

Eliminating Agree^{*}

Michael T. Putnam
Michigan State University

1. INTRODUCTION AND THEORETICAL BACKGROUND

In his essay *Derivation by Phase* (2001:3) Chomsky formulates **Agree** as follows:

We therefore have a relation Agree holding between α and β , where α has interpretable inflectional features and has uninterpretable ones, which delete under Agree.

In a clause with a ‘late subject’ similar to the Icelandic example in (1) (from Sigurðsson 2004:61) and an example from Frisian (2) exhibiting complementizer agreement (2) (from Fuß forthcoming: 6) the operation **Agree** is believed to take place under standard minimalist assumptions.

- (1) Það hafa komið hingað þrír málvísindamenn.
it have.3.PL come here three linguists.N.PL
‘Three linguists have arrived here.’
- (2) ...dat-st do jûn kom-st
that-2.SG you tonight come.2.SG
‘...that you come tonight’

In (1) the lower, logical subject has interpretable number, whereas the number feature of the finite verb is uninterpretable, i.e. it only repeats the number information affiliated with the logical subject and does not add anything new to the interpretation of the clause. Accordingly, the number feature of the verb may potentially not be visible at the conceptual interface where the clause is interpreted. This uninterpretable number feature must be deleted (or in Adger’s (2003) terminology ‘valued’) prior to LF-interpretation.¹ The structural relationship established between the logical subject *þrír málvísindamenn* ‘three linguists’ and the verb *hafa* ‘have’ is known as **Agree**. The active participants in an **Agree** relation are commonly referred to as the **Probe** and the **Goal**. The **Probe** is either

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¹ In a derivational system with interpretable and uninterpretable features, Adger’s (2003) notion of feature-valuing is superior to any formulation of feature deletion in that any morphophonemic inflections must be visible at the ‘phonological’ (e.g. PF) interface.

a syntactic object or a head in a structure dominating the **Goal**. The **Probe** peers downward into previously concatenated syntactic structure that resides in the c-command domain of the **Probe** to seek a suitable **Goal** with matching features. As long as no potential intervening **Goal** exists in the path between **Probe X** and **Goal Y** (i.e. Intervention Effects), an **Agree** relation will be established and the uninterpretable features will be deleted (or valued) for the purpose of successful interface convergence. The example of Frisian complementizer agreement (hereafter C-agreement) in (2) also displays an **Agree** relation. The complementizer C possesses uninterpretable ϕ -features that must be valued prior to the completion of the derivation. Therefore the C-head functions as a **Probe** and seeks out the ϕ -features of the subject (**Goal**). Due to the fact that no other potential **Goals** exist in the c-commanding chain between the C-head (**Probe**) and the subject, **Agree** can be established. The diagram in (3) below schematizes the application of the operation **Agree** in the narrow syntax (adapted from Adger 2003:169,179).

- (3) a. $X[F: \text{val}] \dots Y[uF] \rightarrow X[F: \text{val}] \dots Y[\#F: \text{val}]$
- b. $X[uF] \dots Y[F] \rightarrow X[\#F] Y[F] \dots \{Y[F]\}$
- c. $X[F] \dots Y[uF] \rightarrow X[F] Y[\#F] \dots \{Y[\#F]\}$

Assuming that no intervening alternative **Goals** exist in the c-command domain of X in (3a), the **Probe** X will seek out and find the suitable **Goal** Y. After successfully participating in the FIND GOAL operation, the features on both the **Probe** and **Goal** will match and subsequently the uninterpretable features of Y will be valued. The representations in (3b) and (3c) show a bit of a different story. A valid **Agree** relation isn't always enough to ensure derivational harmony. In (3b) and (3c) X and Y are heads with the matching feature F. **Agree** between the F features takes place, however, in both configurations a local sisterhood relation is necessary for the valuing of these features, i.e. a non-local configuration constrained by c-command will not suffice. Chomsky (1993, 1995) proposes that in derivations such as (3b) and (3c) *feature strength* is at play: Either X or Y possesses a strong feature which can only be checked in a local sisterhood configuration.

Although at first glance attractive, any theoretical system employing **Agree** comes at a cost. In particular, having non-cyclic operations dramatically complicates processing since such derivations return to, and re-compute, structures already built (cf. Frampton and Gutmann 2002). **Agree** is a non-local, look-back operation that operates contrary to cyclic minimalist desiderata. Other conceptual weaknesses exist with **Agree** in its current status: First, not all features can participate in **Agree**. For example, whereas ϕ -features are fair game to potentially enter into **Agree** relations, discourse features such

as Topic and Focus require local configurations (i.e. Spec-Head) and can never call up non-local operations such as **Agree**. Second, and perhaps most important for the arguments presented in this paper, the allowance of non-cyclic mechanisms such as **Agree** calls into question the true motivation of the concatenation of syntactic objects (e.g. **Merge**) throughout the course of a derivation.

