Reduced unconditionals

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1 Introduction

This squib considers structures of the kind underlined in (1) and (2).

(1) a. We must see this through, no matter how painful the consequences.
b. We can't refuse any such students, however low their grades.
c. Whatever the weather, we must move together.[1]
d. If they made that the rule, the employee would just follow the rule, regardless of how loyal the customer.[2]

(2) a. We can't refuse any students, however unprepared.
b. Roberts pointed out, for example, that insurers are required to sell insurance to all comers, no matter how sick.[3]
c. It's in my programming to obey all humans, no matter how insane.[4]

Such structures appear to be "reduced" versions of the adjunct clauses seen in (3).

(3) a. We must see this through, no matter how painful the consequences are.
b. We can't refuse any such students, however unprepared they are.

[1] Marshall Plan poster circa 1950s.
[2] http://kitchenette.jezebel.com/seventeen-is-apparently-totally-in-favor-of-shitty-cust-1725861998
[3] http://www.scotusblog.com/2015/06/symposium-words-still-have-meaning/
[4] BBC series *Red Dwarf*, series 3 episode 4 "Bodyswap".

Following Zaefferer (1990, 1991) and Rawlins (2008, 2013), I refer to adjunct clauses such as the ones underlined above as *unconditionals*. A number of authors (those cited above and references therein) have provided accounts of the syntax and semantics of unconditional clauses. However, the reduced forms in (1, 2) have received comparatively little attention. The properties of the forms in (1), consisting of a *wh*-marked predicate plus a DP (plus perhaps an introductory subordinator such as *no matter* or *regardless of*), are discussed fairly extensively in Culicover 1999:104–30, which is responded to by Fodor (2001:377–80), but otherwise do not seem to have been discussed widely. The forms in (2), consisting of just a *wh*-marked predicate, seem to have received very little attention, with the exception of brief discussion by Fodor (2001) and Kim & Lee (2011), and fuller discussion by Elliott & Murphy (2015).[5]

This squib considers how these "reduced" structures should be best analyzed. The structures in (2) have presumably received little attention because their analysis seems obvious: they look like sluicing constructions, such as (4), in which all of a clause except a *wh*-word has undergone ellipsis (Merchant 2001 a.m.o.). This is what Fodor (2001:380), Kim & Lee (2011), and Elliott & Murphy (2015) propose, for example.

(4) He ate something, but I don't know what ⟨he ate⟩/⟨it was⟩.

[5] Merchant (2001:175) briefly discusses what he calls "concessive" sluices, such as (i).

(i) She'll talk to anyone – it doesn't matter who.
(i.e. *it doesn't matter who* ⟨*it is*⟩)

Despite similarities, I think that these are not to be grouped together with cases like (1, 2). The clause *it doesn't matter who* is not an adjunct clause in (i), as the *wh-ever* and *no matter wh* clauses in (1) and (2) are. Rather, the embedded clause in (i) appears to be an embedded interrogative of the same sort as we would find under a verb like *wonder*; see Culicover 1999:106–9 for further discussion of this point. While structures like (i) have their own mysteries, as Merchant discusses, I do not consider them here, restricting my attention to the adjunct cases.
I also restrict my attention to English. Other languages also have 'reduced unconditionals' similar to *no matter what* (e.g. German *egal was*, Norwegian *uansett hva*), which may have different properties; I make no claims about these here. In particular, it may be that reduced unconditionals in these languages do indeed result from sluicing (see Elliott & Murphy 2015 for data and discussion), a conclusion which I argue against here for English.

In this squib, I want to argue that this tempting parallel is in fact incorrect. Following Culicover (1999), I argue that reduced unconditionals should rather be analyzed as kinds of small clause structures: the *wh*-phrase is predicated of the subject, and then subsequently undergoes movement.

(5) a. no matter how painful the consequences

b. no matter [$_{CP}$ how painful$_i$ [$_{SC}$ [$_{DP}$ the consequences] t$_i$]]

In the fully reduced cases such as (2), I propose that the subject of the small clause is not deleted via the process of sluicing, but is rather replaced by an empty pronoun. As such, the analysis can be likened to "pseudosluicing" (Merchant 1998).

