Reflexivizers and intensifiers: consequences for a theory of focus*

Giorgos Spathas – University of Stuttgart

Abstract. English reflexive anaphors in focus have been shown to give rise to two different kinds of alternatives; subject- and object-alternatives. Spathas (2010) argues that the existence of subject-alternatives forces a treatment of reflexive anaphors in terms of reflexivizing functions. This paper establishes the two major generalizations that cover the distribution of subject-alternatives and argues for a theory of focus that (i) is built on a question-based discourse model (Roberts 1996, Büring 2003, Beaver and Clark 2008), and (ii) is intermediate, i.e. association with focus is conventional for some but not all focus sensitive operators (Rooth 1992, Beaver and Clark 2008). The possibility of construing reflexive anaphors as agentive intensifiers with naturally reflexive verbs explains why this class predicates shows a different distribution of subject-alternatives.

Keywords: reflexivity, association with focus, disjoint reference, intensification, Current Question.

1. Introduction

Since the advance of Alternative Semantics (Rooth 1985), focus has been used as a means to investigate the semantics of natural language expressions. The strategy is not to probe directly into the semantic properties of some expression, but rather to draw conclusions by investigating the alternatives that the expression generates when in focus. Spathas (2010) employs this strategy to investigate the semantics of reflexive anaphors in English and concludes that they are reflexivizers (as assumed mostly in Categorial Grammar literature) rather than designated bound variables. The main empirical observation is that narrow focus on a reflexive anaphor is licensed in two rather different environments. For example, in the Question-Answer (QA) pairs in (1) and (2), the same sentence with the same intonational contour is used to answer both an object *wh*-question as in (1), as well as a subject *wh*-question as in (2). The regular meaning of (1/2A) is, of course, the same in both cases (roughly the proposition 'Zelda praised Zelda'), but under focus-sensitive rules of QA-Congruence the generated alternatives should be able to vary both in the object position (OA, *Zelda praised x*) for (1) to be felicitous, and in the subject position (SA, *x praised Zelda*) for (2) to be felicitous. As it has been argued in Spathas (2010) and will be presented briefly below in section 3, it is particularly the existence of SA that forces a treatment of reflexive anaphors in terms of reflexivizing functions.

(1) Q: Whom did Zelda praise?
A: She praised herSELF.

(2) Q: Who praised Zelda?
A: ?She praised herSELF.

This paper takes a closer look into the behavior and distribution of SA and draws two conclusions for a theory of focus. Rooth (1992) distinguishes between three possible theories of

* I wish to thank Artemis Alexiadou and Florian Schäfer for comments and discussion. All errors are my own.

focus sensitivity: (i) weak theories according to which the link between focus associating operators (FAOs) and foci is part of the conventionalized lexical meaning of the operators (Rooth 1985), (ii) strong theories according to which focus sensitivity emerges from the workings of general pragmatic mechanisms (Rooth 1992, von Fintel 1994, Roberts 1996, 2004), and (iii) intermediate theories according to which conventional association is true of some but not all FAOs (Rooth 1992, Beaver and Clark 2008). Roberts (1996, 2004) argues in favor of a strong theory built on a question-based discourse model. Beaver and Clark (2008) (B&C) undergoes a comprehensive comparison between different FAOs and concludes in favor of an intermediate theory casted in (a version of) Roberts' question-based model. This paper argues for the position in Beaver and Clark (2008), i.e. an intermediate theory that is built on a question-based discourse model. Asymmetries in the presence of disjoint reference effects between object and subject wh-question and the assumption that conventional association is association with the Current Question, as in the B&C model, explain the two major generalizations about SA: (i) they are less accessible than OAs, and (ii) they do not arise with conventionally associating operators. The fact that naturally reflexive predicates exhibit a freer distribution of SA results from the availability of a second construal in which the focused reflexive anaphor is an adverbial agentive intensifier rather than a reflexivizer in argumental position.

