

Word Order in Finnish: Nonconfigurationality, movement or adjunction?

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Finnish word order is relatively free when compared with several Indo-European languages. This article reviews the literature and finds three existing hypotheses concerning the origin of the phenomenon: (1) the nonconfigurationality hypothesis, according to which Finnish lacks syntactic structure, either partially or fully; (2) the movement hypothesis, according to which the wide range of word order permutations are produced by movement; and (3) the adjunction hypothesis, according to which thematic arguments can be attached to the phrase structure as adjuncts and behave syntactically like adverbs. Of these three hypotheses the nonconfigurationality hypothesis finds no empirical support and is rejected. A hybrid model, according to which the word order results from both movement and adjunction, is considered to best account for the facts.

Keywords: *Finnish, word order, discourse-configurationality, configurationality, adjunction*

1 Introduction

Finnish exhibits relatively few constraints in word order in finite clauses (1–2) (e.g., Hakulinen 1975; Hakulinen & Karlsson 1979; Holmberg & Nikanne 2002; Lindén 1947; Palander 1991; Vilkuna 1989).^{1,2}

- (1) *Jari lainasi kirja-n Merjalle.* (canonical word order)
Jari.NOM lend.3SG book-ACC to.Merja
'Jari borrowed a book to Merja.'
- (2) a. *Kirjan lainasi Jari Merjalle.* b. *Kirjan lainasi Merjalle Jari.*
c. *Merjalle lainasi Jari kirjan.* d. *Merjalle lainasi kirjan Jari.*
e. *Merjalle Jari lainasi kirjan.* f. *Merjalle kirjan lainasi Jari.*
g. *Kirjan Jari lainasi Merjalle.* h. *Kirjan Merjalle lainasi Jari.*
i. *Jari kirjan lainasi Merjalle.* j. . . . and so on.³

At least three hypotheses have been explored in previous literature concerning the origin of the phenomenon: the *nonconfigurationality hypothesis*, according to which the

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² Abbreviations and glosses: 0 = default third person agreement or no agreement ("agreement" is systematic covariation in phi-features between a predicate and a local DP argument); ACC = accusative case (any form); EXPL = expletive; GEN = genitive case; HAN = a second position clitic; IMPASS = impersonal passive form (active or passive voice); NOM = nominative case; PAR = partitive case, PL = plural; PX = possessive suffix (PX/3SG = third person possessive suffix, etc.); SG = singular; TUA = TUA-adverbial (roughly 'after doing something'); Q = yes/no particle *-kO*. Capital letters will be used to represent vowel harmony (e.g., *talO-kO* 'house-Q', *yö-kÖ* 'night-Q').

³ Not all word orders are possible, though; what the permissible orders are will be discussed later in this article.

phenomenon results from lack of hierarchical syntactic structure (e.g., Karttunen & Kay 1985; Sammallahti 2002, 2003; Välimaa-Blum 1988; Vilkuna 1989; see also É. Kiss 1987 for Hungarian); the *movement hypothesis*, which claims that the various word orders are generated from a canonical structure by means of grammatical movement (e.g., Boef & Dal Pozzo 2012; Hakulinen 1975; Holmberg 2000; Holmberg & Nikanne 2002; Holmberg, Nikanne, Oraviita, Reime, & Trosterud 1993; Huhmarniemi 2019; Kaiser 2000, 2006; Koskinen 1998; Nelson 1998; Vainikka 1989; Vilkuna 1995), and the *adjunction hypothesis*, according to which also thematic arguments, and not only PPs and adverbials, can be adjoined to the clause (Brattico 2016, 2018). I will argue in this article that none of these hypotheses, when taken in isolation, can explain the full range of facts. The movement and adjunction hypotheses are both argued to be necessary, while the nonconfigurationality hypothesis is rejected.

The term “discourse-configurational” is often used in connection with Finnish word order. Discourse configurationality refers to a property a language (or part of its grammar) has when discourse functions (and not, e.g., grammatical roles) are articulated by means of word order. As pointed out by Surányi (2016), whether a language is discourse-configurational in this sense is in principle orthogonal to the issue of configurationality: one can develop a discourse-based explanation for word order with or without full phrase structure syntax. I will return to this issue at the end of this article.

2 The nonconfigurationality hypothesis

2.1 Introduction

The nonconfigurationality hypothesis explains (1–2) by asserting that Finnish is, either in part or in whole, a nonconfigurational language: it lacks asymmetric syntactic structure to sustain rigid word order. Helasvuo (2013) summarized the idea by hypothesizing that while phrase structure is essential for the explanation of word order in configurational languages such as English, in nonconfigurational languages, such as Finnish, word order is “based on pragmatic factors” (p. 67) and does not rely on structure. Indeed, because the word orders reported in (1–2) do correlate with discourse properties, Helasvuo’s claim that Finnish word order is “pragmatic” should not be ignored without consideration.

Another version of the nonconfigurationality hypothesis claims that Finnish can be described by relying on word meanings, possibly in conjunction with case morphology, but without phrase structure. Sammallahti (2002, 2003) proposes to replace phrase structural grammar with a descriptive system that relies on word meanings and (non-formal, intuitive) semantic dependency relations between words, and then claims that the role of structural, syntactic properties has been “exaggerated” (Sammallahti 2002, 536, my translation). Specifically, linguistic elements (words and concepts) combine with each other based on their functional and semantic properties, while phrase structural categories such as IP, VP or PP are considered to be nothing but illusory “terms” (p. 550). To claim that they represent something real rather than spurious descriptive ideas is, according to Sammallahti, an “amateurish error” (p. 550) because (the author claims) they can be replaced without residuum by his lexico-semantic theory; a theory that Chomsky and the generativists will likewise, again rephrasing from the original source, inevitably adopt as time goes on (Sammallahti 2003, 58–61). He further proposes that the difference between human and nonhuman animal linguistic behavior, such as that

between a human and a parrot, is quantitative, not qualitative (Sammallahti 2002, 550). Free word order results from linearization: semantic-conceptual representations are linearized by ordering semantic concepts on the basis of “pragmatic intentions” (Sammallahti, 2003, 55), at least in some languages such as Finnish. No details of the linearization procedure are provided, however.

Sammallahti’s position represents the more radical end of nonconfigurationality. A less radical version, argued by É. Kiss for Hungarian (É. Kiss 1987), is that part of the standard phrase structure syntax (hierarchical structure in the postverbal domain of the Hungarian sentence in this case) is missing or is impoverished in some way. This could be applied to Finnish, a distantly related Finno-Ugric language, in order to explain why its word order is free.

These three examples do not exhaust the range of possible nonconfigurational hypotheses that have been proposed in the literature or that could be proposed by following some reasonable canon of rationality; they serve to illustrate the nonconfigurationality hypothesis.⁴ I will consider the relevant empirical evidence next. The discussion in this article is mostly limited to finite clauses; Finnish infinitival word orders remain poorly understood and deserve their own study.

2.2 Preverbal syntax

2.2.1 The structure of the Finnish preverbal field

Descriptive properties of the Finnish preverbal field, as they are understood today, were provided by Vilkuna (1989). She argued that the Finnish preverbal syntax contains two “fields” that are defined, at least in part, by their discourse functions.⁵ The first field (called the “K-field”) is associated with a corrective or contrastive interpretation, while the second field (“T-field”) is associated with a topic interpretation. The high complementizer *että* ‘that’ caps the finite clause (3).

- | | | | | | | | |
|-----|-----------------|---------------------|-----------------|----------------|----------------|----------------|------------------|
| (3) | ... <i>että</i> | [<i>uutta</i> | <i>auto-a</i>] | [<i>Jari</i> | <i>maalasi</i> | (<i>ei-kä</i> | <i>talo-a</i>) |
| | that | new | car-PAR | Jari.NOM | painted | (not-Q | home-PAR) |
| | | <i>K-field</i> | | <i>T-field</i> | <i>Verb</i> | | Postverbal field |
| | | ‘contrastive focus’ | | ‘topic’ | ‘event’ | | |
- ‘...that it was the new car (focus) that Pekka (topic) painted, not house.’

