näh-dä-kse-ni   karhu-a.
       not-1SG come-PAST.PTC see-INF-TRANSL-1SG bear-**PART**
       'I didn't come to see a/the bear'

    Genitive subjects of participial adjuncts differ from genitive subjects of partitipical complements in creating an opaque domain for case assignment. This is illustrated in (53).

(53) Participial adjuncts: temporal clauses (C1):

    a. E-n   odotta-nut häne-n tappa-e-ssa-an karhu-n   (*karhu-a).
       not-1SG wait-PERF.PTC he-GEN kill-PTC-INESS-3P bear-**ACC**$_{\text{GEN}}$ (bear-**PART**)
       'I didn't wait while he killed the bear'

    b. Odote-ttiin   häne-n tappa-e-ssa-an karhu-n (*karhu).
       wait-PAST.PASS he-GEN kill-PTC-INESS-3P bear-**GEN** (bear-**NOM**)
       'One/we waited while he killed the bear'

    c. Itki-n   tape-tta-e-ssa   karhu   (*karhu-n).
       weep.Past-1SG kill-PASS-PTC-INESS bear-**ACC**$_{\text{NOM}}$ (*bear-**ACC**$_{\text{GEN}}$)
       'I cried when a/the bear was killed'

    d. Tape-tta-e-ssa   karhu   (*karhu-n) o-n   ol-ta-va   varovainen.
       kill-PASS-PTC-INESS bear-**ACC**$_{\text{NOM}}$ (*bear-**ACC**$_{\text{GEN}}$) be-3SG be-PASS-PTC careful-.NOM
       'When a/the bear is being killed, one must be careful'

    e. Tape-ttu-a-ni   taas karhu-n, ...
       kill-PERF.PTC-PART-1SG again bear-**ACC**$_{\text{GEN}}$
       'after (my) having killed a bear again, ...'

    Unlike the genitive subjects of CP participial complements, the genitive subjects of participial adjuncts follow the nominal pattern. The data in (54) parallel the NP data in (55). Thus we have possessive agreement in (54a) and in (55a), and so on.

(54) a. Mi-tä   kissa-si$_i$ teke-e (sinu-n$_i$) poissa ol-le-ssa-si$_i$ (*or:* ...ol-le-ssa-si$_i$ poissa)?
       what-PART cat-POSS.2SG do-2SG (you-GEN) away   be-PTC-INESS-POSS.2SG
       'What does your cat do when you are away?'

    b. Mi-tä   kissa-si$_i$ teke-e Peka-n$_j$ poissa ol-le-ssa(*-an$_j$) (...ol-le-ssa poissa)?
       what-PART cat-POSS.2SG do-2SG Pekka-GEN away   be-PTC-INESS
       'What does your cat do when Pekka is away?'

c. Mi-tä   kissa-si$_i$ teke-e ulkona ol-le-ssa-an$_i$ (...ol-le-ssa-an$_i$ ulko-na)?
   what-PART cat-POSS.2SG do-2SG out-ESS be-PTC-INESS-POSS3
   'What does your cat do when it is outside?'

d. *Mi-tä   kissa-si$_i$ teke-e itse-nsä$_i$ ol-le-ssa(-an$_i$)   ulko-na?
   what-PART cat-POSS.2SG do-2SG self.GEN-POSS.3SG be-PTC-INESS(-POSS3) out-ESS
    'What does your cat do when it is outside?'

(55) a. Matti istu-i   (sinu-n$_i$) auto-ssa-si$_i$
         Matti sit-PST-3SG (you-GEN) car-INESS-2SG
         'Matti was sitting in your car'

      b. Matti istu-i   Peka-n   auto-ssa
         Matti sit-PST-3SG Pekka-GEN car-INESS
         'Matti was sitting in Pekka's car'

      c. Matti$_i$ istu-i   häne-n$_{*i,j}$ auto-ssa-an$_{*i,j}$
         Matti sit-PST-3SG (he-GEN)   car-INESS-3SG
         'Matti$_i$ was sitting in his$_{*i,j}$ car'

      d. Matti$_i$ istu-i   auto-ssa-an$_i$
         Matti sit-PST-3SG car-INESS-3SG
         'Matti$_i$ was sitting in his$_i$ car'

      e. *Matti$_i$ istu-i   itse-nsä$_i$ auto-ssa
         Matti   sit-pst-3sg self-3sg   car-iness
         'Matti$_i$ was sitting in his$_i$ car'

5   Attributive Modifiers (Data Set D)

Passives have no agent phrases in Finnish, so the passive participle *-ttu* cannot be have an agent.[10]

(57) a. Ammu-ttu karhu
         shoot-PTC   bear-NOM
         'a/the shot bear'

      b. *(Sinu-n) ammu-ttu(*-si) karhu
         you-GEN   shoot-PTC-2P   bear-NOM
         'a/the bear shot by you'

      c. *Sinu-n ammu-ttu karhu-si
         you-GEN shoot-PTC   bear-NOM-2P
         'a/the bear shot by you' (grammatical on the reading 'your shot bear')

---

[10]Interestingly, sentences of the form (57c) are fully grammatical as agentive passives in a number of languages that are typologically similar to Finnish, including Northern Ostyak (shown here), Armenian, Dagur (Mongolian), Uighur. and Yakut (Sakha); see Hale 2002, Nikolaeva 1999, Kornfilt 2008.