The paper is organized as follows. Section 2 presents our basic assumptions about focus theory and lays out the argument for a functional semantics for reflexive anaphors. Section 3 establishes the two main generalizations covering the distribution of SA. Section 4 makes the case for a focus theory built on a question-based discourse model, and section 5 the case for an intermediate theory of focus. Section 6 brings into the discussion the contribution of agentive intensifiers.

2. Focus theory and the semantics of reflexive anaphors

2.1. Preliminaries to a theory of focus

A focus theory relates some formal properties of an utterance with the information-structural status of its parts. In English, the relevant properties are primarily prosodic, at least in the cases of narrow focus which we investigate here. I assume that the syntactic correlate of focus is F-marking (cf. Jackendoff 1972), so that syntactic nodes can be freely annotated with a privative feature F(ocus).

In the phonological component, Focus Prominence links F-marking with prosodic prominence. Prosodic prominence in English correlates perceptually with pitch accent, which is acoustically realized with a local maximum or minimum of the fundamental frequency.

(3) **Focus Prominence** (in a domain of focus) (Truckenbrodt 1995)
F-marked constituents are more prominent than non-F-marked constituents.

In the semantic component, next to the regular meaning, an alternative meaning is computed on the basis of the F-marked LF (Rooth 1985). I adopt the theory of Schwarzschild (1999). The alternative meaning is the Existential F-Closure, defined in (4).

(4) **Existential F-Closure** *(informal)* (Schwarzschild 1999)
   a. Build the 'presuppositional skeleton' by replacing F-marked constituents with variables of the same type.
   b. Existentially bind the variables.

The distribution of F-features in cases of free focus is determined by a single information-structural notion, that of old-information, defined in (5)[1]. The principle of Givenness, then, requires that utterances are Given.

(5) **Given** (Schwarzschild 1999)
An utterance U is Given iff there is some salient antecedent A and A entails ExFClo(U).

(6) **Givenness**
Utterances are *Given*.

2.2 Reflexive anaphors as reflexivizers

We can now apply the theory to (1) and (2). The QA-pairs are predicted to be felicitous if the respective questions entail the Existential F-Closure of *Zelda praised herself*$_F$.[2] What the ExFClo is depends on the choice of semantics for reflexive anaphors. Spathas (2010) argues that the only semantics that can predict SA are those in (7a). According to (7a), mostly assumed in the Categorial Grammar literature, reflexive anaphors are reflexivizers, i.e. functions that turn relations to reflexive properties (e.g., Bach and Partee 1980, Keenan 1987, Szabolcsi 1992, Schlenker 2005, Lechner 2007, 2012, a.m.o.). Given the semantics in (7a), the ExFClo of (1/2A) is the one in (7b).

(7) a. $[[\text{herself}]] = \lambda R_{eet} \lambda x.\ R(x)(x)$
   b. $\text{ExFClo}(\text{Zelda praised } [\text{herself}]_F) = \exists Q_{eet,et}.\ (Q(\text{praised}))(\text{Zelda})$

To check Givenness, then, we need to determine what are the possible alternatives to reflexive anaphors. The literature has identified at least two further functions from relations to properties.

[1] I make the simplifying assumption that only sentences are domains of focus (i.e. Givenness is checked at the sentential level). In Schwarzschild´s (1999) original theory every constituent is a domain of focus. Nothing hinges on that. I have also left out the necessary Economy component of focus theory which is not relevant here. For discussion and different approaches to the formation of focus domains (and their relation with Economy) see Schwarzschild (1999), Wagner (2005), Büring (2008), Spathas (2010), among others.

[2] Notice that prosodic prominence of a reflexive anaphor in argument position unambiguously indicates narrow focus on the anaphor; in the case of wider focus domains, as in, e.g., (i) and (ii), the reflexive anaphor necessarily prosodically subordinates to the verb. See Spathas (2010), Ahn (2012) for different explanations of this pattern.

(i) Q: What did Zelda do?
A: Zelda PRAISED herself.

(ii) Q: What happened?
A1: Zelda PRAISED herself.