The analysis, which has stood the test of time as a descriptive generalization, is motivated by the fact that almost any kind of phrase can occur in either of these positions.

⁴ An anonymous reviewer of an earlier version of this article claims that the paper involves a “plot” to dismiss “all non-Generativist frameworks,” such as dependency grammar. This is not my intention. The reason I do not review other nonconfigurationality hypotheses is because, as I will argue in this article, I failed to find any supporting evidence for nonconfigurationality itself. In addition, sourcing, e.g., dependency grammatical explanations for the data discussed in this paper proved difficult. Sammallahti (2002, 2003) constitutes a typical example of this genre: virtually everything that bears on the issue of configurationality is ignored. For example, he suggests that topicalization involves linearization to the left (see Sammallahti 2003, 55) but provides nothing to capture the constraints that regulate the process (Section 2.2.3 in the present article).

⁵ Vilkuna’s earlier position (Vilkuna 1989) towards phrase structure syntax can be described as “agnostic,” in that she ignored the role of syntax and syntactic-structural phenomena. In later work she acknowledged the role of phrase structure syntax and argued for a fully configurational analysis (Vilkuna 1995).

Conversely, the behavior of these fields is not governed by syntactic labels (e.g., N, V) or morphosyntax (e.g., Case, phi-agreement, grammatical subjecthood). Vilkkuna also demonstrated that the constituent in the K-field (if any) reads as being the contrastive/corrective focus/topic of the clause, whereas the constituent in the T-field constitutes the topic. These two fields, and the fact that a phrase of almost any kind can occur in them, captures a wide range of Finnish word order facts. This is illustrated by (4). Notice how word order correlates with discourse interpretation provided in the translations.

- (4)
- | | | | | |
|----|---|-----------------|-----------------|------------------|
| a. | <i>Kirja-n</i> | <i>lainasi</i> | <i>Merjalle</i> | <i>Jari</i> |
| | book-ACC | lent.3SG | to.Merja | Jari.NOM |
| | ‘A book was lent to Merja by Jari.’ | | | |
| b. | <i>Kirja-n</i> | <i>lainasi</i> | <i>Jari</i> | <i>Merjalle.</i> |
| | book-ACC | lend.3SG | Jari.NOM | to.Merja |
| | ‘A book was lent by Jari to Merja.’ | | | |
| c. | <i>Merjalle</i> | <i>lainasi</i> | <i>Jari</i> | <i>kirja-n.</i> |
| | to.Merja | lent.3SG | Jari.NOM | book-ACC |
| | ‘To Merja, Jari lent the book.’ | | | |
| d. | <i>Merjalle</i> | <i>lainasi</i> | <i>kirja-n</i> | <i>Jari.</i> |
| | to.Merja | lent.3SG | book-ACC | Jari.NOM |
| | ‘To Merja, it was Jari who lent the book.’ | | | |
| e. | <i>Merjalle</i> | <i>Jari</i> | <i>lainasi</i> | <i>kirja-n.</i> |
| | to.Merja | Jari.NOM | lent.3SG | book-ACC |
| | ‘To Merja, Jari lent the book.’ | | | |
| f. | <i>Merjalle</i> | <i>kirja-n</i> | <i>lainasi</i> | <i>Jari</i> |
| | to.Merja | book-ACC | lent.3SG | Jari.NOM |
| | ‘To Merja, a book was lent by Jari.’ | | | |
| g. | <i>Kirja-n</i> | <i>Jari</i> | <i>lainasi</i> | <i>Merjalle.</i> |
| | book-ACC | Jari.NOM | lent.3SG | to.Merja |
| | ‘It was the BOOK that Jari lent to Merja.’ | | | |
| h. | <i>Kirja-n</i> | <i>Merjalle</i> | <i>lainasi</i> | <i>Jari.</i> |
| | book-ACC | to.Merja | lent.3SG | Jari.NOM |
| | ‘It was the BOOK that Merja was given by Jari.’ | | | |
| i. | <i>Jari</i> | <i>kirja-n</i> | <i>lainasi</i> | <i>Merjalle.</i> |
| | Jari.NOM | book-ACC | lent.3SG | to.Merja |
| | ‘A book was lent to Merja by JARI.’ | | | |
| j. | etc. | | | |

These data might be interpreted as suggesting that the Finnish finite clause is best described as being discourse-configurational. Although (4) does show that discourse plays a role in Finnish word order, a fact to which I will return later in this article, it provides very little to decide on the role of syntax. Does syntax have a role?

To find out, we examine if the operations that fill in the K-field and the T-field are structure-dependent or discourse-based. Considerable amount of evidence has accumulated suggesting that they are regulated by syntactic conditions (e.g., Brattico, Huhmarniemi, Purma, & Vainikka 2013; Holmberg & Nikanne 1993, 2002; Huhmarniemi 2012; Huhmarniemi & Brattico 2013a; Koskinen 1998; Manninen 2003; Vainikka 1989; Vilkkuna 1995, to mention a few). This is corroborated by evidence from Hungarian, a distantly related Finno-Ugric language, in which we find a similar profile (É.

Kiss 2002): preverbal syntax is regulated by structural constraints. Let us briefly examine the evidence, well-known but worth repeating and expanding.

2.2.2 The K-field

While it is true that a contrastive focus or topic typically fills in the K-field, the phrase in the K(ontrast)-field must always match with an empty gap in the same clause (5a-d).

- (5) a. *Ketä₁* *Jari* *ihaili* ___₁?
 who.PAR Jari.NOM admired
 ‘Who did Jari admire?’
- b. **Ketä* *Jari* *ihaili* *Merja-a?*
 who.PAR Jari.NOM admired Merja-PAR
- c. *Ketä₁* *Jari* *sanoi* *että Merja* *ihaili* ___₁?
 who.PAR Jari.NOM said that Merja.NOM admired
 ‘Who did Jari say that Merja admired?’
- d. **Ketä₁* *Jari* *sanoi* *että Merja* *ihaili* *Jukka-a₁?*
 who.PAR Jari.NOM said that Merja.NOM admired Jukka-PAR

A description in which an element in the K-field is associated with a discourse interpretation is not sufficient to account for the attested word orders. One must also capture the properties of the co-occurring gap. Once we do this, several facts emerge suggesting that the explanation cannot rely on discourse alone. For example, morphosyntactic properties of the word or phrase at the K-field must match those of the gap, as shown in (6). The gap is in the position that is assigned the partitive (6a), the same case that must be assigned to the corresponding filler element in the K-field.

- (6) a. *Jari* *ihaili* *Merja-a* b. **Kuka₁* *Jari* *ihaili* ___₁?
 Jari.NOM admired Merja-PAR who.NOM Jari.NOM admired
 ‘Jari admired Merja.’
- c. *Ketä₁* *Jari* *ihaili* ___₁?
 who.PAR Jari.NOM admires
 ‘Who did Jari admire?’

Morphosyntactic properties of the element in the K-field (here the interrogative pronoun *kuka* ‘who’) depend, moreover, on the structural position of the gap, not on its discourse interpretation. This is not surprising if there is a structural dependency between the fronted constituent and the gap. This assumption is supported by the observation that the dependency follows standard structural conditions of filler-gap dependencies (operator movement) observed in English and other languages (Chomsky 1977; Huhmarniemi 2012). Some of these limitations are demonstrated in (7).

- (7) a. *No movement out of a DP*
 **Kenen₁* *Jari* *ihaili* *kaunista* ___₁ *koti-a?*
 whose.GEN Jari.NOM admired beautiful home-PAR
 Intended: ‘Whose beautiful home did Jari admire?’
- b. **Mikä₁* *Jarin* *ehdotus* *ostaa* ___₁ *tyrmättiin?*
 what.PAR Jari.GEN proposal to.buy was.rejected
 Intended: ‘Jari’s proposal to buy what was rejected?’

- c. *No movement out of an adverbial*
 **Minkä₁, Jari sai rangaistuksen riko-ttua-an* ___₁?
 what-ACC Jari.NOM got punishment break.TUA-PX/3SG
 Intended: 'For breaking what was Jari punished?'
- d. *No movement from a conjoined clause*
 **Minkä₁, Jari osti pyörän ja lainasi* ___₁?
 what.ACC Jari.NOM bought bicycle and borrowed
 Intended: 'What was it that Jari borrowed?'