In this paper, I show that the *Probe-Goal Approach* through **Agree** cannot be maintained in a minimalist view of syntax. In particular, I propose that long-distance, non-local agreement phenomena can be accounted for within Stroik's (1999, forthcoming) version of minimalism (called *Survive*). According to Stroik, an optimal minimalist syntax will employ only strictly local Merge operations that map elements from the Numeration N onto the Derivation D. Stroik's version of minimalism significantly simplifies the necessary components and mechanisms involved in the syntax: look-ahead, look-back, Agree, Attract, economy constraints and Internal Merge (Move) are subsequently removed from the system. In this system all that remains are two primitive syntactic operations: **Merge**, which concatenates, in D, two elements from N (what actually gets merged are copies of elements of N – the originals of which continue to be contained in N); and **Remerge**, which remerges into D syntactic objects (SOs) in N that have previously been merged but still possess concatenative features that must be checked in the derivation (these features have “survived” previous applications of **Merge**).² Although the **Survive** model of minimalism stipulates that **Agree** and other non-local operations should be done away with, scanty little is said by Stroik (1999, forthcoming) about non-local agreement phenomena such as long-distance subjects in Icelandic or C-agreement in Bavarian German and some dialects of Dutch. To rectify and improve Stroik's **Survive** account of minimalism, I introduce a third primitive operation **Link!** that has been alluded to in Stroik's work, however, never explicitly spelled out. At every instance of **Merge** and **Remerge** in the course of syntactic derivation the concatenation of two SOs results in a unit that immediately identifies the LF and PF interfaces of the features matched and valued in this local structure. In this sense syntactic structure is automatically “linked” to the interfaces simultaneously upon concatenation.³ In this paper I will show how the implementation of **Survive** and **Link!** in minimalist syntax provides a straightforward account for non-local agreement effects

² In his article dealing with agreement epiphenomena in Germanic languages, Sigurðsson (2004) essentially reaches the same conclusion, albeit from a slightly different perspective, that **Agree** can be reduced to **Merge** (and possibly also to **Move**).

³ The reader must bear in mind that although this proposal look strikingly similar to level-free syntax approaches put forward by Epstein and Seely (1998, 2002, 2006 and subsequent work), both of these aforementioned theories continue to make use of a movement-based (e.g. Internal Merge/Move) account for constituent distal. As explained by Stroik (1999, forthcoming), movement-based analyses face the risk of over-generating structure and must be constrained by unnecessary licentious triggers such as EPP and structures such as phases that bear no relevance at the interfaces. More importantly, they are constrained by anticipatory look-ahead mechanisms which are obviated through the *Survive* model of minimalism.

in long-distance subjects in Icelandic and C-agreement reflexes in West Germanic (namely, Bavarian German and selected dialects of modern Dutch) without appealing to **Agree**.

2 SURVIVE AND *LINK!*

Before discussing the conceptual and empirical advantages of the primitive operation ***Link!***, a brief introduction to the major tenets of **Survive** is necessary.⁴ According to the *Survive Principle* (Stroik 1999, forthcoming; Stroik & Putnam forthcoming) the displacement of syntactic objects from their base-position is not driven by *Attract* or *Move*, but by means of survival. Stroik defines this grammatical primitive as the *Survive Principle*:

- (4) *The Revised Survive Principle* (based on Stroik 1999:286)
 If Y is a syntactic object (SO) in an XP headed by X, and Y has an unchecked feature [+F] which is incompatible with the feature born on X, Y remains active in the Numeration.

To gain an idea of how the computation of human language (C_{HL}) would operate according to the *Survive Principle* laid out above, a sample derivational history of a grammatical sentence constructed according to this principle is provided below.

- (5) Who cares?
- (6) a. Merge {who, cares} → who cares
- b. Survive {who}
- c. Merge {T, {**who**, cares}} → T who cares
- d. Remerge {who, {T, {**who**, cares}}} → who T **who** cares
- e. Survive {who}
- f. Merge {C, {**who**, {T, {**who**, cares}}}} → C **who** T **who** cares
- g. Remerge {who, {C, {**who**, {T, {**who**, cares}}}}} → who C **who** T **who** cares

⁴ For a more detailed account of the *Survive Principle*, the reader is referred to Stroik (1999, forthcoming) and Stroik and Putnam (forthcoming) in the bibliography.