(6) a. no matter how sick

b. no matter [$_{CP}$ how sick$_i$ [$_{SC}$ [$_{DP}$ $\emptyset$] t$_i$]]

I will first show evidence that constructions like (1, 2) cannot result from sluicing. I will then discuss the small-clause analysis of reduced unconditionals with an overt DP. Culicover (1999) notes that there are strict constraints on the kind of DP that can appear in these constructions. I propose a new descriptive generalization which captures these restrictions: in a reduced unconditional construction, either the matrix clause or unconditional clause must contain an E-type pronoun bound from the other clause. This generalization also helps us understand some peculiar behavior of the putative null pronoun in (6). I provide some evidence that this null pronoun should be analyzed as little *pro*, a surprising conclusion given that English is usually considered not to be a *pro*-drop language; I offer some speculation about why *pro* should be licensed in reduced unconditionals.

2 Reduced unconditionals are not sluices

Unreduced unconditionals clearly result from *wh*-movement.

(7) a. We can't refuse any students, however unprepared they are.

b. $[_{CP}$ [however unprepared]$_i$ $[_{TP}$ they are $t_i]]$

There is debate in the literature concerning whether their syntax is most analogous to free relatives (such as *I'll eat whatever he cooks*) or interrogatives (such as *What(ever) is he doing?*). Rawlins (2008, 2013) offers several arguments that they have the internal syntax of interrogatives. If that is right, we would expect them to undergo sluicing, just as the embedded interrogative in (8) can; and this would offer an obvious explanation for the possibility of reduced unconditionals as in (9).

(8) They're unprepared but I don't know $[_{CP}$ [how unprepared]$_i$ $\langle[_{TP}$ they are $t_i]\rangle]$.

(9) We can't refuse any students,
$[_{CP}$ [however unprepared]$_i$ $\langle[_{TP}$ they are $t_i]\rangle]$.

However, there are reasons to believe that, contrary to appearances, sluicing is not in fact possible in unconditional adjuncts. It is well known that not all instances of *wh*-movement allow sluicing (see e.g. Lobeck 1995, Merchant 2001 a.m.o.); for example, free relatives do not: *John cooked something, and I will eat what *(he cooked)*. In this section I argue that unconditionals are one such environment, in which sluicing is disallowed even though *wh*-movement takes place;[6] and that reduced unconditionals do not result from sluicing.

The first argument in support of this comes from the fact that, as Weir (2014a:ch. 5) discusses, not all unconditionals can be "reduced". For example, ellipsis in cases like (10) is not possible, even though the material that would be omitted in the

[6] We should not necessarily draw from this the conclusion that unconditionals do not, in other respects, have the syntax of interrogatives, as Rawlins argues for. Weir (2014a) discusses how an interrogative syntax for unconditionals can be compatible with their failure to sluice. The important point for the present argument, however, is just to establish the empirical fact that unconditionals do not undergo sluicing.

unconditional adjunct is syntactically and semantically given, and even though sluicing true embedded questions in very similar contexts is grammatical (11).

(10) a. A: Which dress should I wear?
B: You'll look lovely whichever dress/no matter which dress *(you wear). (Weir 2014a:264)

b. A: The liberal party has a new leader.
B: It doesn't matter; they won't win an election whatever kind of leader/no matter what kind of leader *(they have).

(11) a. I know which hat I'll wear, I just don't know which dress (I'll wear).

b. The party has a new leader, but I don't know what kind of leader (it has).

If sluicing is generally permitted in unconditionals, there is no explanation for the ungrammaticality of (10). On any extant theory of the identity requirement in ellipsis, these clauses should be able to undergo sluicing. However, they cannot. This suggests that sluicing is not in general available in unconditionals, and we should look elsewhere for the derivation of reduced unconditionals.

We can also construct a similar argument in the opposite direction: in some cases, reduced unconditionals are possible where sluices are not. Note, for example, that (12) is ungrammatical as a sluice:[7]

(12) We will accept no students without asking them how committed *(they are).

A reduced unconditional of a very similar type, however, is grammatical (13). Again, if reduced unconditionals are derived by sluicing, then this contrast is unexpected.

(13) We will accept no students, no matter how committed.

[7]Why (12) is ungrammatical is not immediately clear, but it seems plausible that the anaphoric/semantic condition on sluices – congruence with the Question under Discussion or "live issue" (Ginzburg & Sag 2000, AnderBois 2010, 2014, Barros 2014, Weir 2014a, 2017) – is not met.

A final reason to reject a sluicing analysis comes from the fact that a second remnant, in addition to the *wh*-phrase, is possible, as in the cases in (1).

