Adverb order with *still**

Aviv Schoenfeld[1], Moshe E. Bar-Lev[2] & Roni Katzir[2]

[1]Ben-Gurion University of the Negev, [2]Tel Aviv University

1.   Introduction

Cinque (1999) observes that the relative ordering possibilities of adverbs within and across languages are highly restricted. He accounts for this observation in terms of what we will call the Universal Order Assumption (UOA): some or all adverbs are linearly ordered within the clause, according to a universal ordering provided by UG. Cinque implements the UOA in terms of a universal ordering of functional heads along the clausal spine, with specific adverbs originating in the specifier positions of specific heads.

The UOA faces well-known worries, at least on Cinque's implementation. First, Chomsky et al. (2019) and others have raised questions about the evolutionary plausibility of Cinque's elaborate categorial specification becoming part of the innate component. Second, Bobaljik (1999) observes that while both the ordering of adverbs and the ordering of overt functional heads seem to be preserved, adverbs and overt heads can be interleaved in different ways, which complicates the idea that specific adverbs are associated with fixed positions within the clause. To maintain that idea, it seems necessary to complicate the grammar by allowing for multi-dimensional syntax or order-preserving constraints on adverb movement, both of which involve nontrivial stipulations.

An alternative account, endorsed by Ernst (2001), Nilsen (2003, 2004), and Ramchand and Svenonius (2014), among others, is that at least some restrictions on adverbial orderings arise from semantic or pragmatic clashes that hold in the unattested orderings. We refer to this idea as the Scopal Approach (SA). To the extent that statements about the relevant adverbial meanings and semantic and pragmatic principles are independently supported, the SA avoids the need for additional stipulations of orderings in the categorial component and therefore addresses the conceptual worry of Chomsky et al. (2019). The SA also provides a handle on the empirical challenge of Bobaljik (1999): a semantic clash between adverbs should be maintained regardless of how they interleave between other elements, as long as the meanings of the latter do not eliminate the clash.

Here we make a small contribution to fleshing out the SA with certain adverbial interactions with *still*. Moreover, we present two novel empirical arguments for why the SA has an advantage over the UOA in specific cases of restrictions on adverbial orderings, again focusing on *still*. First, the UOA is challenged by restrictions that persist across clause boundaries; we note that such cross-clausal restrictions exist and seem similar to familiar clause-internal restrictions (§3). Second, the UOA cannot explain why certain bad adverb orders are rescued by semantic manipulations (§4). Such cases challenge the UOA even as a descriptive generalization for the ordering pattern with *still* that we will look at, and we will try to show that it follows directly from the SA. Before presenting these arguments, we next review how the UOA and the SA account for the ordering restrictions with *still* that will be our empirical focus in the rest of the paper.

2.   Ordering restrictions with *still*, UOA vs. SA

This section reviews how the UOA and the SA account for the rigid orders of *finally* > *still* and *suddenly* > *still*, beginning with the former in (1).[1]

(1)   a.   With Daylight Savings Time (DST), it's **finally still** light out after 5:00 p.m.

       b.   It's **(#still) finally** light out after 5:00 p.m.

The UOA account of (1) is that *finally* and *still* belong to ordered categories, e.g. $Asp_{delayed}$ > $Asp_{continuative}$ (Cinque 1999, 2006). The following is a schematic illustration:

(2)
$$Asp_{delayed}$$

finally   . . .

. . . $Asp_{continuative}$
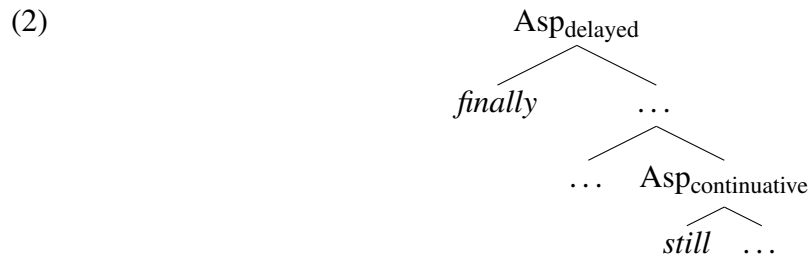
still   . . .

By contrast, the SA would derive the pattern in (1) in terms of the semantic content of the adverbs. Concretely, we note that on the assumptions in (3)—both of which we believe are independently supported—the ordering of *finally* above *still* in (1a) is non-clashing, while the ordering of *still* above *finally* in (1b) is clashing.

(3)   a.   *Still* requires a homogeneous event (Michaelis 1993, Ernst 2001).

       b.   *Finally* forms a non-homogeneous event.

---

[1]Here and throughout, #*still* symbolizes the lack of a temporal reading. *Still* in (1b) can have the concessive reading, paraphrasable as *nevertheless* (Michaelis 1993).