The concatenation of SOs qua *Merge* occurs between a SO and a head bearing the matching feature α (cf. (6a)). The initial merger of {who, snores} takes place in the ν P and is motivated by the necessity to check the thematic feature of **who**. According to the *Survive Principle*, if a SO bears any additional features not present on the immediately governing head (in this case V), it will survive (6b) and remain active in the Numeration until all subsequent features have been checked through *Remerge*. After the merger of the T head (6c), the wh-item **who** will participate in *Remerge* motivated by the need to check ϕ -features (6d). In steps (6d) and (6f) who remerges from the lexicon in order to properly check its agreement and [Q] features.

The *Survive Principle* radically departs from ‘orthodox’ minimalism in several areas. First, it eliminates the mechanism known as *Internal Merge/Move* (Chomsky 1993, 1995, 2001 and Hornstein 2001 among a host of others). The key differences between a theoretical system employing *Internal Merge* and one that makes use of the *Survive Principle* are presented in (7) below.

- | | | | |
|-----|----|-----------------|-------------------|
| (7) | a. | Internal Merge: | $D \rightarrow D$ |
| | b. | Survive: | $N \rightarrow D$ |

Whereas *Internal Merge* allows SOs to remain in the derivation after their initial entrance into the narrow syntax (qua *External Merge*), the *Survive Principle* incorporates copies of SOs that reside in the Numeration rather than the SOs themselves. Derivation according to *Survive* is thus the iterative mapping of copies of SOs that exist in the Numeration. This notion has far-reaching theoretical effects on the minimalist program; no longer are notions of the *Copy Theory* (cf. Chomsky 1995), look-back and/or look-ahead mechanisms, economy constraints and ontological commitments (e.g. phases) deemed conceptually necessary. All of these aforementioned ‘essential’ components of minimalist syntactic theory are attached to a theory of constituent distal that make use of *Internal Merge/Move*. The removal of *Internal Merge* also liberates the theory from these taxing computational constraints. As pointed out by Frampton and Gutmann (2002), look-ahead and look-back mechanisms (i.e. non-cyclic operations) in the grammar impose a massive workload on the C_{HL} . This is clearly an undesirable result in a theory that seeks to minimize to the fullest extent all operations and constraints that function within the grammar. The *Survive Principle* only employs two primitive operations (*Merge* and *Remerge*), hence bring the theory one step closer to Frampton and Gutmann’s (2002) vision of a crash-proof syntax and how it may potentially operation within the framework of minimalism.⁵ Second, the *Survive Principle* also threatens the virtual conceptual

⁵ David Pesetsky (person communication) points out the application of evaluation processes upon ever iterative step of *Merge* could also be viewed as a costly processing strain on the grammar. Be that as it

necessity of uninterpretable and unvalued features in both the Numeration and in the Derivation. According to **Survive**, both *Merge* and *Remerge* are not viewed as a ‘checking’ configuration *per se*, but rather as fusion process of two identical, interpretable features.⁶ Both *Attract* and *Move* models of XP-displacement rely upon the notion of uninterpretable and/or unvalued features, while *Survive* only uses interpretable features that are immediately interpretable at the interfaces upon concatenation (e.g. *Merge*). Under such principles SOs enter the derivation fully interpretable at both the LF and PF interfaces. Third, the *Survive Principle* addresses Brody’s (1998, 2002) observation that a minimalist program of syntax that employs *Internal Merge* is a mixed theory that is weakly representational in its design. The elimination of *Internal Merge* in favor of **Survive** creates a pure derivational view of minimalism. In conclusion, the *Survive Principle* amounts to defining the fundamental problem of compositionality. The *Survive Principle* addresses the prime function of language structure, namely, how can two distinct units ever make up a whole that, in turn, may function as part of another, larger whole (cf. Sigurðsson 2004:65)?

With the potential conceptual advantages of the *Survive* version of minimalism in mind, let’s once again return to the sample derivation in (6) above. At this juncture, the purpose of this paper is to elucidate further on the nature of *Remerge* and the status of lower “copies” that exist in the derivation for a given SO residing in the Numeration. It is paramount to bear in mind that SOs reside in the Numeration throughout; what appears during the course of the derivation is “something else”. What happens immediately upon concatenation – be it an application of *Merge* or *Remerge* – is that an identity is formed linking the fused features of head and SO. This newly bound unit is immediately interface-interpretable. Call this operation **Link!**

(8) *Link!*

If XP is a syntactic object (SO) bearing the interpretable feature α , and a syntactic head Y^0 enters the derivation bearing the interpretable feature α , XP will remerge into the structural position immediately dominating Y^0 [SpecYP]⁷, at which point the matching features will amalgamate and be interpreted at the interfaces.