(14) a. We must see this through, whatever the cost.

b. We can't refuse these students, however low their grades.

Such *wh* + remnant structures are not in general licit in sluicing.[8] Embedded interrogative counterparts to (14), for example, are ungrammatical.

(15) a. That dress looks nice. I wonder what the cost *(is).

b. Whether we reject these students depends on how low their grades *(are).

Reduced unconditionals, then, do not appear to be derived via sluicing of their unreduced variants. However, it does seem that reduced unconditionals can generally be *paraphrased* as full unconditionals containing a pronoun and a copula. In what follows, I propose an analysis which preserves this intuition.

3 The syntax of reduced unconditionals

The starting point is to understand unconditionals which consist of a *wh*-phrase plus another phrase, as in (1). As noted above and shown by the data in (1), such cases consist of a *wh*-marked predicate plus a DP. Reduced unconditionals are obligatorily predicative; using a *wh*-phrase which is identificational rather than predicative, as in (16), results in ungrammaticality.

(16) We won't accept any student, no matter whose son the student *(is).

[8] There is one exception: *why* (and *how come*), as discussed by Weir (2014b) and Yoshida et al. (2015).

(i) John kissed Mary. Why Mary?

For discussion of why *why* might be different, see the cited references; but it's clear that this is not a possibility for most *wh*-words in sluicing, as (15) shows. The syntax of *why*-stripping and of reduced unconditionals may in fact be connected (see brief discussion in section 3), but I won't try to develop this here.

Given this, and roughly following the discussion in Culicover 1999, one plausible way of analyzing reduced unconditionals would be to say that they contain small clauses, which are generally restricted to expressing predicative meanings (*I consider Cicero intelligent*/**I consider Cicero Tully*; though see Heycock & Kroch 1999:381f. for caveats here). Concretely, I assume the underlying structure shown in (17a), in which a ForceP layer hosting an interrogative operator Q (see Rawlins 2013) sits above a small clause. The predicate *wh*-moves to a part of the CP layer just below Force (17b), as in Rawlins' analysis of unreduced unconditionals.[9]

(17) We must see this through, no matter how painful the consequences.

a. no matter [$_{\text{ForceP}}$ Q [$_{\text{CP}}$ [$_{\text{SC}}$ [$_{\text{DP}}$ the consequences] [$_{\text{AP}}$ how painful]]]]

b. no matter [$_{\text{ForceP}}$ Q [$_{\text{CP}}$ [$_{\text{AP}}$ how painful]$_i$ [$_{\text{SC}}$ [$_{\text{DP}}$ the consequences] t$_i$]]]

The only departure in (17) from Rawlins' proposal for unreduced unconditionals is that the CP/Force layer sits on top of a predicative small clause, rather than a full clause or TP. This may seem unconventional, but similar structures have been proposed on independent grounds. In some treatments of imperatives, for example, a CP layer merges directly above a verbal layer without the mediation of TP (see e.g. Zanuttini 1996 and in particular Platzack & Rosengren 1998).

(18) [$_{\text{ForceP}}$ [$_{\text{vP}}$ *pro* [$_{\text{VP}}$ eat your dinner]]]

Weir (2014b) proposes a similar structure to (18) in his analysis of *why*-stripping (*John ate natto; why natto?*; see also Yoshida et al. 2015). If the above authors are on the right track, a similar structure for reduced unconditionals may not be implausible. However, it does not cover all of the idiosyncratic properties of the reduced unconditional construction, of which there are many. For example, the fact that small clauses "topped" by ForceP/CP layers appear to be restricted to unconditional adjuncts (and are not licit in, for example, interrogative complements: **I wonder how talented*

[9] I don't commit myself to the syntax of the *no matter* or *regardless of* here; they are plausibly Ps which take CP complements. For comment on the "external" syntax of unconditionals, see Rawlins 2013.

the students) is not explained. Culicover (1999) notes an additional mystery: the *wh*-element of a reduced unconditional must be the predicate, a restriction which does not hold of unreduced unconditionals. It is ungrammatical for the *wh*-element of a reduced unconditional to be the subject of the small clause (19a), or to subextract the *wh*-element from within the predicate (19b) (although unreduced versions of these, with the copula expressed, are grammatical).