These are the argument structure operations of passivization (Bach 1980, Chierchia 1998/2004, Bruening 2011 a.m.o.), and detransitivization (Chierchia 1998/ 2004, Barker 2010). [3]

(8) a. [[PASS]] = λRλx∃y. R(x)(y)
b. [[DETRANS]] = λRλx∃y. R(y)(x)

Before checking Givenness, we need to shift the meanings of questions so that entailment relations can be computed. We do this with (9), so that the ExClo of (1Q) and (2Q) are as in (10a) and (10b), respectively.

(9) **Existential Closure for Questions** *(informal)* (Schwarzschild 1999)
a. Build the 'presuppositional skeleton' by replacing wh-constituents with variables of the same type.
b. Existentially bind the variables.

(10) a. ExClo(Whom did Zelda praise?) = ∃x. Zelda praised x
b. ExClo(Who praised Zelda?) = ∃x. x praised Zelda

We can now see that, given the semantics of reflexive anaphors in (7a), the principle of Givenness is respected. The Existential F-Closure in (7b) is entailed by both ExClo(1Q) and ExClo(2Q) predicting correctly that both OA and SA are felicitous.[4]

(11) a. ∃x. Zelda praised x → $\exists Q_{eet,et}$. (Q(praised))(Zelda) *for Q=DETRANS*
b. ∃x. x praised Zelda → $\exists Q_{eet,et}$. (Q(praised))(Zelda) *for Q=PASS*

[3] I assume that verbal predicates denote binary relations between individuals so that reflexive anaphors compose with verbs directly. If one wishes to 'severe the external argument from the verb' (Kratzer 1996), the reflexivizing function should apply after the external argument slot has been introduced, e.g. after movement of the anaphor above the little v head. Lechner (2007, 2012) provides a detailed implementation of a movement analysis drawing from a comparison with another type-driven movement operation, Quantifier Raising (QR). Similar issues arise with the functions in (8a) and (8b). See Bruening (2011) for an analysis of English passives that reconciles the semantics in (8a) with neo-Davidsonian assumptions about external arguments.

[4] Ahn (2012) notices that no SA arise in examples like (i)-(iii) (Ahn only considers QA-pairs). He proposes that SA require movement of the anaphor to the specifier of a Voice Projection, a proposal he terms a 'syntactic alternative' to the analysis presented here. However, as long as one needs to assume a formal focus-sensitive definition of QA-Congruence, it is hard to see how any analysis could avoid making specific assumptions about the semantics of reflexive anaphors and the alternatives they generate under focus. Moreover, Ahn´s examples exhibit what we know since Reinahrt and Reuland (1993) and Pollard and Sag (1992) to be exempt anaphors (i.e. *not* reflexivizers), so our prediction is that they should not generate SA. Ahn´s additional examples exhibit ditransitives. I have not been able to replicate Ahn´s judgments in the case of ditransitives, except for (iv). In both the analyses of Ahn and Spathas (2010) the reflexive anaphor in (iv) must be analyzed as an exempt anaphor. It is, of course, possible, as Ahn seems to suggest and has been already proposed by Reuland and Winter (2009), that the exempt anaphor vs. reflexivizer behavior of English anaphors is conditioned by the availability of movement. For the argumentation in this paper to go through all we need to assume is the functional semantics in (7a).

(i) Ms. Adler doesn´t like people like herSELF. #John likes people like Ms. Adler.
(ii) Remy didn´t burn Marie and himSELF. #Alfred burnt Marie and Remy.
(iii) Lucie didn´t count five tourists besides herSELF. #John counted five tourists besides Lucie.
(iv) Lucie was not introduced to herSELF. #John was introduced to Lucie.

3. The data

This section establishes the two major generalizations that govern the behavior of SA. It is shown that SA, when available, is always less accessible than OA. Moreover, SA is possible in free focus environments and in cases of quasi- and free-association, but not in cases of conventional association with focus

3.1. Free focus

In free focus environments both OA and SA are possible, as has been shown with the Q-A pairs in (1) and (2) and is confirmed by the corrective contexts in (12) and (13).