(56) (ma) xans-əm/tinij-əm   me:pək-e:m
     my   write-PST.PTC/SELL-PSTPART book-1SG
     'the book I wrote/sold' (literally 'my written/sold book')

Instead of the ungrammatical (57b) we must use the "agent participle" in *-ma-*, which forms relative clauses with genitive subjects. Possessor agreement then applies, as expected:

(58) Sinu-n ampu-ma-si karhu
    you-GEN shoot-INF-2P bear-NOM
    'a/the bear shot by you'

They allow compounding as freely as participial clauses of types B and C, which suggests that they are adjectival clauses; contrast the propositional (CP) participial clause (59b).

(59)   a. pois-juokse-va karhu
         away-run-PTC.NOM bear.NOM
         'a/the bear that is running away'

       b. *Huomas-i-n karhu-n pois-juokse-va-n (OK: juoksevan pois)
         notice-PAST-1SG bear-GEN away-run-PTC.C
         'I noticed that a/the bear was running away'

Another indication that genitive subjects of *-ma* complements are specifiers of their participial heads, like that of all participial clauses except propositional (CP) participial clauses, is that extraction from them is constrained by the Left Branch Condition.

(60) *Kene-n$_i$ löyde-ttin e_i ampu-ma karhu?
    who-GEN find-PAST.PASS shoot-PTC.NOM bear-NOM
    'who was a bear shot by found?'

6   Conclusion

The functional syntactic structure of Finnish nonfinite clauses is a transparent reflection of the overt morphological makeup of their participial and infinitival lexical heads. This implies the viability of a lexicalist analysis in which morphology merges morphemes into words, endowing them with functional features that determine how they are merged by syntax into sentences. Taking the morphology at face value and letting it constrain the syntax obviates the need for invisible syntactic functional heads and syntactic word-building rules. Participial propositional clauses were argued to be CPs with external arguments, unlike other nonfinite clauses, whose genitive specifiers behave syntactically like possessors.

References

ANTTILA, ARTO & JONG-BOK KIM. 2017. Locality and variation in Finnish structural case. *Natural Language & Linguistic Theory* 35:581–634.

HAKULINEN, AULI & LAURI KARTTUNEN. 1973. Missing persons: On generic sentences in Finnish. *CLS9: Papers from the Ninth Regional Meeting*, 157-71, Chicago Linguistic Society, Chicago.

HALE, K. 2002. On the Dagur object relative: Some comparative notes. *Journal of East Asian Linguistics* 11(2): 109-122.

INABA, NOBUFUMI. 2015. *Suomen datiivigenetiivin juuret vertailevan menetelmän valossa.* Suomalais-ugrilaisen Seuran Toimituksia 272. Helsinki: Suomalais-Ugrilainen Seura.

ITKONEN, TERHO. 1976. Syntaktisten vaikutusyhteyksien luonteesta [On the nature of syntactic interactions]. *Virittäjä* 80: 52–81.

ITKONEN, TERHO. 1981. Katson minulla olevan oikeus. In *Näillä näkymin: Kirjoituksia nyky-suomesta ja sen huollosta*, 86–116. Helsinki: Suomalaisen kirjallisuuden seura.

KIPARSKY, PAUL. 2001. Structural case in Finnish. *Lingua* 111: 315-376.

KIPARSKY, PAUL. 2005b. Absolutely a matter of degree: The Semantics of Structural Case in Finnish. `https://web.stanford.edu/~kiparsky/Papers/partitive.ho.pdf`

KIPARSKY, PAUL. 2013. Towards a null theory of the passive. *Lingua* 125: 7-33.

KORNFILT, JAKLIN. 2008. Subject case and Agr in two types of Turkic RCs. In S. Ulutaş & C. Boeckx (eds.) *Proceedings of WAFL* 4; *MIT Working Papers in Linguistics* 56, 145-168.

LASNIK, HOWARD, & MAMORU SAITO. 1984. On the nature of proper government. *Linguistic Inquiry*. 15:235-289.

MANNINEN, SATU & DIANE NELSON. 2004. What is a passive? The case of Finnish. *Studia Linguistica* 58: 212-251.

NELSON, DIANE. 2012. Diagnosing Finiteness in Embedded Nominalised Clauses. *Finno-Ugric Languages and Linguistics* 1: 82-88.

NIKOLAEVA, IRINA. 1999. *Ostyak.* München: LINCOM.

PERLMUTTER, D. M. 1971. *Deep and surface structure constraints in syntax.* New York: Holt, Rinehart and Winston.

PESETSKY, DAVID. 1982. Complementizer-trace phenomena and the nominative island condition. *The Linguistic Review.* 1:297-344.

PESETSKY, DAVID. 2015. Complementizer-trace effects. Ms., MIT. `http://ling.auf.net/lingbuzz/002385`

RIZZI, LUIGI. 1982. Negation, wh-movement and the null subject parameter. In *Issues in Italian syntax*. 117-185. Dordrecht - Holland: Foris.

ROSS, JOHN. 1967. *Constraints on variables in syntax.* Ph.D. dissertation, Massachusetts Institute of Technology.

TOIVONEN, IDA. 2000. The Morphosyntax of Finnish Possessives. *Natural Language & Linguistic Theory* 18: 579-609.

VAINIKKA, ANNE, & PAULI BRATTICO. 2014. The Finnish accusative: Long distance case assignment under agreement. *Linguistics* 52(1): 73–124.

VAINIKKA, ANNE, & JOAN MALING. 1996. Is partitive case inherent or structural? In J. Hoeksema (ed.) *Partitives. Studies on the Syntax and Semantics of Partitive and Related Constructions.* Berlin/New York: Mouton de Gruyter.

WURMBRAND, SUSI. 2014. Restructuring across the world. In *Complex Visibles Out There.* ed. by L Veselovská and M. Janebová, 275-294. Olomouc: Palacký University.

WURMBRAND, SUSI. 2015. Restructuring cross-linguistically. `ling.auf.net/lingbuzz/002514/current.pdf`