(19) a. We won't accept any students, no matter how many of their grades *(are) impressive.

b. We must follow the rule, no matter who$_i$ the customers *(are) [$_{AP}$ angry at t$_i$]. (after Culicover 1999:115, ex.(46f))

Culicover (1999) suggests that reduced unconditionals show such idiosyncratic properties that they have to be specified as a fixed construction, as in (20), rather than being derived by more general grammatical rules:

(20) (Culicover 1999:118)
no matter [Predicate[+WH]$_i$ NP$_i$]
where reference of NP is a definite generic.

(I will comment further on the "definite generic" restriction below.) I suggest that the schema in (17) is preferable to that in (20); no *wh*-movement is implied in the construction in (20). Given that the leftmost position of *wh*-elements in English is usually taken to be a consequence of movement, as well as the fact that Rawlins (2013) makes crucial use of a Q operator in the CP layer in his analysis of unreduced unconditionals, I feel it appropriate to treat reduced unconditionals as involving *wh*-movement to a left-peripheral/CP layer. However, I have no suggestions at present for how to (non-stipulatively) derive the generalization that the predicate must be the *wh*-element in a reduced unconditional, or that the "CP atop SC" syntax above only shows up in a restricted set of cases; it may be that these facets of its behavior will still

have to be stipulated constructionally.[10]

However, while many properties of reduced unconditionals remain mysterious, I believe that the clause in (20) restricting DPs to definite generics can potentially be made to follow from deeper principles, to which I now turn.

4 Restrictions on DPs in reduced unconditionals

Culicover (1999:109–12) notes that there are a number of restrictions on the DP in a reduced unconditional construction. For example, it cannot be a deictic expression, a proper name, or a pronoun (see Culicover 1999:109–12 for some other restrictions).

(21) I'm going to the party, *however angry John/him/that guy over there.

Culicover suggests that the relevant restriction is to definite generics. At first glance, that seems to be bolstered by the data in (1); but in fact this does not seem to be completely correct. Consider (22), for example, where the DP is not definite.

(22) However low a student$_i$'s grades, we can't reject them$_i$.

The key generalization seems to be that some sort of binding relationship must hold, in one direction or the other, between the matrix clause and the reduced unconditional. The binding relationship can be between a quantifier and a bound pronoun, as in (22) and in (23a); or a bound definite description, as in (23b). It can also potentially hold of a covert pronoun, as in (23c); more abstractly, a definite DP can be in a bridging-type relationship with the other clause (23d).

(23) a. We can't refuse any student$_i$, however low <u>their$_i$ grades</u>.

b. We can't refuse any student$_i$, however unprepared <u>the student$_i$</u>.

[10] One could suggest that "CP atop SC" structures are (or can be) selected by the Force head which is involved in the creation of unconditionals (Rawlins 2013), but not other Force heads; Fodor (2001:378–80) sketches a proposal along these lines. Culicover (1999:114–8) argues that, while one can always encode such behavior in the syntax by brute force, this would ultimately be no less stipulative than the template in (20); it would simply locate the stipulation in a different place. I have no rejoinder to that argument here, except to note that selectional restrictions are stipulations which are independently needed (see also Fodor 2001:380f.).

c. We must see this through, no matter how painful the consequences.
(i.e. 'no matter how painful the consequences *of it* are')

d. Whatever the weather, we must move together.
(i.e. 'we must move together *in all situations*, whatever the weather *in that situation* is')

I propose the following descriptive generalization:

(24) In a reduced unconditional construction, either the matrix clause or the unconditional adjunct must contain an E-type pronoun (or a definite description functioning as an E-type pronoun) – that is, a variable bound by a quantifier in the other clause.

The data in (22) and (23) are ruled in by this generalization, while the ungrammatical cases in (21) are ruled out. The case in (23d) does not contain an overt E-type pronoun, but the paraphrase I have given suggests that the E-type pronoun here can be understood as a situation pronoun embedded within *the weather* (see e.g. Elbourne 2005, Schwarz 2012), which co-varies with the situations described by the main clause.

Does the generalization in (24) have a deeper source, and if so, what is it? I am not in a position to provide a full explanation, but it seems plausibly connected with the fact that unconditionals themselves can be seen as kinds of correlatives over situation pronouns, or as (restrictors of) sets of situations, as in Rawlins 2013; as well as with Elbourne (2005)'s analysis of E-type/donkey pronouns as involving quantification over situations. Developing this line of thought here (and explaining why only reduced unconditionals seem to be subject to (24)) would take more space than this squib permits; for now, I will leave (24) as a descriptive generalization, but in the hope that the above represents a promising avenue for eventually deriving it.