The primitive function **Link!** – working in tandem with *Merge*, *Survive* and *Remerge* – maps the interpretable features $\{\alpha, \beta, \gamma\}$ of a SO (W) into the derivation by means of syntactic structure generated by *Merge* and *Remerge*.⁸

may, it is far more in line with minimalist thought to envision of a system with purely local evaluation mechanisms rather than one that employs look-ahead and look-back operations.

⁶ Similar in structure and purpose to Rizzi’s (1991) *Dynamic Agreement*.

⁷ An idea worthy of potential future research is Sigurðsson’s (2004) removal of X’-theory from the minimalist program in favor of a nucleus/edge approach.

⁸ Due to the dynamic, rapid composition of syntactic structure in the course of actual real-time construction *Remerge* and *Link!* occur simultaneously. Be that as it may, I parse these two operations separate from one another for the sake of clarity.

- (9) Num = {W(α , β , γ), X(α), Y(β), Z(γ)}
- a. Merge {W,X} \rightarrow WX
 - b. Link! { α , α } \rightarrow α
 - c. Survive {W}
 - d. Merge {Y, {W, X}} \rightarrow YWX
 - e. Remerge {W, {Y, {W, X}}} \rightarrow WYWX
 - f. Link! { β , β } \rightarrow β
 - g. Survive {W}
 - h. Merge {Z, {W, {Y, {W, X}}}} \rightarrow ZWYWX
 - j. Remerge {W, {Z, {W, {Y, {W, X}}}}} \rightarrow WZWYWX
 - k. Link! { γ , γ } \rightarrow γ
 - l. Spell-Out
 - m. PF = WXYX
 - n. LF = WZWYWZ

The sample derivation in (9) is an expanded version of (6) with the help of abstract variables and with the addition of **Link!**⁹ We no longer have to erroneously speak of copies and chains in *Survive*; **Link!** illustrates the true interpretative nature of what remains behind. What resides in these structural positions previously occupied by the object W is the concatenate identity forged through **Link!** What is phonologically produced at the end of the derivation (cf. (9m)) is the highest copy, how this is interpreted

⁹ David Pesetsky and Peter Sells (personal communication) have brought to my attention the strikingly familiarity the *Survive* version of minimalism shares with the HPSG framework (cf. Pollard and Sag 1994) to the extent that heads are familiar with their neighbors thus ‘naturally’ preventing look-ahead properties. Although the *Survive* version of syntax faces the issue of sorting out which head merges first and why, the application of Agree in ‘standard’ minimalism also bears strong affinities to HPSG (the idea of **unification** found in this framework) and LFG (Bresnan 2001).

throughout the derivation at LF (cf. (9n)) are all of the previous applications of **Link!** A clear advantage to integrating **Link!** into the *Survive* view of minimalism is the resultant ability of lower instantiations of *Merge* and *Remerge* being fully interpreted at the interfaces. (In current versions of minimalism that maintain either an *Attract* or *Internal Merge/Move* approach to constituent displacement, the problem of how lower copies of a movement chain are interpreted remains an unsettled issue.)

In the proceeding sections I turn my attention to showing how **Link!** is a superior replacement to the non-local, non-cyclic operation **Agree**. Up to this point I have merely provided the conceptual argument of how **Link!** fits into the *Survive* version of minimalism. Therefore the burden of proof is still on me to provide empirical evidence to support the advantage of applying **Link!** in non-local agreement configuration in favor of **Agree**. In **Sections 3** and **4** respectively I present and analyze C-agreement phenomena in West Germanic and ‘long-distance’ subjects in Icelandic.

3 C-AGREEMENT IN WEST GERMANIC

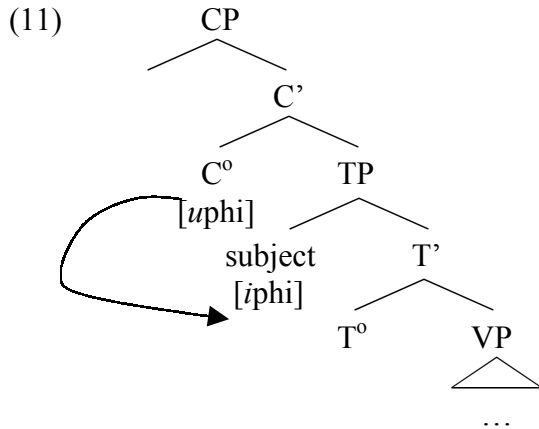
Instances of C-agreement are widely attested in West Germanic dialects and languages (e.g. Dutch, Flemish and German (Bavarian) as well as Frisian). Example (10) is an example of C-agreement from a modern Dutch dialect.¹⁰

- (10) **Datt-e we** toffee jongens zijn, dat wille me wete. Rotterdam Dutch
that-_{INFL} we great boys are that want we know
‘That we are great boys, that is what we want to know.’

