What moves where in echo *wh*-questions?

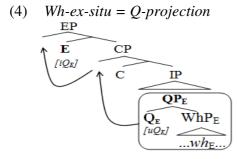*Ekaterina Chernova*
Universitat de Girona

1. Introduction. Traditionally, it is assumed that echo *wh*-questions (henceforth *wh*-EQs) necessarily exhibit *wh*-in-situ (Fiengo 2007; Sobin 2010, a.o.). This paper argues against this view and presents novel evidence for overt *wh*-movement in request-for-repetition *wh*-EQs. It is argued that, as standard long-distance *wh*-movement, echo *wh*-fronting proceeds successive cyclically and hence its legitimacy depends on whether the derivation contains an available escape hatch.

2. Data. The English *wh*-EQ in (1b), which repeats a previous *wh*-interrogative utterance (U$_{(WH)}$), (1a), presents a number of striking properties that would result ungrammatical in an ordinary *wh*-question: (i) *wh*-in-situ; (ii) violation of Superiority; (iii) widest scope for the echo *wh*-phrase (only *who* requests an answer). Notice that, unlike an ordinary *wh*-item (in italics), the echo *wh*-word (in bold and indexed with *E*) acts as a *discourse, intersentential anaphora*, referring back to an entity already introduced in the immediately previous utterance, but unheard by the speaker.

(1) a. U$_{(WH)}$: *What* did (mumble) buy? (ENG) (2) a. U$_{(DCL)}$: Mary bought (mumble). (ENG)
    b. EQ: *What* did **who**$_E$ buy?   b. EQ: Mary bought **what**$_E$?
    c. EQ: ***Who**$_E$ bought *what*?   c. EQ: **What**$_E$ did Mary buy?

Overt echo *wh*-movement is blocked in English EQs like (1c), but allowed in EQs reproducing a declarative U (U$_{(DCL)}$), (2c). However, compare (1) with the Russian *wh*-EQs in (3), which reproduce a previous *wh*-question. In addition to the standard *wh*-in-situ option, (3b), multiple *wh*-fronting languages (henceforth MWF) allow overt movement of the echo *wh*-word: (i) to the leftmost position, above the U's *wh*-phrase, (3c) (in Slavic in general), and (ii) to the immediately preverbal position, (3d) (^{OK} in Russian, Polish; but *$^{/??}$ in Bulgarian):

(3) a. U$_{(WH)}$: *Čto* kupil (mumble)?   b. EQ: *Čto* kupil **kto**$_E$?   (RU)
        what bought   what bought who$_E$
        'What did (mumble) buy?   c. EQ: $^?$ **Kto**$_E$ *čto* kupil?
                                          d. EQ: *Čto* **kto**$_E$ kupil?

The data in (1-3) suggest that legitimacy of echo *wh*-movement crucially depends on two factors: (i) the clause-type of the utterance being echoed (declarative *vs.* interrogative); (ii) general pattern of *wh*-movement in ordinary questions (e.g. whether MWF is allowed (e.g. RU) or not (e.g. ENG)).

3. Proposal. **3.1.** Extending Cable's (2010) Q-theory to *wh*-EQs, I argue that their derivation involves three crucial elements: (i) an anaphoric echo *wh*-phrase (WhP$_E$) merged at the argument position, (ii) a phonetically null discourse-bound interrogative Q-particle (Q$_E$), merged anywhere in the tree where it c-commands WhP$_E$, and (iii) interrogative E ('echo') head. All three elements bear some instance of the interrogative Q-feature (henceforth [Q$_E$], in order to distinguish from [Q] in canonical *wh*-questions). Adopting Sobin's (2010) insight, I argue that the derivation of *wh*-EQs, unlike the one of standard *wh*-questions, contains two Ā-projections: (i) CP, of the same clause-type (e.g. declarative, interrogative) as the one of the U being echoed; (ii) discourse-bound interrogative EP, which assigns scope to Q$_E$. As shown in (4), EP selects CP as a complement.
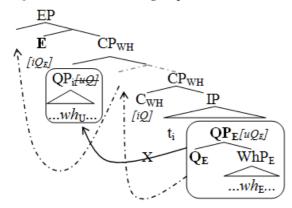
(4) *Wh-ex-situ = Q-projection*