(12) A: Zelda praised Oscar.
B: No, she praised herSELF. *OA*

(13) A: Oscar praised Zelda.
B: ?No, she praised herSELF. *SA*

3.2. Association with focus

In their typology of FAOs Beaver and Clark (2008) distinguish between three classes of FAOs: Quasi-associating Operators (QAOs), Free-associating Operators (FrAOs), and Conventionally-associating Operators (CAOs). We present here the basic facts about SA following this typology.

3.2.1. Quasi-associating Operators

QAOs are non-veridical, propositional operators like negation, intentional propositional modifiers, belief operators etc. Consider, e.g., negation in (14) and (15). Narrow focus on *herself* can generate two inferences: (i) that Zelda praised someone other than Zelda (OA), and (ii) that someone other than Zelda praised Zelda (SA). The availability of the two inferences is checked with two possible continuations, one compatible with OS ('Zelda praised Oscar' in (14)) and one compatible with SA ('Oscar praised Zelda' in (15)).

(14) Zelda didn't praise herSELF. She praised Oscar. *OA*
(15) Zelda didn't praise herSELF. ?Oscar praised her. *SA*

Negation forms a good environment for SA to arise, especially in examples with non-animate subjects, since SA in these cases generates the only plausible inferences.[5] In (16), for example, the only plausible inference is that someone other than the room should go clean the room (SA), not, of course, that the room should clean something other than itself (OA).

[5] Stephens (2006) discusses examples like *These jokes write themSELVES* under the name 'virtual reflexive construction'. She claims that such cases exhibit an independent argument structure configuration. According to Stephens virtual reflexives 'convey that the given activity is particularly easy for some agent to accomplish' (p.277), while also 'allowing a partial transfer of agentivity to the patient-subject' (p.143). The examples can be subsumed under the present proposal; they exhibit nothing more than regular SA readings of focused reflexivizers that associate with a covert FAO, probably Krifka´s (1995) Emphatic Focus operator that indicates that the asserted proposition is particularly unlikely with respect to its alternatives.

(16) Go clean your room - it won't clean itSELF.

Other QAOs like the intentional modifier *perhaps* in (17) and (18) and the belief operator *think* in (19) and (20) behave similarly.

(17) Perhaps Zelda praised herSELF. Or perhaps she praised Oscar. *OA*
(18) Perhaps Zelda praised herSELF. ?Or perhaps Oscar praised her. *SA*

(19) I think Zelda praised herSELF. She didn't praise anyone else. *OA*
(20) I think Zelda praised herSELF. ?No one else praised her. *SA*

3.2.2. Free-associating Operators (FrAOs)

Free-associating operators quantify over an implicit domain, semantically represented as a variable over propositions. FrAOs include quantificational adverbs, generics/ modals, and superlatives, among others. As with QAOs, SAs are possible but less accessible than OAs.

(21) Zelda always praises herSELF. She never praises other people. *OA*
(22) Zelda always praises herSELF. ?No one else ever praises her. *SA*

(23) Ambitious people must praise themSELVES. *OA*
They shouldn't praise other people.
(24) Lawyers must defend themSELVES. *SA*
?They are not allowed to have other lawyers defend them.

(25) Zelda praised herSELF the longest. *OA*
She only mentioned Oscar in passing.
(26) Zelda praised herSELF the longest. *SA*
?Oscar only mentioned her in passing.

3.2.3 Conventionally-associating Operators (CAOs)

CAOs are also operators that have been assumed to include implicit variables. The resolution of the implicit variable, however, is not done through pragmatic mechanisms, but is encoded in the conventional lexical meanings of the operators. In this case, SA is not possible.