The K-field is perhaps best described as the final landing site of a movement deriving an operator-variable construction, hence it constitutes an “A-bar position” in the standard generative theory. To account for the word order principles involved with the Finnish K-field, one must, therefore, posit an A-bar dependency; merely documenting the fact that a phrase fills in the K-field is insufficient. On the same grounds we can reject any proposal suggesting that these word orders are produced from a semantic representation by linearization guided by “pragmatic intentions” as insufficient.

One principle regulating the dependency between an element in the K-field and the gap in Finnish is c-command. C-command is usually defined in the literature as a variation of the following core definition: X c-commands Y if and only if the sister of X dominates Y, where “sister” and “dominates” rely on phrase structure geometry. Example (8) illustrates violations of c-command in connection with filler-gap dependencies created by an element in the K-field. All these examples are impossible with the given interpretations.

- (8) a. **Pekka kysyi* ___₁ *että keneltä₁ hän voisi lainata polkupyörä-n.*
 Pekka.NOM asked that of.who he could borrow bicycle-ACC
 Intended: 'Pekka asked from x: could he borrow a bicycle from x?' or
 'Which person x: Pekka asked from x: could he borrow a bicycle from x?'
- b. **[Kenen₁ veli] halusi* ___₁ *nukkumaan?*
 who.GEN brother wanted to.sleep
 Intended: 'Which x: the brother of x wanted x to sleep?'
- c. **Sinun₁-ko Jari palautti* ___₁ *tietääksesi kirja-n Merjalle?*
 You.GEN-Q Jari returned to.your.knowledgebook-ACC to.Merja
 Intended: 'Was it according to you that Jari returned the book to Merja?'

Structural properties therefore play a role. Consistent with this explanation, only one phrase per clause can occur in the K-field.

- (9) a. **Ketä₁ viime vuonna₂-ko Jari ihaili* ___₁ ___₂?
 who.PAR last year-Q Jari.NOM admired
 Intended: 'Was it last year that who Jari admired?'
- b. **Ketä₁ viime vuonna₂-han Jari ihaili* ___₁ ___₂?
 who.PAR last year-HAN Jari.NOM admired
 Intended: 'Who did Jari admire last year?'

The clause contains a limited number of syntactic slots or positions (here only one such position, the “K-field” itself). There are no higher structural positions for heads or phrases in the Finnish left periphery, so that only one element (head or phrase) may

occupy the CP-layer. A further constraint is that if a head is dislocated to the K-field (10a), no phrase can do the same (10b).

- (10) a. *Ihaili₁-ko Jari ___₁ Merja-a?*
 admire-Q Jari.NOM Merja-PAR
 b. **Ketä₁ ihaili₂-ko Jari ___₁ ___₂?*
 who.PAR admire.Q Jari.NOM
 ‘Did Jari admire Merja?’

Therefore, not only is it impossible to fit two phrases in the K-field, but also the combination of a head and a phrase inside the same field is illicit. Consider (11a–d).

- (11) a. *Pekka-ko ihaili Merja-a?*
 Pekka-Q admired Merja-PAR
 ‘Was it Pekka that admired Merja?’
 b. *Merja-a-han ihaili Pekka.*
 Merja-PAR-HAN admired Pekka.NOM
 ‘It was MERJA who Pekka admired.’
 c. **Pekka-ko Merja-a-han ihaili?*
 Pekka-Q Merja-PAR-HAN admired
 d. *Pekka-ko-han Merja-a ihaili?*
 Pekka-Q-HAN Merja-PAR admired
 ‘Was it PEKKA that admired Merja?’

Examples (11a) and (11b) illustrate two types of phrases that can occur in the K-field: phrases that are suffixed with the yes/no question clitic *-ko*, glossed as Q in this article, and phrases that are suffixed with the second position clitic *-han* (whose semantics are still unclear and not relevant here). What is impossible is a configuration in which both types of phrases are fronted simultaneously (11c). The key observation is (11d), which shows that both features/clitics can be part of the same clause, but only as long as they are at the same element. The features do not clash semantically; the bottleneck is in the syntax, which makes room for one position for an element that carries them. The same pattern extends to all features associated with the K-field. For example, it is possible to combine *-ko* and *-han* with the *wh*-feature to generate an interrogative pronoun such as (*kuka-ko-han* ‘who-Q-han’) but only as long as all features (*wh*, *ko*, *han*) accumulate on the same element.

Also the claim that the K-field is associated with contrastive interpretation has to be amended. It is only partially true: relative pronouns use the same position (Brattico et al. 2013; Huhmarniemi 2012; Huhmarniemi & Brattico 2013b; Vilkuna 1989, 38), as shown in (12).

- (12) *unsi anto jota₁ Pekka maalasi ___₁*
 new car which.PAR Pekka.NOM painted
 K-field T-field V

The relative pronoun does not evoke a contrastive discourse interpretation; it has logico-semantic function (Heim & Kratzer 1998). Discourse does not exhaust the semantic role of the K-field in Finnish. The Finnish K-field seems to constitute a left-peripheral

position targeted by A-bar/operator movement (Huhmarniemi 2012) and is therefore best characterized as an operator position (Brattico et al. 2013).

Sammallahti's (2002, 2003) claim that phrase structural notions such as CP or IP (and therefore also notions such as "c-command" or "syntactic position") are fictional objects that can be replaced without residuum by a lexico-semantic theory and a tentative linearization algorithm guided by "pragmatic intention" must be evaluated against the type of facts just cited. The facts do not support the nonconfigurationality hypothesis; they support the opposite conclusion.

2.2.3 *The T-field*

Moving next to the second preverbal subject position, the T-field in Vilkuna's analysis, this position is usually said to be associated with the topic (Holmberg & Nikanne 2002; Huhmarniemi 2019; Koskinen 1998; Vainikka 1989; Vilkuna 1989). A phrase from almost any category can occur in this position and is typically interpreted as the topic of the clause. For example, in a typical OVS clause, the direct object is prototypically interpreted as the topic, while the postverbal subject constitutes the information focus (13).

- (13) a. *Pekka* *ibaile-e* *laulaj-i-a.*
 Pekka.NOM admire-3SG singer-PL-PAR
 'Pekka (topic) admires the singers (focus).'
- b. *laulaj-i-a* *ibaile-e* *Pekka.*
 singer-PL-PAR admire-3SG Pekka.NOM
 'Pekka (information focus) admires the singers (topic).'

The nature of the topic interpretation associated with the preverbal T-field is a matter of debate, but the position is under syntactic control. Some of the most important syntactic properties are as follows. First, the phrase that fills in the T-field must correspond to an empty gap in the same clause, and the thematic and case features of the preverbal phrase are computed on the basis of its canonical position and thus on the basis of where the gap is (14).

- (14) *Merja-a,* *Pekka* *rakasta-a* *—.*
 Merja-PAR Pekka.NOM love-3SG
 'Pekka loves Merja (topic).'

Second, the preverbal T-field cannot remain empty, but must be filled in (by an expletive if nothing else), and thus it exhibits a formal EPP feature of some kind (15).

- (15) a. **Ibaile-e* *Pekka* *Merja-a.*
 admire-3SG Pekka.NOM Merja-PAR
 'Pekka admires Merja.'
- b. *Sitä* *oltiin* *taas* *ryypäämässä.*
 EXPL were.IMPASS.0 again drinking
 'One has again been drinking.'

Third, filling in the T-field is sensitive to S–V agreement or some related condition:

- (16) a. *Pekka sa-a tavata laulaja-n.*
 Pekka.NOM can-3sg to.meet singer-ACC
 ‘Pekka can meet the singer.’
 b. *Laulaja-n sa-a tavata Pekka.*
 singer-ACC can-3SG to.meet Pekka.NOM
 ‘It is Pekka that can meet the singers.’
- (17) a. *Peka-n täytyy tavata laulaja.*
 Pekka-GEN must.0 to.meet singer.NOM
 ‘Pekka must meet the singer.’
 b. **Laulaja täytyy tavata Peka-n.*
 singer.NOM must.0 to.meet Pekka-GEN
 ‘Pekka (focus) must meet Merja (topic).’