The paradigms of C-agreement in West Germanic are mostly defective (cf. Zwart 1997:159); for example, East Netherlandic has an agreeing C only if the subject is first person plural (1PL), South Hollandic only displays C-inflection with first and third person plural subjects and Munich Bavarian displays this form of C-agreement only in the presence of second person singular and plural subjects. In the literature, one mostly finds syntactic accounts for C-agreement in West Germanic (e.g. Zwart 1993, 1997 supports an INFL-to-C movement analysis, Roberts 1994 and Shlonsky 1994 interpret C-agreement as the result of a Spec-Head relation between the subject and a separate Agr-head in the C-domain, and Carstens 2003 and Van Koppen 2005 propose that a separate set of (uninterpretable) ϕ -features on the C-head initiates an **Agree** operation accessing the (interpretable) ϕ -features of the subject). For the sake of time, space and relevancy, I will only focus on the **Agree** analysis of put forward by Carstens (2003) and Van Koppen (2005) in this paper. The syntactic account of C-agreement based on **Agree** stems from

¹⁰ Although this form of C-agreement is assumed to be restricted to SOV-languages (cf. Zwart 1993), Putnam and Van Koppen (forthcoming) discuss the similarities and differences between the alls-construction in vernacular American English (an SVO-language) and traditional C-agreement in West Germanic as illustrated in (10).

the minimal assumption that the inflection on C signals the presence of ϕ -features on C. These ϕ -features are unvalued, i.e. there are **Probes** in the sense of Chomsky (2001). **Agree** forces these **Probes** to search for a suitable **Goal**, which is believed to be found in the subject. The diagram in (11) illustrates the **Agree** relation.



A potential problem that an **Agree** account of C-agreement faces is how to account for the strict adjacency that is required between C and the lower subject. If any intervening element disrupts the adjacency requirement, the derivation crashes (data from Ackema and Neeleman 2004:362).

West Flemish dialect of De Panne

- (12) **da/ da-n zunder** op den warmste dag van't jaar tegen under wil gewerkt en.
that/ that_{3PL} they on the hottest day of the year against their will worked have
- (13) **da/ *da-n** op den warmste dag van't jaar **zunder** tegen under wil gewerkt en.
that/ that_{3PL} on the hottest day of the year they against their will worked have
 "...that they have worked against their will on the hottest day of the year.

As pointed out by both Ackema and Neeleman (2004) and van Koppen (2005) adverb intervention disrupts an **Agree** relation between C° and the subject presiding in [SpecTP]. In (12) the complementizer *da-n* 'that' is immediately adjacent to the subject *zunder* 'they', however, in (13) the complementizer and subject are separated by the adjunct phrase *op den warmste dag* 'on the hottest day'. To salvage the **Agree** analysis of C-agreement Cartens (2003) proposes that C hosts its own set of uninterpretable ϕ -features and functions as a **Probe** searching for a suitable **Goal** in its c-commanding domain. Prior to encountering the subject with its interpretable ϕ -feature, the **Probe** C finds the adjunct (or PP) intervening between the **Probe** and targeted **Goal**. By assumption, the intervening adjunct in (13) according to Carsten bears a Case feature and can be

identified as a possible **Goal** for the C head thus causing the derivation to crash.¹¹ If these assumptions were correct, we would expect that an intervening adverb between T and a subject in [SpecvP] should also give rise to similar adjacency effects. This, of course, is not the case. Therefore the **Agree** analysis of C-agreement cannot fully overcome the shortcoming of these aforementioned adjacency effects.¹²

Furthermore, there is data that challenges the assumption that C-agreement involves a checking or **Agree** relation between C and the subject (data from Bayer 1984:269).


- (14) a. D'Resl is gresser [als wia-st du bist] Bavarian German
the-Resl is taller than as_{2SG} you are
 'Resl is taller than you are.'
- b. *D'Resl is gresser [als wia-st du]
the-Resl is taller than as_{2SG} you
- c. D'Resl is gresser [als wia du]
the-Resl is taller than as you