We support (3) with the well-known test for homogeneity based on compatibility with *for*-adverbials (Vendler 1967, Dowty 1979, Krifka 1998, Landman and Rothstein 2010). To illustrate, a *for*-adverbial can modify the homogeneous event of believing in the stork in (4a), but not the non-homogeneous event of reaching the summit in (4b). These are, respectively, a state and an achievement in the sense of Vendler (1967).

(4)   a.   I believed in the stork **for several years**.   *state; homogeneous*

        b.   I reached the summit (#**for a few minutes**).   *achievement; non-homogeneous*

The first ingredient in the SA account of *finally* > *still* in (1) is (3a): *still* requires homogeneity. This is demonstrated by the distribution of the *for*-adverbials in (4) replicating with *still* in (5).[2]

(5)   a.   I **still** believed in the stork when I was eight.

        b.   I (#**still**) reached the summit at noon.

The second ingredient in the SA account is (3b): *finally* causes non-homogeneity. This is shown in (6) with the *for*-adverbial test.[3]

(6)   **For six months**, it was (#**finally**) light out after 5:00 p.m.

At this stage, the SA is conceptually preferable over the UOA due to being less stipulative, by appealing to the independently-needed ingredients in (3). To further highlight this point, note that the SA account straightforwardly extends to further adverbial interactions with *still*, e.g. *suddenly* > *still* in (7).

(7)   a.   When DST starts, it's **suddenly still** light out after 5:00 p.m.

        b.   It's (**#still) suddenly** light out after 5:00 p.m.

The UOA extension to (7) would make the dual stipulation that (i) *suddenly* belongs to a category that (ii) is ordered above *still*. By contrast, it suffices for the SA to appeal to the statement that *suddenly* causes non-homogeneity, as is corroborated by it failing the *for*-adverbial test in (8).

(8)   **For six months**, it was (#**suddenly**) light out after 5:00 p.m.

---

[2]*Still* is infelicitous in the past tense when the reference time is not specified (Greenberg 2008). This is circumvented in (5) with temporal adverbials.

[3]Setting aside what homogeneity is exactly, there is agreement that an event is homogeneous only if it is durative (Dowty 1979, Krifka 1998, Landman and Rothstein 2010). Intuitively, an event modified by *finally* is non-durative because fulfillment of expectations is instantaneous.

After arguing that the SA is conceptually preferable over the UOA for the present adverbial interactions with *still*, the next two sections go a step further by arguing for the SA on empirical grounds.

3. Ordering restrictions persist across clause boundaries

The UOA and the SA make diverging predictions for cross-clausal adverb order. First, if the ordered categories are the only enforcers of adverb order, and if they are associated with different regions of the clause (Cinque 1999, Ramchand and Svenonius 2014), then mono-clausal ordering restrictions should not persist across clause boundaries. By contrast, the SA predicts that if clause-introducing elements do not interact with the meanings of the adverbs, then ordering restrictions should persist. We next show that the latter is borne out by *finally* > *still* in the mono-clausal (1) persisting in the bi-clausal (9), plus *suddenly* > *still* in the mono-clausal (7) persisting in the bi-clausal (10).

(9)   a.   With DST, it's **finally** the case that it's **still** light out after 5:00 p.m.

      b.   It's (#**still**) the case that it's **finally** light out after 5:00 p.m.

(10)   a.   When DST starts, it's **suddenly** the case that it's **still** light out after 5:00 p.m.

      b.   It's (#**still**) the case that it's **suddenly** light out after 5:00 p.m.

Recall from §2 that the present SA account is that *finally* and *suddenly* fail the homogeneity requirement of *still*. Using the *for*-adverbial test, (11) shows that *finally* and *suddenly* continue to cause non-homogeneity under *case*. This correctly predicts that *case* should not eliminate the clash, as is borne out in (9b) and (10b).

(11)   **For six months**, it was the case that it was (#**finally** / #**suddenly**) light out after 5:00 p.m.

In conclusion, cross-clausal adverb order follows directly from the SA, which is our first empirical argument for pursing it over the UOA.

4. Semantic manipulations can rescue otherwise bad orders

The SA predicts that if a given semantic clash is eliminated, then the adverb order should become acceptable. For example, *finally* should become acceptable under *still* if the homogeneity requirement is satisfied. To show that this is borne out, recall from §2 that *reach the summit* is unacceptable under *for*-adverbials and *still*. However, it becomes acceptable with the iteration contributed by *every day* in (12). This is part of the generalization that iteration is homogeneous (Dowty 1979, Krifka 1998, Ernst 2001).

(12)   a.   <u>For a decade</u>, I reached the summit ⎡every day⎤.

b.   I <u>still</u> reach the summit every day .

Parallel to (12), iteration rescues *finally* under *for*-adverbials and *still*. Consider a speaker who has a garden where the flowers are expected to bloom every year, which the speaker always looks forward to, but the flowers always take a bit too long to start blooming. If this continues for a decade, the speaker can say (13a) (with a *for*-adverbial). If this is still ongoing, the speaker can also say (13b) (with *still*).