3.2. With Cable (2010), I argue that *all* instances of *wh*-movement (including *echo wh*-movement) arise as a secondary effect of Q-movement to the scope position of the question, a syntactic universal. More precisely, echo *wh*-movement is a result of *Q$_E$-projection*, (4): Q$_E$ merges with the echo-inserted WhP$_E$ at the base position and projects a QP$_E$, which immediately dominates both Q$_E$ and its sister. Consequent movement of QP$_E$ into EP pied-

pipes WhP$_E$ (no wh-feature-percolation being necessary). With Bošković (2007), I assume that Ā-Agree is an upward relation between a probe α and a goal β, such that (i) α bears some [uF]; (ii) β has a matching [iF]; (iii) α c-commands β. Therefore, interrogative (echo) movement is triggered by an unvalued instance of the Q$_E$-feature on Q$_E$. In (4), QP$_E$ carrying [uQ$_E$] must move over E bearing [iQ$_E$], in order to agree.

4. Echo *wh*-movement. I argue that Q$_E$-movement to EP proceeds successive cyclically, through Spec,CP, used as an escape hatch. If Spec,CP is available as an intermediate landing site for the fronted QP$_E$, echo *wh*-movement is allowed; otherwise, it is blocked. The echo-puzzle in (1-3) then follows straightforwardly. **4.1.** The *wh*-EQ in (2c) is derived along the lines in (4). Since the echoed U is a declarative, a declarative CP is projected in the derivation of a corresponding *wh*-EQ, whose specifier is unfilled. This position can be used as an intermediate landing site for the fronted QP$_E$ on its way to EP; as a result the echo *wh*-item appears at the left edge of the clause. **4.2.** In (1), however, the echoed U is a *wh*-interrogative. As shown in (5), the interrogative C (C$_{WH}$) is projected, which in turn attracts the non-echo QP (containing U's *wh*-word) to Spec,CP.
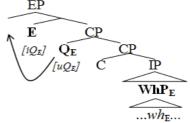
(5) *QP$_E$-movement through Spec,CP$_{WH}$*

Therefore, in languages of the English-type, which make use of a single Spec,CP (Richards 2001), echo *wh*-movement is blocked, (1c) (represented by *continuous arrows* in (5)). Nevertheless, as standardly assumed, MWF languages can use multiple specifiers of CP, as opposed to English (Rudin 1988; Pesetsky 2000; Richards 2001, a.o.). The proposed analysis correctly predicts the grammaticality of (3c): in Slavic, QP$_E$ moves into EP through the inner Spec,CP (*dashed arrows* in (5)). I suggest that the 'marginal' (?) status of (3c) (for some native speakers) is due to the feature-sensitive Relativized Minimality effect (Starke 2001): QP$_E$ can be extracted from CP$_{WH}$ over the non-echo QP, since the former is more richly specified than the latter at this point ([uQ$_E$] on QP$_E$ has not been checked yet).

5. Echo *wh*-in-situ. Q-based approach to *wh*-EQs uniformly captures the *wh*-in-situ option, which is a result of *Q$_E$-adjunction* (available in D-linked questions in *wh*-fronting languages). Within Q-theory (Hagstrom 1998; Cable 2010), Q-particle can be merged anywhere in the sentence, from where it c-commands the *wh*-word. I suggest that in EQs with *wh*-in-situ the anaphoric interrogative Q$_E$ is adjoined to CP (Ā-position), requesting for repetition of certain portion of the U, (6). Such Q$_E$ does not project and moves to EP by itself. I show that such view correctly captures a number of echo-challenges: e.g., why the echo *wh*-words are allowed inside islands, (7).

(6) *Wh-in-situ = Q$_E$-adjunction*

(7) a. EQ: You wonder [*who* solved the problem **how$_E$**]?   (ENG)

Moreover, the analysis captures the clause-internal *wh*-fronting in (3d). As standardly assumed, in some Slavic languages the immediately preverbal position for WhP$_{(E)}$ is a result of *wh*-scrambling to a position below CP (FocusP in Bošković 2002; IP in Richards 2001; AspP in Chernova 2013, a.o.). Thus, in (3d), the echo *wh*-phrase appears below the non-echo *wh*-item (which is at Spec,CP), but receives widest scope due to Q$_E$ adjoined to CP and then fronted by itself into EP.

6. In sum, this Q-based approach uniformly captures the puzzling echo-properties and suggests that *wh*-EQs are less opposed to ordinary *wh*-questions than it could appear.