Fourth, topicalization is subject to structural island constraints (18–19) and it cannot be long distance (20):⁶

- (18) **Huomenna-ko Merja-n₁ Pekka lainaa ___₁ kalliin pyörän?*
 tomorrow-Q Merja-GEN Pekka.NOM borrows expensive bicycle
 ‘Is it tomorrow that, as for Merja, Pekka will borrow her expensive bicycle?’
- (19) **Huomenna-ko kilpailu-n₁ Pekka harjoittelee [voittaakseen ___₁]?*
 tomorrow-Q competition-ACC Pekka practices in.order.to.win
 ‘Is it tomorrow that, as for the competition, Pekka practices in order to win it?’
- (20) **?Huomenna-ko kilpailun₁ väitti Pekka että Merja voittaa ___₁?*
 tomorrow-Q competition claimed Pekka that Merja wins
 ‘Is it tomorrow that, as for the competition, Pekka claimed Merja will win it?’

The above list contains some of the most salient syntactic properties of the T-field. They are all structural. I am not aware of any proposal explaining any of these observations by relying on discourse properties, communicative pragmatics, or “pragmatic intentions,” to borrow Sammallahti’s phrase. Furthermore, the discourse property of ‘topic’ is insufficient to explain what can appear in the T-field. The expletive, which occurs in the same position (Holmberg & Nikanne 2002), does not constitute a topic. In addition, the preverbal T-field can be filled in by nontopics, such as indefinite quantifiers (21) (Huhmarniemi 2017, 2019).

- (21) *Ilmeisesti joku ihaile-e Merja-a.*
 apparently somebody.NOM admire-3SG Merja-PAR
 ‘Apparently somebody admires Merja.’

In sum, Finnish preverbal syntax appears to be configurational: the K-field is filled in by A-bar movement, and while the ultimate explanation of what fills in the T-field is still debated, it is not controversial that the operation is regulated by structural principles.

⁶ A temporal adverb *huomenna-ko* ‘tomorrow-Q’ appears as a first element in these examples in order to avoid an unintended interpretation in which the moved constituent is interpreted as occurring in the K-field. This is not irrelevant, because long-distance A-bar movement, unlike long-distance topicalization, is possible in Finnish.

Finnish is therefore like Hungarian, a distantly related Finno-Ugric language with relatively free word order but configurational preverbal syntax (É. Kiss 1987, 2002).

2.3 Postverbal syntax

While the claim that Finnish preverbal word order is configurational can be regarded as well-argued, the situation with its postverbal syntax is perhaps less so. Moreover, there is a convincing argument, presented in various forms in the literature since the late 1980s, that the Hungarian postverbal syntax is “flat” (É. Kiss 1987, 2008).⁷ Because Hungarian is distantly related to Finnish, it is possible that the same applies to Finnish. The data we currently have nevertheless suggests that also Finnish postverbal syntax is configurational.

First, although the order of thematic arguments along the projectional spine of the finite clause structure is relatively free, positioning of the grammatical heads is not (Manninen 2003). In a sentence such as (22), only the surface order between grammatical heads is possible; most variations are ungrammatical, extremely marginal or poetic deviations.

- (22) a. *Pekka ei ole halunnut harjoitella kilpailuun.*
 Pekka not be to.want to.practice to.competiton
 ‘Pekka has not wanted to practice for the competition.’
 b. **Pekka ole ei halunnut harjoitella kilpailuun.*
 c. **Pekka halunnut ole ei harjoitella kilpailuun.*
 d. **Pekka harjoitella halunnut ole ei kilpailuun.*
 e. etc.

While Manninen’s claim is true, there are interesting exceptions. One is generated by head movement to the K-field, which can be local (23a) or nonlocal (23b).

- (23) a. *Käski-kö Pekka — hei-dän auttaa Merja-a?*
 order-Q Pekka.NOM they-GEN to.help Merja-PAR
 ‘DID Pekka order them to help Merja?’
 b. *Auttaa₁-ko Pekka käski hei-dän —₁ Merja-a?*
 to.help-Q Pekka.NOM asked they-GEN Merja-PAR
 ‘Was it to help/helping that Pekka asked them to do to Merja?’

Infinitival phrases can move and pied-pipe their heads, producing noncanonical orders between grammatical heads:

- (24) *Pekka-ko [hei-dän nukkua]₁ käski —₁ ?*
 Pekka-Q they-GEN to.sleep asked
 ‘Was it Pekka that asked them to sleep?’

While these data show that the ordering between heads can be noncanonical, the process is regulated by structural principles. The following is a partial list of some of the relevant conditions: heads cannot move downward (e.g., **Pekka —₁ ole nukkunut ei₁* lit. ‘Pekka _

⁷ This position has not been uncontested, however. Surányi (2006) mentions several papers developing the configurational approach to Hungarian syntax and himself argues for a hierarchical postverbal field within which leftward scrambling applies to adjoined positions.

had slept not’); only one head can move to the K-field (**Eikö_i ole-ban₂ Pekka_i _₁ _₂ nukkunut?* lit. ‘not-Q be-hAn Pekka _ _ slept’); a head cannot move to the K-field if a phrase is moved there (**Pekka-ban_i ei-kö₂ _₁ _₂ ole nukkunut* lit. ‘Pekka-hAn not-Q _ _ had slept’); heads cannot freely reverse positions (**Pekka ole_i ei _₁ nukkunut* lit. ‘Pekka had not slept’); heads cannot often be clause-final (*Pekka ole nukkunut ei* lit. ‘Pekka had slept not’); head movement and adjunction is limited to local domains (*...ett-ei Pekka _ ole nukkunut* lit. ‘that-not Pekka _ had slept’ vs. **...ett-ei miksi Pekka _ ole nukkunut* lit. ‘that-not why Pekka _ had slept’). In conclusion, ordering of grammatical heads is rigid, as argued by Manninen, and when variations do occur, they too are syntactically regulated and hence structure-dependent.

Evidence from sentence fragments and coordination further suggests that Finnish does have a VP structure below the finite verbal elements of the clause (25).

- (25) (Manninen 2003, ex. 55–56, p. 38.)
- a. *Mitä Sirkku tekee? Syö suklaa-ta.* (sentence fragment)
 What Sirkku does? Eats chocolate-PAR
 ‘What is Sirkku doing? Eating chocolate.’
- b. *Tytöt söivät ja joivat vatsansa täyteen.* (coordination)
 girls ate and drank stomachs full
 ‘The girls ate and drank so that their stomachs were full.’

Evidence of this type was discussed by Hakulinen & Karlsson (1979), who mention, among other relevant phenomena, VP-deletion (p. 226):⁸

- (26) a. *Saat auttaa, jos osaat (~~auttaa~~).* (=ex. 7b in the original)
 can.2SG help if you.can (help)
 ‘You can help if you can.’
- b. *Kalle saa tanssia kun hän haluaa (~~tanssia~~).* (=ex. 8)
 Kalle can dance when he wants (to.dance)
 ‘Kalle can dance when he wants.’

Third, and perhaps most importantly, Manninen shows (2003, 39–40) that binding is sensitive to postverbal word order:⁹

- (27) a. *Matkalle Espanjaan vei [Pekka äiti-nsä].*
 to.trip to.Spain got Pekka_i.NOM mother-PX/3SG
 ‘Pekka took his mother to a trip to Spain.’
- b. **Matkalle Espanjaan vei [äiti-nsä Peka-n].*
 to.trip to.Spain took mother-PX/3SG Pekka_i.ACC
 Intended: ‘His_i mother took Pekka_i to a trip to Spain.’

Furthermore, while word order is “free” in the finite clause, the phenomenon disappears in infinitival environments (Brattico 2016) (28).

⁸ The authors, while presenting convincing evidence for the existence of the VP-structure in the Finnish finite clause, are only able to reach the conclusion that the existence of the Finnish verb phrase is “unclear” (p. 228). What prompted this skepticism is left unstated.