(13)   a.   <u>For a decade</u>, the flowers **finally** bloomed every year .

           b.   The flowers <u>still</u> **finally** bloom every year .

A simple UOA account of *finally* > *still* incorrectly rules out (13b). One could assume that one or both adverbs belong to multiple ordered categories such that both orders are allowed, but this would not explain why iteration rescues *finally* under *still*. By contrast, this follows directly from the SA.

    We conclude this section with additional semantic manipulations that rescue an additional adverb under *still*, namely *again*. On its own, it is unacceptable under the *for*-adverbial in (14a) and *still* in (14b).[4]

(14)   a.   <u>For a decade</u>, the flowers bloomed (#**again**).

           b.   The flowers are <u>still</u> blooming (#**again**).

Unlike (14), *again* becomes acceptable under *for*-adverbials and *still* when it is conjuncted with *again*, (15).

(15)   a.   <u>For a decade</u>, the flowers bloomed **again** and again .

           b.   The flowers <u>still</u> bloom **again** and again .

The UOA could account for the contrast between (14) and (15) by saying that *again* vs. *again and again* are different adverbs, and only the latter belongs to a category ordered under *still*. However, this would incorrectly rule out *again* under *still* with two other semantic manipulations: the familiar iteration in (16b), and the novel negation in (17b). By contrast, (16a) and (17a) show that both manipulations cause *again* to pass the *for*-adverbial test, meaning the acceptability of *again* under *still* directly follows from the SA.

(16)   a.   <u>For a decade</u>, the flowers bloomed **again** every year .

           b.   The flowers <u>still</u> bloom **again** every year .

(17)   a.   <u>For a decade</u>, the flowers have not bloomed **again**.

---

[4]Ernst (2001:p.358) mentions offhand that *again* forms a non-homogeneous event, which we corroborate and build on here.

    b.   The flowers <u>still</u> have ⬚not⬚ bloomed **again**.

In conclusion, it follows directly from the SA that *finally* and *again* are rescued under *still* by semantic manipulations. This exemplifies the second empirical argument for pursing the SA over the UOA.

5.   Conclusion

This paper makes a small contribution to fleshing out the SA, by attributing several ordering restrictions to *still* requiring homogeneity, and other adverbs (*finally*, *suddenly*, *again*) causing non-homogeneity. The *for*-adverbial test shows that these assumptions are independently-motivated, which makes redundant any aspect of the UOA concerning these adverbs. Beyond this small contribution, we present two arguments that the UOA is empirically inadequate. We do so by showing that the UOA is at times too weak, and at other times too strong. First, it provides an insufficient account of adverb order in general, once cross-clausal order is taken into account. Second, it incorrectly rules out attested orders that are rescued by semantic manipulations. The SA makes correct predictions in both cases, so it is not only conceptually preferable to the UOA, but also more empirically adequate.

References

Bobaljik, Jonathan David. 1999. Adverbs: The hierarchy paradox. *Glot International* 4.9:27–28.

Chomsky, Noam, Ángel J. Gallego, and Dennis Ott. 2019. Generative Grammar and the Faculty of Language: Insights, questions, and challenges. *Catalan Journal of Linguistics* 229–261.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press.

Cinque, Guglielmo. 2006. *Restructuring and functional heads: The cartography of syntactic structures*. Oxford University Press.

Dowty, David. 1979. *Word meaning and Montague grammar*. Reidel.

Ernst, Thomas. 2001. *The syntax of adjuncts*. Cambridge University Press.

Greenberg, Yael. 2008. Presupposition accommodation and informativity considerations with aspectual *still*. *Journal of Semantics* 26:49–86.

Krifka, Manfred. 1998. The origins of telicity. In *Events and grammar*, ed. by Susan Rothstein. Kluwer Academic Publishers.

Landman, Fred, and Susan Rothstein. 2010. Incremental homogeneity in the semantics of aspectual *for*-phrases. In *Syntax, lexical semantics and event structure*, ed. by Malka Rappaport Hovav, Ivy Sichel, and Edit Doron. Oxford University Press.

Michaelis, Laura A. 1993. 'Continuity' within three scalar models: The polysemy of the adverbial *Still*. *Journal of Semantics* 10:193–237.

Nilsen, Øystein. 2003. Eliminating positions: Syntax and semantics of sentential modification. Doctoral dissertation, Utrecht University.

Nilsen, Øystein. 2004. Domains for adverbs. *Lingua* 114:809–847.

Ramchand, Gillian, and Peter Svenonius. 2014. Deriving the functional hierarchy. *Language Sciences* 48:152–174.

Vendler, Zeno. 1967. *Linguistics in philosophy*. Cornell University Press.

Aviv Schoenfeld, Moshe E. Bar-Lev & Roni Katzir

aviv-s@hotmail.com, moshebl@tauex.tau.ac.il, rkatzir@tauex.tau.ac.il