Example (14b) shows that in comparatives overt agreement on C leads to ungrammaticality if the finite verb is absent from the structure. In the absence of finite verb the complementizer cannot bear any inflection (14c) in order for the sentence to be grammatical. If C-agreement simply boils down to a set of uninterpretable ϕ -features interacting with a matching interpretable set on the subject, (14b) should be a grammatical construction. The data in (14) show that the presence/absence of the inflected verb is critical for the grammaticality of C-agreement. Fuß (2005, forthcoming) asserts that the inflection found in the C-domain is mediated by the finite verb. According to Fuß' assumptions, the agreement features that give rise to C-agreement are introduced by means of a post-syntactic operation which creates a copy of the relevant set of ϕ -set on T and inserts it to C at the level of Morphological Structure. According to this theoretical adjustment, the agreement morpheme on C is thus some sort of copy of the agreement morpheme located on T. Although Fuß' proposal provides a nice explanation to adjacency requirements of C-agreement and exposes the shortcomings of any sort of **Agree** (i.e. **Probe/Goal**), his analysis relies upon non-cyclic operations (e.g. look-back, post-syntactic morpheme insertion, etc.) that can be eliminated under **Survive**. With that being said, Fuß' assumption that entire ϕ -set of T is the appropriate trigger for C-

¹¹ This, of course, raises the question as to whether or not adjunction is triggered by a feature or feature-like entity in the narrow syntax (see Putnam 2006:Ch. 4 and Rubin 2003).

Another analyzes of the adjacency effects of C-agreement mentioned above are best understood as a prosodic, post-syntactic phenomenon (cf. Ackema and Neeleman 2004).

agreement in West Germanic is absolutely correct. Implementing the operation **Link!** at this point in the derivation performs essentially the same task that Fuß' insertion of Morphological Structure at PF does, however, the latter has the advantage of accounting for the phenomenon of C-agreement in the syntax rather than post-syntactically. Upon the concatenation of the subject and T (qua **Remerge**), **Link!** immediately takes place creating the necessary ϕ -set for interface interpretation. The ϕ -set established by **Link!** may now participate in feature spreading if the immediately adjacent constituent is the C-head rather than an adjunct. If a given dialect or language allows the agreement morpheme associated with the linked ϕ -set on T to also appear on C, and if the subject is structurally adjacent to the subject, C-agreement may take place.

- (15) a. $\text{Remerge } \{\text{Subj}, \{\text{T}, \dots\}\} \rightarrow \text{Subj T}$
- b. $\text{Link! } \{\text{Subj-}\phi, \{\text{T-}\phi\}\} \rightarrow \text{T}\phi$
- c. $\text{Merge } \{\text{C}, \{\text{Subj}, \{\text{T}, \dots\}\}\} \rightarrow \text{C Subj T}$
- d. $\text{Feature Spread } \{\text{C} \quad \{\text{T}\phi\}\} \rightarrow \text{C}\phi \text{ T}\phi$
- 

The agreement identity created by **Link!** in (15b) has the ability to spread to a structurally adjacent C (due to the fact that adjuncts don't inflect). The parametric variation found among the West Germanic dialects and languages that license defective paradigms can be best explained now by the robustness (or lack thereof) of the ϕ -set on C. Two major conceptual advantages to the approach presented here and Fuß's post-syntactic agreement morpheme assertion stand out. First, the **Survive-Link!** approach is a syntactic operation that strictly obeys the notion of successive cyclicity. A post-syntactic approach would force the C_{HL} to compute all of the necessary syntactic structure and then re-compute and re-evaluate it again through the application of non-cyclic look-back operations for morphology insertion. Second, adopting the minimalist view of syntax according to **Survive-Link!** continues to obviate any reliance upon the notion of copies in the derivation (and post-derivational operations). The concept of feature spreading is simply the phonological continuation of a previously local concatenate structure created in the narrow syntax. Parametric variation exists due to languages' abilities to permit linked material to appear multiple times in the derivation. Since these materials are made available to both the LF and PF interfaces via **Link!** immediately upon the application of **Merge** or **Remerge**, *feature spreading* is merely the potential phonological continuation of linked material. Returning to the sample derivation of **Survive** and **Link!** in (9) from the previous section, we can see that all previous iterative instantiations of **Link!** appear at LF (cf. (9n)). *Feature spreading* simply allows some of those check points to also

appear on multiple syntactic objects at PF. In the following section, I will show how the operation **Link!** can also account for ‘long-distance’ subjects in Icelandic.

4 ‘LONG DISTANCE’ SUBJECTS IN ICELANDIC

Another set of traditionally challenging data for an non-local **Agree** mechanism responsible for feature checking is ‘long-distance’ subjects in Icelandic (data from Sigurðsson 2004:74).

- (16) Þá hafið þetta sennilega bara verið þið.
then have_{2PL} this probably only been you_{N.PL}
 ‘Then this/it has probably only been you.’
- (17) Þá hafa henni sennilega aldrei líkað þeir.
then have_{3PL} her_{DAT} probably never liked they_{N.PL}
 ‘Then she has probably never liked them.’