⁹ The binder in these examples is the third person possessive suffix, glossed as PX/3SG. It requires a c-commanding antecedent.

- (28) a. *Pekka käski [Merja-n harjoitella kilpailuun.]*
 Pekka asked Merja-GEN to.practice to.competition
 ‘Pekka asked Merja to practice for the competition.’
 b. **?Pekka käski [kilpailuun harjoitella Merja-n.]*
 Pekka asked to.competition to.practice Merja-GEN
 c. **?Pekka käski [harjoitella Merja-n kilpailuun.]*
 Pekka asked to.practice Merja-GEN to.competition
 d. **Pekka käski [harjoitella kilpailuun Merja-n.]*
 Pekka asked to.practice to.competition Merja-GEN

Hakulinen & Karlsson (1979) argue that the explanation and description of Finnish nonfinite complement clauses such as (29) requires or at least benefits from the postulation of the VP. The fact that the ordering of infinitival heads *and* their arguments is fixed supports this hypothesis further.

- (29) *Marja haluaa [VP lähteä kotiin nukkumaan.] (=ex. 11a)*
 Marja.NOM wants to.go home to.sleep
 ‘Marja wants to go home to sleep.’

Control also distinguishes postverbal arguments from each other. In the example (30), the thematic null subject of the adverbial (PRO) must refer to the thematic subject of the main clause, and does so even if both arguments remain in the postverbal field, and irrespective of their mutual order.

- (30) a. *Sitä voitti Merja₁ Sirku-n₂ [PRO_{1,+2} juoksemalla]*
 expl won Merja.NOM Sirkku-ACC by.running
 ‘Merja won Sirkku again by running.’
 b. *Eilen voitti Sirku-n₂ Merja₁ [PRO_{1,+2} juoksemalla]*
 yesterday won Sirkku-GEN Merja.NOM by.running
 ‘Yesterday, Sirkku was beaten by Merja by running.’

The Finnish particle *-kin* that triggers a pair-list reading for multiple *wh*-interrogatives also distinguishes the two arguments. In the example below, I use a triple-*wh*-interrogative construction to keep the two interrogative pronouns in their postverbal positions and then show that their postverbal order matters.¹⁰

- (31) a. *Milloin voitti kuka kenet-kin?*
 when won who.NOM who.ACC-KIN
 ‘When did who beat who?’
 (only pair-list reading possible with the particle *-kin*)
 b. **Milloin voitti kuka-kin kenet?*
 when won who-KIN who.ACC
 c. *?*Milloin voitti kenet-kin kuka ?*
 when won who.ACC-KIN who.NOM

¹⁰ Example (31c) is perhaps only marginal. The pair-list reading is hard to get, but not impossible. The construction is quite likely derived by fronting the direct object interrogative to the edge of vP. If this sentence is not ungrammatical, then it is possible that postverbal scrambling can be reconstructed for the purposes of computing the pair-list reading generated by the occurrence of the *-kin* particle.

Finally, I could not find any independent evidence from a published source that Finnish postverbal syntax would be nonconfigurational.

In conclusion, from the evidence currently available it appears possible to reach the conclusion that Finnish is a configurational language, as argued previously by van Steenbergen (1989) and Manninen (2003). The facts warrant even more general conclusion, namely, that in every language, even in those with a “free word order,” the “restrictions on order are quite severe, and therefore rules of realization of abstract structures are necessary” (Chomsky 1965, 134).

3 The movement hypothesis

3.1 Introduction

Perhaps the standard view today, at least within generative theorizing, relies on movement in explaining Finnish noncanonical word order (Hakulinen 1975; Holmberg & Nikanne 2002; Huhmarniemi 2012, 2019; Koskinen 1998; Manninen 2003; Vainikka 1989). I call this the *movement hypothesis*. The movement hypothesis has several variants, discussed below, but where they all agree is in the claim that there exists canonical, fully recursive phrase structure that is manipulated by grammatical operations whose output creates the attested word orders. I will assume that the category of “grammatical operation” is construed in the broadest sense, including any formal-computational mechanism (e.g., standard movement, stylistic movement, rightwards movement, linearization algorithm) that can scramble elements in the canonical structure.¹¹

The movement hypothesis connects word order with discourse interpretation by maintaining that movement is triggered by, or associated with, discourse features. Holmberg & Nikanne (2002), who represent this view, assume that the feature that triggers movement to the subject into the T-field in (3) is a non-focus (topic) feature. The mechanism is syntactic, but the feature triggering the operation has discourse-semantic interpretation. Huhmarniemi (2012) explores the K-field from essentially the same perspective. She assumes that phrases that occur inside the K-field have been moved there from their canonical positions by A-bar movement to check the criterial *wh*-feature and other operator features. In sum, the movement hypothesis does not deny that word order and discourse interpretation correlate; it assumes that they do and tries to explain why the correlation exists.

The movement hypothesis explains the asymmetric properties of both the preverbal and postverbal field, reviewed in the preceding sections, by relying on the notion of *canonical structure*. Binding, control, morphosyntax (in particular, case assignment), canonical word order, thematic role assignment, adverb scope, many movement restrictions and other phenomena occur at the canonical structure (sometimes also called “d-structure”). Noncanonical word orders, which do not participate in determining the above-mentioned phenomena, are derived by manipulating the d-structure.

¹¹ It is of course possible to combine a system of computational word order permutations with nonconfigurationality. Sammallahti, for example, assumed a linearization algorithm that applies to lexico-semantic, conceptual representations (see Section 2.1 in the present article).

We can discern at least three types of approaches assuming the movement hypothesis. One approach (e.g., Chomsky 1965: §4.4) takes the position that what we intuitively view as “discourse-motivated nonconfigurality” constitutes “stylistic movement” that takes place outside of syntax proper, perhaps at the syntax–phonology interface or as part of the performance component of grammar (see also Chomsky, Gallego & Ott 2019). Vainikka (1989) assumed that several Finnish word order permutations are created in this way. It is possible that, as Vainikka argued, some word order permutations are created inside syntax, while others are more peripheral. Another possibility is that the word order permutations are created by standard movement, such as A-movement and A-bar movement. Finally, it is also possible that at least some word order permutations are generated by nonstandard movement, such as extraposition and/or other forms of “rightward” movement.¹²

3.2 Standard (A and A-bar) movement

Are Finnish word order permutations created by movement and, if they are, is the operation stylistic displacement, standard movement or some form of nonstandard movement? I will simply assume from now on, following Huhmarniemi (2012), that the K-field is filled in by A-bar movement. Nothing in the current literature suggests otherwise.

Let us consider the T-field. A movement hypothesis for topicalization was first assumed in Vainikka (1989) and then further developed or assumed by several authors (e.g., Holmberg 2005; Holmberg & Nikanne 2002; Huhmarniemi 2019; Koskinen 1998; Vilkuna 1995). Holmberg and Nikanne, specifically, proposed that the preverbal T-field is filled in differently by grammatical subjects and nonsubjects: the former is moved to the position by means of A-movement, the latter by means of A-bar movement. The idea is illustrated in (32).

- (32) a. $[Jari]_i$ *osti* ---_i *uuden* *auto-n*. (subject movement)
 Jari.NOM bought.3SG new car-ACC
 ← (A-movement)
 ‘Jari bought a new car.’
- b. $[Uuden\ auto-n]_i$ *osti* *Jari* ---_i . (nonsubject movement)
 new car-ACC bought.3SG Jari.NOM
 ← (A-bar movement)

If the K-field is filled in by A-bar movement, and the T-field as in (32), then a substantial amount of Finnish word order can be captured by assuming nothing but the canonical structure and two standard movement operations, A-movement and A-bar movement. The data examined in Section 2, suggesting that these word order variations have a structural component, no longer pose a problem: the explanation relies on structure.