(27) Zelda only praised herSELF. She didn't praised anyone else. *OA*
(28) Zelda only praised herSELF. #?No one else praised her. #?*SA*

(29) First, Zelda praised Oscar. Later, she praised herSELF too. *OA*
(30) First, Oscar praised Zelda. #?Later, she praised herSELF too. #?*SA*

(31) Zelda praised many people. She even praised herSELF. *OA*
(32) Many people praised Zelda. #?She even praised herSELF. #?*SA*

(33) Zelda praised many people. E.g., she praised herSELF. *OA*
(34) Many people praised Zelda. #? E.g, she praised herSELF. #? *SA*

3.3. *Always* vs. *only*

Beaver and Clark (2008) base their distinction between FrAOs and CAOs on a detailed comparison between the operators *always* and *only*. To illustrate once more the difference between FrAOs and CAOs wrt the licensing of SA, consider the minimal contrast in (35). The context forces a SA reading of (35a) and (35b), but only the variant with *always* is felicitous. Notice that the contrast is specific to SA; OA is possible for both *only* and *always*, as shown in (36). [6]

(35) Context: Oscar is a petty criminal who always finds himself having to face some charge in court. Being a lawyer himself, he does not need to hire another attorney to defend him; if he chooses, he can defend himself in court. Does he ever use this option?
a. ?Yes, he always defends himSELF (when accused of something).
b. #Yes, he only defends himSELF (when accused of something).
'Whenever someone defends Oscar, Oscar defends Oscar.'

(36) Context: Oscar is a petty criminal who usually works with his brother. They always find themselves having to face some charge or other in court. Being a lawyer himself, Oscar does not need to hire another attorney to defend him; if he chooses, he can defend himself in court. In fact, if he wants to, he can defend his brother. Does he ever do that?
a. ?No, he always defends himSELF.
b. ?No, he only defends himSELF.
'Whenever Oscar defends someone, Oscar defends Oscar.'

3.4. The generalizations

I state below the two major generalizations that we need to explain. Section 4 discusses Generalization One. Section 5 discusses Generalization Two.

(37) **Generalization One**
Object Alternatives are more accessible than Subject Alternatives.
(38) **Generalization Two**
Subject Alternatives are possible with Quasi- and Free-associating Operators, but not with Conventionally-associating Operators.

[6] For event-based meanings for *only* see, e.g., Bonomi and Casalegno (1993), Beaver and Clark (2008, 155-6).

4. A question-based discourse model for focus

In this section Generalization One is explained by moving to a focus theory that is built on a question-based discourse model. The argument is based on an asymmetry between subject and object *wh*-questions; only the former exhibit disjoint reference effects.

4.1. QA-congruence

In the discussion around (1) and (2) above we showed how a specific semantics for reflexive anaphors allows licensing of Givenness. Felicitous QA-pairs, however, require more than Givenness to be respected; answers should be complete answers, defined in (39) (cf. partitions in Groendijk and Stokhof 1984), and questions should offer at least one true alternative, as required by (40) (cf. the existential presupposition of focus in Geurts and van der Sandt 2004).

(39) **Complete Answer** (Roberts 1996)
The answer denotes a proposition on the basis of which one can determine the truth or falsity of all the propositions in the question's meaning.

(40) **Current Question Rule** (Beaver and Clark 2008)
The current question must contain at least one true alternative, and contain multiple alternatives which are not resolved as true or false in the common ground.

The crucial QA-pair in (2) seems at first glance to respect both (39) and (40). Assuming the semantics for questions in Hamblin (1973), *Who praised Zelda* denotes the set of propositions in (41a) (if Zelda and Oscar are the only relevant individuals). Given exhaustification, *Zelda praised Zelda*, determines that 'Zelda praised Zelda' is true and 'Oscar praised Zelda' is false.[7] The Current Question Rule is also respected since 'Zelda praised Zelda' in (47a) is proposed in the answer in (2A) to be true.

(41) a. [[Who praised Zelda?]] = {Zelda praised Zelda, Oscar praised Zelda}
b. [[She praised herself]] = Zelda praised Zelda

4.2. Asymmetries in disjoint reference effects: deriving Generalization One

I propose that, unlike in the case of (1), (2) actually exhibits a violation of (40), explaining the asymmetry between the two QA-pairs. Consider first the QA-pair in (42), in which the answer *She praised no one* cannot be continued with *She praised herself*. The explanation is straightforward; with *She praised no one*, the speaker asserts that all the propositions in [[Whom did Zelda praise]] are false. This includes the proposition 'Zelda praised Zelda'. With *She praised herSELF* the speaker asserts that 'Zelda praised Zelda' is true, a contradiction.