5 Null pronouns in reduced unconditionals

We can now consider reduced unconditionals that only contain the *wh*-predicate, but no DP, as in (25).

(25) It's in my programming to obey all humans, no matter how insane.

I propose that these constructions are instances of the same small clause structure proposed above which contain a null pronoun, bound by a referent in the matrix clause.

(26) …to obey [all humans]$_i$,
no matter [$_{\text{ForceP}}$ Q [$_{\text{CP}}$ [$_{\text{AP}}$ how insane]$_j$ [$_{\text{SC}}$ [$_{\text{DP}}$ $\emptyset_i$] t$_j$]]]

The null pronoun in reduced unconditionals can only have a quantificational antecedent, or an antecedent which denotes a group which a variable can in principle range over (e.g. a bare noun, (27b)). Reduced unconditionals containing null pronouns are illicit if the antecedent is a referential DP, as in (28).

(27) a. I will talk to {anyone/everyone/no-one}, no matter how angry.
(i.e. 'I will talk to any/every/no person x, no matter how angry x is')
b. I do not talk to (such) students, no matter how angry.

(28) *I will talk to John/the boss, no matter how angry.
(Can't mean either '…how angry I am' or '…how angry John/the boss is')

This follows directly from the generalization in (24); the null pronoun is forced to be interpreted as an E-type pronoun, bound by a quantifier in the main clause.

This proposal may help explain the fact that overt pronouns are barred from being the DP in a reduced unconditional (29), as Culicover (1999) notes (see (21) above):

(29) No student$_i$ can be admitted, no matter how talented the student$_i$/*he$_i$/*him$_i$.

It is well-known that, in contexts where a null pronoun is in principle available, overt pronouns must be interpreted as free and not bound (Chomsky (1981)'s Avoid Pronoun

Principle, Montalbetti (1984)'s Overt Pronoun Constraint), as (30, 31) show; whatever the etiology of this constraint, this is plausibly what is ruling out (29).

(30) Nadie$_i$ cree que *pro*$_{i,j}$/él$_{*i,j}$ es intelligente.
nobody thinks that pro/he is intelligent
'Nobody$_i$ thinks that he$_{i,j}$ is intelligent.' (Montalbetti 1984:83)

(31) Nobody$_i$ won without [PRO$_{i,*j}$/him$_{*i,j}$ working hard]. (after Huang 1991:67)

If a null pronoun is implicated in cases like (26), what kind of null pronoun is it? Two possibilities present themselves: *pro* and PRO. Interestingly, evidence points to the former of these possibilities. (Non-arbitrary) PRO requires syntactic control, as (32a) shows: the controller of PRO cannot be a quantifier which does not take syntactic scope over PRO (that is, PRO cannot find its antecedent in the way that E-type pronouns can: see also Montalbetti 1984:126f.). However, there is no problem with object control in reduced unconditionals (32b).

(32) a. The court may not try anyone$_i$ without [him$_i$/*PRO$_i$ being present].
b. The court may not try anyone$_i$, however guilty-looking *pro*$_i$.

The putative null pronoun in cases like (26) and (32b), then, seems to pattern more with *pro* than PRO, given that *pro* can be an E-type pronoun unproblematically (Montalbetti 1984:77). If this is correct, it of course raises questions about the licensing and distribution of *pro* in English. Notably, there is at least one other structure in English where *pro* has been invoked: null subjects in imperatives (see e.g. Zanuttini 2008). And, as discussed above, it is commonly proposed that imperatives contain a CP/left-peripheral layer, and a verbal/vP layer, but not TP – just as proposed for reduced unconditionals in section 3. We might speculate, then, that little *pro* is available in English only in those structures where a CP takes a verbal or predicative structure directly, without TP being present. The radical absence of T in such structures – and therefore the absence of agreement features – may license the presence of *pro* (given the apparent link between "radical *pro*-drop" and lack of

agreement in a language, as in e.g. Japanese and Chinese, Huang 1984). This is speculative, and fully exploring the consequences of this proposal is outside the scope of this squib. However, the arguments above seem to at least tentatively support the conclusion that little *pro* is available in reduced unconditionals in English; as such, reduced unconditionals may represent a case of genuine pseudosluicing in English.

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