I agree with the idea that subject topicalization involves A-movement (see also Huhmarniemi 2019) but remain skeptical that nonsubject topicalization constitutes A-bar movement (Brattico 2016, 2018). One reason is that unlike long-distance A-bar movement, long-distance topicalization is not possible (33). (The K-field is filled to avoid

¹² The extraposition approach has not been pursued in the literature. Because it has not been applied to Finnish, I will not discuss it in detail in this article. It merits an article-length treatment.

an interpretation in which the direct object of the embedded clause is A-bar moved to the contrastive focus position.)

- (33) a. **Tänään-kö Merja-n₁ väitti Pekka että tapasi ___₁?*
 today-Q Merja-ACC claimed Pekka.NOM that met
 ‘Was it today that, about Merja, Pekka claimed that he will meet her?’
 b. *Mitä tulee Merjaan...*
 ‘When it comes to Merja...’
 **tänään-kö hänet väitti Pekka että tapasi ___?*
 today-Q she.ACC claimed Pekka that met
 ‘...was it today that Pekka claimed that he met her?’

Long-distance A-bar movement is possible (34).

- (34) *Merja-n-ko₁ Pekka väitti että tapasi ___₁?*
 Merja-ACC-Q Pekka claimed that met
 ‘Was it Merja that Pekka claimed that he met?’

Thus, while topicalization is restricted to the minimal finite clause, A-bar movement is not. The second difference is that while Finnish A-bar *wh*-movement obeys Heck’s edge generalization (Heck 2009; Huhmarniemi 2012), topicalization does not. Example (35) illustrates the edge generalization in connection with A-bar/operator movement. The *wh*-element must occur at the left edge of the phrase that is pied-piped to the sentential scope position at the left edge of the interrogative clause. If any of the movement operations are left undone, the result is ungrammatical (or constitutes an echo-question).

- (35) [[*Mitä kaupunkia₁ kohti ___₁*]₂ *virtaamalla ___₂*]₃ *Seine saavuttaa valtameren ___₃?*
 what.PAR city.PAR towards by.floating Seine reaches ocean-ACC
 ‘By flowing towards which city does Seine reach the ocean?’

This condition is not true of topicalization. Suppose that we topicalize the complement of the preposition *kohti* ‘towards’ in (35). There is no equivalent edge generalization forcing topicalized DPs to occur at the edge of a phrase that is moved to the T-field. All word orders in (36a–c) are acceptable.

- (36) *Mitä tulee Pariisiin...*
 ‘When it comes to Paris...’
 a. [*virtaamalla kohti sitä*]₁ *saavuttaa Seine valtameren ___₁.*
 by.floating towards it reaches Seine ocean
 b. [*virtaamalla [sitä₂ kohti ___₂]*]₁ *saavuttaa Seine valtameren ___₁.*
 by.floating it towards reaches Seine ocean
 c. [[*sitä₂ kohti ___₂*]₃ *virtaamalla ___₃*]₁ *saavuttaa Seine valtameren ___₁.*
 it towards by.floating reaches Seine ocean
 ‘... by flowing towards it will Seine reach the ocean.’

In addition, while discourse context can affect the position of the topic in a sentence, it cannot change the outcome of A-bar/operator movement. In (37a), context creates a

situation in which the topic is in a postverbal position; there is no context that licenses the same position for an interrogative pronoun (37b).

- (37) *Mitä tulee Pekkaan...*
 ‘When it comes to Pekka...’
- a. ... *Merja yritti soittaa hänelle.*
 Merja.NOM tried to.call him (= postverbal topic)
 ‘Merja tried to call him.’
- b. ... **Merja yritti soittaa hänelle-kö?*
 Merja.NOM tried to.call him-Q

Phrases hosting operator features occur in the K-field, while the topic can be situated virtually anywhere in the clause (provided a licensing context). This is possibly related to the fact there is no requirement that the topic *must* be situated in the Finnish preverbal T-field. Even indefinites can occur in this position (38) (see also (21) above).

- (38) *Joku maalasi tämän seinä-n.*
 somebody.NOM painted this wall-ACC
 ‘Somebody painted this wall.’

The ‘subject/topic’ in the preverbal T-field thus behaves differently from a *wh*-pronoun’ in the K-field: the former represents a tendency, modulated by discourse context, the latter a grammatical law rejecting modulation by discourse context.

Finally, the pair-list generator particle *-kin* is sensitive to A-bar movement but not topicalization. In Finnish multiple *wh*-interrogatives, *-kin* must be suffixed to an interrogative element that is c-commanded by another (binding) interrogative at s-structure (39a–b). Examples (39b–d) show that the output of topicalization is not relevant in licensing the *-kin* particle; what matters is the output of A-bar movement.

- (39) a. *Kuka osti mitä-kin?*
 who.NOM bought what.PAR-KIN
 ‘Who bought what?’ (only pair-list interpretation)
- b. **Mitä-kin kuka osti?*
 what.PAR-KIN who.NOM bought
- c. *Mitä kuka-kin osti?*
 what.PAR who.NOM-KIN bought
 ‘What did who buy?’ (only pair-list interpretation)
- d. **Kuka₁-kin mitä₂ osti?*
 who-KIN what.PAR bought

In sum, the hypothesis that Finnish nonsubject topicalization is due to A-bar movement cannot be taken for granted.

3.2.1 Stylistic movement

Let us consider the hypothesis that Finnish discourse-motivated word order variations (topicalization among them) constitutes “stylistic movement,” perhaps post-syntactic displacement taking place in the phonological branch of the derivation. This alternative is assumed by Vainikka (1989), but essentially without argument. I have presented several arguments against this hypothesis (Brattico 2018), but the basic justification is that word

order permutations in Finnish *are* sensitive to syntactic and semantic conditions, such as the EPP principle (40a), phi-agreement (40b), a finite/non-finite distinction (Section 2.3), logical scope and pair-list readings (see the previous section) and discourse properties. Moreover, a head or phrase that is in the K-field cannot be moved out (41), a fact that would remain unexplained if movement were literally post-syntactic.

- (40) a. **Ihailee Pekka Merja-a. / Pekka ihailee Merja-a.*
 admires.3SG Pekka.NOM Merja-par Pekka.NOM admires.3SG Merja-PAR
 ‘Pekka admires Merja.’
- b. **Uusi auto täytyy ostaa Peka-n.*
 new car.NOM gets.3SG to.buy Pekka-GEN
 ‘Pekka must buy a new car.’
- c. *Uuden auton saa ostaa Pekka.*
 new car.ACC must.0 to.buy Pekka.NOM
 ‘Pekka can buy a new car.’
- (41) a. *Ketä₁ Pekka ihailee –₁?*
 who.PAR Pekka.NOM admires –₁?
 ‘Who does Pekka admire?’
- b. **–_{1,2} Pekka ihailee –₁ ketä₂.*¹³
 Pekka.NOM admires –₁ who.PAR

Finally, topicalization is ungrammatical if an indefinite argument is topicalized over a definite subject, showing that the operation is sensitive to quantificational properties of the moved constituents (42) (Brattico 2019c; Holmberg 2005; Välimaa-Blum 1988).

- (42) **Mitä tahansa tekee Aili. / Aili tekee mitä tahansa.*
 what ever does Aili Aili does what ever
 ‘Aili can do anything.’

Perhaps because of the above-mentioned reasons, no well-argued position exists in print explaining Finnish free word order as a ‘phonological’ or ‘extrasyntactic’ phenomenon.¹⁴ The issue requires further scrutiny, however.

3.2.2 *Extraposition and rightward movement*

Another variation of the movement hypothesis is to say that Finnish word order permutations are or can be generated by rightward movement or extraposition. This idea has never, to my knowledge, been proposed seriously for Finnish, yet there are several reasons why it should not be rejected without consideration. First, several Finnish word order permutations, such as topicalization or rightward focusing, are limited to the

¹³ In this example the interrogative pronoun first moves the K-field by A-bar movement (trace 1) and then to the rightward position by the hypothetical post-syntactic displacement rule (trace 2).

