

Evidence described below indicates that although adjectival passive participles have internal syntactic structure, promotion of object to subject in such cases does not involve syntactic movement, in contrast to eventive passive participles.

The English pro-VP *do so* does not support movement of an internal argument, including wh-movement (1a) or object promotion in passives (1b) (Hallman 2006).

- (1) a. \*I know which sonatas Max played, but I wonder which ones Mary did so?  
 b. \*Max was arrested and Mary was done so, too.

Like other adjectives, participles may be replaced by *so* in predicate position (2). Adjectival *so* patterns like verbal *do so* in not supporting wh-movement (3). However, as the examples in (2) indicate, *so* replacement does not inhibit object promotion to subject. The object of the underlying verbs *dedicate* and *respect* appears as the subject in the participle constructions in (2). Assuming that (1) and (3) are ungrammatical because *so* replacement bleeds movement, externalization of *this book* and *Barry* in (2) appears to proceed without movement. Embick's (2004) observation that passive participles can be formed from resultative constructions, which are formed in the syntax, and which are also replaceable by *so* (4), preempts any appeal to Wasow's (1977) claim that the object of an adjectival passive is externalized in the lexicon.

- (2) a. This book appears dedicated to Ferdinand, and that one appears so, too.  
 b. Barry appears respected by Shel, and Doris appears so, too.  
 (3) \*This book is dedicated to Ferdinand, but I wonder (to) whom that one is so?  
 (4) The grass is run bare, and the astroturf is so, too.

My proposal is three-fold: (I) Predicates with verbal bases consist in the structure (5), where VP introduces the theme, vP an agent, if there is one, and PredP a non-theta marked DP, which I refer to as the 'phase-subject'.

- (5) [(Asp<sub>E</sub>) [PredP [(Asp<sub>R</sub>) [(vP) [VP]]]]]

Following Embick, Asp<sub>E</sub> hosts the participial morphology in eventive passive participles and Asp<sub>R</sub> that in resultant state participles. While Embick places Asp<sub>R</sub> lower than vP, excluding agents from resultant state participles, agents do in fact occur in resultant state participles as 'incorporated subjects' (e.g. *war-ravaged country*, *interest-driven inflation*, *state-sponsored terrorism*, etc.), and sometimes in *by*-phrases (2b), warranting the high position for Asp<sub>R</sub> seen in (5). (II) The participial forming heads Asp<sub>E</sub> and Asp<sub>R</sub> make the subjacent specifier a non-intervenor for minimality, in which sense it is 'demoted'. (III) There is an unpronounced lexical item that I term  $\epsilon$  ('epsilon') with the following properties: (IIIa) it cannot bear Case (being unpronounced) and therefore does not move to a Case position, (IIIb) it is anaphoric in that it must be bound by the closest antecedent, and (IIIc) it is subject-oriented in that it must be bound by the phase-subject (i.e., the constituent in [spec,PredP]).

In active transitive constructions (6a),  $\epsilon$  may occur in [spec,vP], since it finds an antecedent in [spec,PredP] that is also the closest potential antecedent, causing the phase-subject (which itself raises to subject) to be construed as the agent (6b).  $\epsilon$  may not occur in [spec,VP] and be bound by the phase-subject since the agent in [spec,vP] intervenes (6c). An overt theme in [spec,VP] may also not move to the nominative subject position over the phase-subject, for the usual reason that the phase-subject intervenes (6d).

- (6) a. Max dedicated the book to Ferdinand.  
 b. [TP Max<sub>i</sub> . . . [PredP t<sub>i</sub> [vP ε<sub>i</sub> [VP the book [V' dedicate to Ferdinand]]]]]  
 c. \*[TP The book<sub>i</sub> . . . [PredP t<sub>i</sub> [vP Max [VP ε<sub>i</sub> [V' dedicate to Ferdinand]]]]]  
 d. \*[TP The book<sub>i</sub> . . . [PredP Max<sub>j</sub> [vP ε<sub>j</sub> [VP t<sub>i</sub> [V' dedicate to Ferdinand]]]]]

However, in eventive passives, Asp<sub>E</sub> makes the phase-subject a non-intervenor for minimality (indicated by the strikethrough), in which case the theme in [spec,VP] *can* raise to the nominative subject position (7b; ε cannot since it cannot not bear Case). ε may still not occur in [spec,VP] and be bound by the phase-subject, since the agent in [spec,vP] still intervenes (7c). In eventive passives, therefore, object promotion to subject can only proceed by movement. (1b) is ungrammatical because *so* replacement (of the complement of PredP) bleeds movement.

- (7) a. The book was dedicated to Ferdinand.  
 b. [TP The book<sub>i</sub> was [AspEP -ed [PredP ~~someone~~<sub>j</sub> [vP ε<sub>j</sub> [VP t<sub>i</sub> [V' dedicate to F.]]]]]]  
 c. \*[TP The book<sub>i</sub> was [AspEP -ed [PredP t<sub>i</sub> [vP someone<sub>j</sub> [VP ε<sub>i</sub> [V' dedicate to F.]]]]]]

In resultant state passives, however, the participial morphology Asp<sub>R</sub> makes the agent in [spec,vP] a non-intervenor for binding of ε in [spec,VP] by the phase-subject, causing the phase-subject to be construed as the theme (8b). The theme itself (epsilon) remains in [spec,VP] (where it may license a resultative predicate). Since no movement takes place, *so* replacement (of the complement of PredP) is licit. Hence the contrast between (1b) and (2).

- (8) a. The book appears dedicated to Ferdinand.  
 b. [TP The book<sub>i</sub> appears [PredP t<sub>i</sub> [AspRP -ed [vP ~~someone~~ [VP ε<sub>i</sub> [V' dedicate to F.]]]]]]

This analysis makes the prediction that unlike eventive passives, object externalization in unaccusative constructions should survive *do so* substitution. Since there is no vP in unaccusative predicates, no agent intervenes for binding of a theme in [spec,VP] by the phase-subject. As predicted, unaccusative verbs admit *do so* replacement, which is surprising assuming that externalization in unaccusatives proceeds as in passives. Compare (9a) with (1b).

- (9) a. The pond froze solid and the river did so, too.  
 b. [TP The pond . . . [PredP t<sub>i</sub> [vP ε<sub>i</sub> [freeze solid]]]]]

Thus, 'externalization' by binding ε is at work in more than just adjectival participle constructions. The data above implicate the generalization that when Pred<sup>0</sup> is stranded by *so*-replacement, it is pronounced *do* when the *so*-replaced complement is verbal (vP or VP) and goes unpronounced when the complement is adjectival (Asp<sub>R</sub>P).

**References:** Embick, David (2004). On the Structure of Resultative Participles in English. *Linguistic Inquiry*, 35:355-392. Hallman, Peter (2006). Constituency and Agency in VP, in Schmeiser, Benjamin et al (eds) *Proceedings of WCCFL 23*, 304-317, Cascadilla Press. Wasow, Tom (1977). Transformations and the Lexicon. In Culicover, Peter et al (eds) *Formal Syntax*, 327-360, Academic Press.