In both (16) and (17) the deeply embedded pronominal subjects *þið* ‘you’ and *þeir* ‘they’ are responsible for triggering the inflection on the auxiliary verb *hafa* ‘to have’. Attempting to explain this phenomenon by means of **Agree** immediately faces the problem of intervention effects: In both (16) and (17) potential **Goals** – i.e. both *þetta* ‘this’ and *henni* ‘her’ respectively – exist within the c-commanding domains of the **Probe** T. Since a closer potential **Goal** does exist in both sentences, we should expect the **Probe** to value the ϕ -features present on *þetta* ‘this’ and *henni* ‘her’. This, however, does not occur.

Below I will illustrate how the enterprise established in the **Survive** and **Link!** system can salvage this derivation. Let’s first consider (17): The initial merger of *líka* ‘to like’ and *þeir* ‘they’ informs the interfaces of the thematic identity of the pronoun. The syntax object *þeir* ‘they’ will remain active in the Numeration due to its ϕ -set. Later in the course of the same derivation the dative object *henni* ‘her’ will also merge into the narrow syntax. Although this dative object possesses an interpretable ϕ -set, they are not compatible with those that appear on the **Probe** T. (Recall that in this system proposed here the distinction between interpretable and uninterpretable features ceases to exist). As T enters the system to ϕ -features on subject *þeir* ‘they’ which has remained active in the Numeration remerges with T.¹³ At this point, two questions instantaneously stand out. First, if **Remerge** has taken place between the lower subject *þeir* ‘they’ and T, why doesn’t the subject rise and appear adjacent to T? Second, don’t the data in (16) and (17) contradict the theoretical notion of *feature spreading* introduced in the previous section? Addressing the first question, it is paramount to keep in mind that the true syntactic object involved in the derivation remains in the Numeration; all that appears in

¹³ The subject will also most likely merge with T at this point for its nominative Case feature.

the syntax are instantiations of this object necessitated by the necessity to **Merge/Remerge** and **Link!** for interface intelligibility. If only one phonological instance of the subject will appear at PF, it must not obligatorily always be the highest appearance of the constituent in question.¹⁴ As for the second question concerning *feature spreading*, recall that the issue at hand in the previous section was the absence of the valued (or linked) ϕ -set on T. The phonological effects of any sort of *feature spreading* operation – at least as far as C-agreement effects in West Germanic are concerned – require a completed T, which is yet to be established in (16) and (17).

In this section the conceptual advantages of the **Survive** and **Link!** operations over non-cyclic **Agree** come to the forefront. **Survive** and **Link!** are not stymied by intervention effects imposed by alternative **Goals** that disrupt the c-command domain of the **Probe** T. Upon every iterative application of **Merge** involving a functional head such as T, syntactic objects that are still active in the Numeration are evaluated. Only upon the matching and concatenation of ϕ -sets on T and the subject can **Remerge** take place. Unlike a minimalist system that employs **Agree**, intervention effects do not spell do for this derivation.

5 SPREADING EFFECTS

Before moving to the conclusion, I would like to make a few speculative closing remarks concerning *feature spreading*. Perhaps the term is a bit misleading in that making the claim that an all-encompassing phonological *feature spreading* mechanism would need to be substantiated. The percolation of phonological features is therefore only to be understood as a possibility at this point. Nonetheless, in languages such as Swahili and Kayardild (extinct or nearly-extinct) some form of agreement spreading is realized (data from Corbett 1991:43 and Blake 2001:108 respectively).

- (18) **Kikapu kikubwa kimoja kilianguka.**

Class7basket AGRlarge AGRone ARGfell

‘One large basket fell.’

- (19) **Makuntha yalawujarrantha yakurinaantha dangkakarranguninaantha mijilinguninantha**

woman_{AGR} caught-ntha fish_{AGR} man’s with_{AGR} net_{AGR}

‘The woman must have caught fish with the man’s net.’

¹⁴ Perhaps a command such as PF-REMAIN would provide a sufficient explanation as to why the lower subject appears at PF. After all, this is a ‘problem’ at the PF-interface that ultimately does not concern syntactic operations. As evidenced by the data in (16) and (17) it is clear that the subject’s ϕ -features remain active in the derivation due to the tense inflection on the auxiliary.

In Swahili nouns exhibit prefixes that mark its number (singular vs. plural) and noun class.¹⁵ In Kayardild the suffix *-nthā* is originally the marker of oblique case, however, it has also developed into a marker of inferential modality that “should probably be treated as a feature of the verb which spreads to the dependents via concord” (Blake 2001:109). With these data I do not wish to propose that feature percolation exists *a priori* in the syntax, but rather I wish to suggest how **Survive** and **Link!** may provide a clearer path in dealing with these epiphenomena previously unattainable in minimalist syntax.