¹⁴ Chomsky (1965) discusses such a theory in Section 4.4 and points out that the phenomenon of free word order, or what he calls “stylistic reordering,” falls outside the domain of the theory of ordinary transformations. This is the position taken in the present paper as well. He further suggests, however, that the phenomenon “has no apparent bearing, for the moment, on the theory of grammatical structure” (p. 136). The latter thesis does not follow from the former. This is because while Finnish “stylistic reordering” might not be standard movement, it interacts with several core grammatical principles (e.g., finiteness, agreement, EPP, definiteness, and others).

minimal finite clause, and so is extraposition (Ross 1967). Second, as reported in detail in Brattico (2016, 2018) and already observed in Vilkkuna (1989), arguments *can* move into rightward and/or downward direction (43)–(44).

- (43) a. *Varastetun pyörän*₋₁ *käski Merja-n* *palauttaa omistajalleen* *Pekka*₁.
 stolen bicycle asked Merja-GEN to.return to.owner Pekka
 ‘Pekka asked Merja to return the stolen bicycle to its owner.’
 b. ?*Varastetun pyörän* *-1* *käski Merja-n* *palauttaa Pekka*₁ *omistajalleen*.
 stolen bicycle asked Merja-GEN to.return Pekka to.owner
 ‘Pekka asked Merja to return the stolen bicycle to its owner.’
 c. ?*Varastetun pyörän* *-1* *käski Merja-n* *Pekka*₁ *palauttaa omistajalleen*.
 stolen bicycle asked Merja- GEN Pekka to.return to.owner
- (44) *Parisiin halusi* *-1* *ajaa autollaan kesällä ilman taukoja* *Pekka*₁.
 to.Paris wanted to.drive with.car at.summer without pauses Pekka.
 ‘Pekka wanted to drive to Paris during the summer.’

Third, extraposition does not obey the standard properties of A-movement or A-bar movement; but neither do Finnish word order permutations.¹⁵ But there are also problems that might explain why the hypothesis has never been entertained. One problem is that Finnish word order permutations are not limited by direction. Leftward operations, such as those in (45), are also possible.

- (45) a. *Miksi Jukalle*₁ *lainasi Pekka auton* *-1*?
 why to.Jukka lend Pekka.NOM car
 ‘Why did Pekka lend the car to Jukka?’
 b. *Pekka käski Jukalle*₁ *Merjan palauttaa avaimet* *-1*.
 Pekka asked to.Jukka Merja.GEN to.return keys
 ‘Pekka asked Merja to return the keys to Jukka.’
 c. *Avaimet käski Jukalle*₁ *palauttaa Pekka* *-1*.
 keys.ACC asked to.Jukka to.return Pekka.NOM
 ‘Pekka asked to return they keys to Jukka.’

What these data show is that rightward movement together with standard movement are not sufficient to account for the phenomenon as a whole.

3.2.3. Interim conclusion

A good heuristic generalization – not exceptionless, but a good starting point – is to assume that in Finnish a thematic argument can occur in any position in the finite clause. A phrase can undergo leftward movement (e.g., movement to the K-field or to the T-field), rightward movement, and from almost any position into any position, including positions in the ‘middle’ of the sentence. The hypothesis that the phenomenon results from nothing but grammatical movement should therefore be viewed with skepticism, or at the very least something that still requires strong justification. Furthermore, a general notion of “movement” capturing all attested word orders would render the notion of

¹⁵ An anonymous reviewer points out that rightward movement does obey some principles of standard A/A-bar movement, such as island conditions. That is true. To my knowledge the issue remains unaddressed for Finnish.

“grammatical movement” devoid of empirical content, allowing movement into any direction and position. An empirical phenomenon, noncanonical word order in this case, would be explained by relying on a theoretical construct, grammatical movement, that has no direction and bears no resemblance to anything existing in previous literature.

4 The adjunction hypothesis

If the hypothesis that Finnish is configurational is well-supported, but the idea that it is explained in its entirety by relying on A-bar movement, stylistic movement or extraposition is not, what is the alternative? Let us begin with the observation that many free word-order variations behave as if they were not interacting syntactically with the surrounding structure. Consider the following noncanonical positioning of the grammatical subject:

- (46) a. *Illalla auto-n palautti Jariille Pekka.*
 evening car-ACC returned to.Jari Pekka.NOM
 ‘In the evening, Pekka returned the car to Jari.’
 b. *Illalla auto-n palautti Pekka Jariille.*
 evening car-ACC returned Pekka.NOM to.Jari
 ‘In the evening, Pekka returned the car to Jari.’

Whether the grammatical subject occurs, for example, in the last position (46a) or the second last position (46b) has no impact on selection, thematic role assignment, case assignment or labeling. Developing the original proposal by Baker (1996), Chomsky (1995: 4.7.3) and Jelinek (1984), I have proposed that thematic arguments, such as the grammatical subject in (46), can be attached to the phrase structure as case-licensed adjuncts (Brattico 2016, 2018, 2019b). Specifically, after being first-merged to the structure in their canonical positions (where they receive thematic roles and are decorated with morphosyntactic properties), arguments can be remerged or “floated” into a different position as an adjunct. The fact that thematic arguments can be attached to the phrase structure as adjuncts explains why their ordering is free and why they behave as if they were not part of the structure. I call this the *adjunction hypothesis*. The key idea is that instead of unifying the free word order phenomenon with standard movement, it is unified with the placement of adverbials.

One motivation for this analysis is the fact that the distribution of adverbials is similar to the distribution of arguments in Finnish. Both adverbial dislocation and free word order are limited to the minimal tensed clause. No long-distance adverbial displacement is possible (47).

- (47) **Kuka nopeasti_i sanoi että Merja juoksi _{-i}?*
 who fast said that Merja ran
 ‘Who said that Merja ran fast (=topic)?’

Second, while the positioning of thematic arguments correlates with discourse, the same is true of adverbials. In (48a), in which the adverbial is in the topic position, it is interpreted as representing something familiar from prior discourse. For example, it is implied that it has already been discussed or at least mentioned that somebody’s going to sleep. If the adverbial occurs towards the end of the clause, as in (48b), it is interpreted as

being either in the informational focus or as being in a neutral, canonical (all-new) position. This mirrors the discourse interpretation of arguments.

- (48) a. *Kuka [mentyään nukkumaan] kuorsasi koko yön?*
 who went.TUA.3SG to.sleep snored whole night
 ‘Who snored the whole night after s/he went to sleep?’
 b. *Kuka kuorsasi koko yön [mentyään nukkumaan?]*
 who snored whole night went.TUA.3SG to.sleep
 ‘Who snored the whole night after s/he went to sleep?’

Third, the fact that both the thematic argument and the adverbial are adjoined to the structure explains why their position is “free.” Much like thematic arguments, an adverbial in Finnish can occur almost in any position.

- (49) *Pekka käski Merja-n (huomenna) palauttaa (huomenna) kirjan*
 Pekka asked Merja-GEN (tomorrow) to.return (tomorrow) book.ACC
(huomenna) Jukalle (huomenna)
 (tomorrow) to.Jukka (tomorrow)
 ‘Pekka asked Merja to return the book to Jukka tomorrow.’

Free word order and adverbial dislocation are both directionless. A manner adverbial that occurs towards the end of the clause in a canonical configuration can dislocate to the left, whereas a sentential adverbial that occurs canonically towards the left of the clause can move to the right (49). Although the distribution of adverbials and thematic arguments is not identical, there are similarities that do not seem to be accidental. Moreover, a theory of the “free” adverb ordering is required independently; thus, it remains a theoretical possibility that such a theory, when developed formally, generalizes automatically to thematic arguments. Finally, adjunct and adverbial displacement do not obey the edge generalization, which distinguishes the operation from standard operator/A-bar movement. If nonsubject topicalization is adjunction, then the lack of a snowballing/edge generalization in connection with such an operation no longer poses a problem.

The adjunction hypothesis has several problems, however. One problem is that the adjunction operation was not formalized in the sources cited, and so we do not know what it is and how it works, making it difficult to know what exactly this hypothesis predicts. The movement hypothesis fares much better in this arena, relying on fifty years of literature discussing such operations. The problem is not only that without a formal, rigorous theory of adjunction it is difficult to say what the theory predicts, but also because the operation of ‘adjunction’ itself is controversial in current linguistic theorizing. This is problematic also from the point of view of the fact that adverbials and thematic arguments do not have identical distribution. For example, it is well-known that the referential properties of arguments, e.g., whether they are definite or indefinite, affects their ordering (Brattico 2019c; Välimaa-Blum 1988); adverbials do not exhibit such properties. Thus, unlike in the case of the standard movement hypothesis discussed

earlier, the adjunct hypothesis has not yet been sufficiently developed so that it could be tested or compared with the movement hypotheses.¹⁶

5 Discussion and conclusions

The nonconfigurationality hypothesis, the movement hypothesis and the adjunction hypothesis were considered as explanations for the Finnish free word order phenomenon. The nonconfigurationality hypothesis explains free-word order by assuming that Finnish has no syntax, but it suffers from lack of supporting evidence. The movement hypothesis assumes that Finnish has phrase structure syntax and derives word orders by applying grammatical operations to a canonical structure. Indeed, both preverbal and postverbal word orders are controlled by syntactic conditions in Finnish. However, a variation of the movement hypothesis that relies on standard forms of movement suffers from the fact that not all word order possibilities obey such standard conditions. A movement hypothesis that relies on nonstandard forms of movement remains a possibility but has not been argued in print. Finally, the adjunction hypothesis, the third hypothesis examined in this paper, wrongly predicts that the distribution of arguments should be the same as the distribution of other sentential adjuncts, and furthermore relies on the grammatical operation of ‘adjunction’ that is controversial.

Perhaps the most conservative position, taking all the facts into account, is an analysis which relies both on movement and adjunction. The evidence in favor of the hypothesis that the Finnish operator position is filled in by standard A-bar/operator movement is overwhelming and cannot in my view be rejected on rational grounds. The filler–gap dependency created by the K-field satisfies all the criterial properties of A-bar movement (Chomsky 1977). It would be pointless to try to argue that such word orders are created by adjunction or communicative pragmatics. At least *some* word orders are produced by standard operator movement. As argued by Huhmarniemi (2012) and Huhmarniemi & Brattico (2013a), the same logic applies to Finnish internal operator movement. Consider, for example, the free ordering of arguments inside phrases that undergo *wh*-pied-piping in Finnish. The phenomenon is illustrated by (50) and (51). In (50), the DP-complement of an adposition occurs both in the prepositional (a) and postpositional (b) positions, with little or no difference in meaning. The same reasoning could apply also to the argument–adverbial ordering exhibited by (51).

- (50) a. *Seine virtaa [kohti Pariisi-a.]*
 Seine.NOM flows towards Paris-PAR
 ‘Seine flows towards Paris.’
- b. *Seine virtaa [Pariisi-a kohti ____.]*
 Seine flows Paris-PAR towards
 ‘Seine flows towards Paris.’
- (51) a. *Pekka parantui [syömällä lääkkei-tä.]*
 Pekka healed by.eating medicine-PAR
 ‘Pekka was cured by eating medicine.’

¹⁶ I have developed the proposal formally in unpublished work (Brattico, 2019a, 2019b) that will not be discussed in this review. The main point is that in order to compare the adjunction hypothesis and the movement hypothesis some formalization is necessary.

- b. *Pekka parantui [lääkkei-tä syömällä —].*
 Pekka healed medicine-PAR by.eating
 ‘Pekka was cured by eating medicine.’

It is possible that these variations are created by internal A-bar movement similar to internal *wh*-movement reported in the sources cited. While this does not constitute a demonstration that these *are* instances of A-bar movement, it remains a possibility, suggesting that A-bar/operator movement could have a larger role in explaining Finnish word order than just filling in the sentential operator field. Disentangling A-bar movement from, e.g., adjunction or other displacement operations constitutes an interesting topic that remains unexplored.

The status of the T-field is controversial. There is agreement in the literature that the position is configurational, in fact most likely the Spec,TP or Spec,FinP position of the standard theory (Holmberg & Nikanne 2002; Huhmarniemi 2019; Vainikka 1989; Vilkuna 1995). Several papers have proposed that subject topicalization is a form of A-movement (Brattico 2019c; Holmberg & Nikanne 2002), but the matter remains difficult to argue due to the limited number of relevant constructions and the local nature of the operation, rendering convincing experimentation difficult. Nonetheless, there is no direct evidence against the hypothesis. Nonsubject topicalization has been treated as standard movement or adjunction; it is too nonlocal and morphosyntactically inert to constitute A-movement. I have proposed that nonsubject topicalization is adjunction, which tries to capture the several differences between A-bar movement and topicalization. For example, nonsubject topicalization, like adverbial topicalization, is limited to the minimal finite clause, whereas A-bar/operator movement is not. A proponent of the movement hypothesis should find an alternative explanation for these differences, a task that remains to be done.

Postverbal word order remains understudied. I see little prospect in capturing the phenomenon in its entirety by relying on extraposition or nonstandard stylistic/phonological movement; the latter because many of these operations are under syntactic control, the former because the postulated “rightward movement” must then target almost any position to the right of the canonical position. The adjunction hypothesis was proposed to handle these cases, as adverbials exhibit similar freedom in ordering. Specifically, adverbial order does not care about the left-right direction or the landing site (i.e. whether it is leftmost, rightmost or something between). A-bar movement could still, even if the adjunction hypothesis were partly true, be applied to some cases of postverbal word ordering; yet convincing and theory-neutral evidence is hard to come by.¹⁷

The correlation between word order and discourse merits a comment. The correlation itself is uncontroversial; what is subject to controversy is the direction of causality. Since there is no evidence for radical nonconfigurationality, the idea that Finnish word order could be explained by relying on discourse or communicative pragmatics without structural constraints does not look promising. All of the facts mentioned in Section 2 would remain unaccounted for. The evidence supports a less radical starting point. The existence of both syntax and discourse should perhaps be assumed, and then the problem should be formulated as a question concerning their interaction. One possibility is that in Finnish discourse-semantic properties are ‘read off’ from the syntactic structure (or that they guide “free choice” in linguistic production) but

¹⁷ That is, evidence that can distinguish the adjunct hypothesis from the movement hypothesis.

are not otherwise part of narrow syntax. Another possibility is that the discourse features are part of narrow syntax. There exist uncontroversial examples of both situations. Consider the semantic property of ‘being round and red’. Whether some constituent denotes something that has this property is not visible in narrow syntax: there are no syntactic laws, conditions or principles that are sensitive to such a property. On the other hand, the property of being ‘definite’ belongs to the second group: some syntactic laws are sensitive to this attribute. When it comes to discourse, the matter therefore boils down to the question of whether there are or are not (structure-dependent) syntactic laws, conditions or principles that are sensitive to notions such as ‘topic’ or ‘focus’. An argument for such laws must show what the laws are and how they are supported by empirical evidence; and the opposite conclusion can be supported by showing that the proposed laws do not exist and/or they are better explained by relying on something else (for recent discussion, see Chomsky, Gallego & Ott 2019).

Consider the fact that a phrase that occurs in the preverbal subject position in Finnish typically receives the topic interpretation. This led many authors, including Holmberg & Nikanne (2002), to assume that the preverbal position involves the checking of a topic feature (or ‘non-focus’ feature). But the problem, well-known at least since Vilkuna (1989), is to explain the grammaticality of finite clauses in which the preverbal subject is *not* a topic, such as expletive constructions and sentences of the type (52). In this sentence, the direct object constitutes the topic while the preverbal subject is an indefinite DP.

- (52) *Mitä tulee Pekkaan, joku yritti tavoitella hän-tä.*
 when it comes to Pekka, somebody.NOM tried to.reach he-PAR
 ‘When it comes to Pekka, somebody tried to reach him.’

In addition, I have argued based on these and other facts that the preverbal T-field is not associated with topic interpretation but with definiteness (Brattico 2019c). The fact that a logico-semantic relative pronoun can fill in the K-field suggests that discourse-configurationality plays only a secondary role in the K-field. Whether there are laws, conditions or principles regulating Finnish preverbal syntax while relying on discourse notions such as topic or focus is therefore not known. In sum, then, whether Finnish is discourse-configurational is currently an open problem; whether it is configurational is not.

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