But what does all of this discuss about feature percolation have to do with ‘less exotic’ language families such as Germanic? The complexity and variety of Germanic agreement phenomena is actually quite robust and impressive for such a limited and closely related group of languages (Norwegian data from Christensen and Taraldsen 1989:58 and Icelandic data from Sigurðsson 2004:87).

- | | | | |
|------|----|--|-----------|
| (20) | a. | They would- ø be rich- ø . | English |
| | b. | Sie wären reich- ø .
<i>they would be_{3PL} rich</i>
‘They would be rich.’ | German |
| | c. | Gjestene er- ø nett komme /*kome.
<i>guests.the are just arrived_{PL/SG}</i>
‘The guests have just arrived.’ | Norwegian |
| | d. | Þeir voru kaldir .
<i>they_{NOM/PL} were_{3PL} cold_{NOM/PL}</i>
‘They were cold (to touch)’ | Icelandic |

The diversity displayed in the agreement epiphenomena in Germanic is represented in the data set (20). In English (20a) neither the modal nor the predicate adjective display any sort of agreement morphology. German (20b) has more robust verb morphology but also fails to show any inflection on the predicate adjective. Norwegian (20c) behaves completely opposite to German in that Norwegian does not inflect its verbs but like other Scandinavian languages (i.e. Swedish) marks its supine past participle for agreement. Lastly, Icelandic (20d) shows agreement morphology on both its verbs and past participles. Although the English, German and Norwegian inflectional patterns are demonstrated not to be as robust as Icelandic, this does not mean that the potential did not exist diachronically nor has it been fully eliminated from synchronic dialects that agreement morphology could appear on verbs and (supine) past participles in these

¹⁵ There are usually between seven to twelve different noun classes involved in Swahili dialects depending upon whether or not singular and plural are classified together.

languages. One could envision *feature spreading* within a minimalist view of syntax utilizing **Survive** and **Link!** involving the concatenation of T and the subject to link their united ϕ -set. Upon this application of **Link!** lower ‘copies’ of syntactic object in the Numeration would possess a feature causing them to also display agreement morphology at PF. Such an approach clarifies the division of labor of the narrow syntax and the phonological component of the grammar (e.g. PF). Although an in depth theoretical account of these agreement variations present in Germanic (cf. (20)) is currently lacking, the stipulate solution mentioned here is in harmony with **Survive** and **Link!** appears to be on the right track.

6 CONCLUSION(S)

My prime aim in this paper has been to explore *if* and *how* Stroik’s (1999, forthcoming) version of minimalism (e.g. *Survive*) can explain agreement phenomena in Germanic languages (i.e. C-agreement in West Germanic and long-distance subjects in Icelandic) due to *Survive*’s abandonment of non-local agreement checking/valuing mechanisms such as **Agree**. In this paper I introduce a third primitive grammatical operation to Stroik’s system known as **Link!** Upon the concatenation (qua **Merge** or **Remerge**) of two syntactic objects their linked feature identity is immediately shipped off to the external interfaces. Building upon Fuß’ work (2005, forthcoming) I also concur that the ϕ -set of T (not just the subject) trigger the appearance of C-agreement in certain dialects of modern Dutch, Bavarian German, Frisian and West Flemish. The application of **Link!**, however, drastically improves Fuß’ assertion that morphological agreement features are copied post-syntactically to C. The operation **Link!** achieves the same effects of Fuß’ suggestions while maintaining that C-agreement is a syntactic phenomenon obeying successive cyclicity. Long-distance subjects in Icelandic also receive a clear explanation within the system described here. Since both the “**Probe**” and the “**Goal**” in Stroik’s version of minimalism possess interpretable ϕ -features, the concatenation and subsequent completion of T’s ϕ -set will not suffer from intervention effects that would certainly doom an **Agree** relation analysis of the Icelandic data in (16) and (17). Finally, although currently speculative, **Survive** and **Link!** suggest a possible minimalist solution to agreement feature spreading in diverse languages.

Not only does **Link!** provide a lucid solution to these empirical data, but the conceptual advantages of these analyses are also attractive. Similar to Stroik’s version of **Remerge**, **Link!** helps clarify the division of labor between syntax and modular units of C_{HL} that take place external to the syntax at the interfaces. The addition of **Link!** to **Survive syntax** provides Stroik with a mechanism that can properly interpret previous appearances (i.e. lower copies, traces, etc.) of a given syntactic object. This is a desirable advantage currently unavailable to ‘orthodox’ minimalist models.

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