[7] I take the exhaustification inference to be a scalar implicature derived by Grice´s Maxim of Quantity. One could also use a grammatical theory of exhaustification as in Chierchia (2004), Fox (2006), as long as the *Exh* operator is treated as a free-, not a conventionally-associating operator (cf. discussion in section 5).

(42) Q: Whom did Zelda praise?
A: She praised no one. # She praised herSELF.

Notice that the same reasoning should lead to contradiction in the case of the subject *wh*-question in (43), but no contradiction arises. This can be so if 'Zelda praised Zelda' is not in [[Who praised Zelda]], a disjoint reference effect.[8]

(43) Q: Who praised Zelda?
A: No one praised her. She praised herSELF.

(44) [[Who praised Zelda?]]= {~~Zelda praised Zelda~~, Oscar praised Zelda}

Assuming the meaning in (44), *Zelda praised herSELF* can still be taken to be a complete answer to *Who praised Zelda?* in (2); it determines that 'Oscar praised Zelda' is false. But, then, no alternative in (44) is true, a violation of the Current Question Rule. I propose that this violation is the reason for the reduced accessibility of SA. The result of the violation is a mismatch between the assumptions of the interlocutors; whereas the question does not consider 'Zelda praised Zelda' to be among the possible true alternatives, the answer asserts that it is in fact true. Speaker A, then, goes on to address a question that she knows is unanswerable. Notice that the violation in (2) does not lead to a complete break-down of communication; speaker A cannot be expected to concur with all the assumptions of speaker Q. What is expected, however, is that she explicitly rejects a CQ if she knows that it cannot be answered. I assume that with the use of *No one praised her* in (43), speaker A explicitly rejects *Who praised Zelda?* as a legitimate CQ, so that the discourse proceeds unhindered in this case.

4.3. Structuring discourse with questions

The reasoning above explains the asymmetry between the QA-pairs in (1) and (2), but Generalization One states that the asymmetry between OA and SA holds across the board. The behaviour can be generalized to both free focus and association with focus, if we adopt a question-based discourse theory. I adopt and present here briefly Beaver and Clark's (2008) re-interpretation of the model of Roberts (1996). As in Stalnaker (1972), the objective of

[8] I do not as yet have an account of the disjointness effect in (2). Disjoint reference effects were first noticed for passives in Baker, Johnson, and Roberts (1989); the implicit argument cannot be coreferential with the theme-subject in examples like *They were admired*. Baker, Johnson, and Roberts (1989) treats the disjoint reference effect as a case of strong crossover, an analyisis not applicable to (2). As Daniel Büring (p.c.) points out, Kehler and Büring (2008) propose a generalized principle of disjointness in *wh*-questions containing pronouns. BBBD in (i) captures, e.g., the disjointness effect between *John* and the bound pronoun in (ii). As it stands, (i) does not apply to (2). Schlenker (2005) presents a more general account of disjoint reference. A closer look at Schlenker´s system must await another occasion, however.

(i) Be Bound or Be Disjoint (BBBD)
If a pronoun *p* is free in the c-command domain of a (non-wh) DP *a*, *p* bears a presupposition of disjointness with *a*.

(ii) Who_1 thinks that John loves his_1 wife?

information-seeking discourses is taken to be to narrow down the context set, i.e. answer the question 'What's the world like?'. The main innovation is the assumption that interlocutors devise strategies to that effect using sequences of questions that stand in entailment relations (Groenendijk and Stokhof 1984). So, in (45) (where indentations indicate entailment relations) answering the super-question 'What's the world like?' requires answering all the questions that it entails.

(45) What's the world like?
  What happened at the meeting?
    Who praised who?
      Who praised Zelda?
      Whom did Zelda praise?

At any given moment in discourse, interlocutors have two legitimate moves: they can either answer the Current Question, defined in (46), or ask a question from the sequence (which is then promoted as the Current Question). The legitimacy of a discourse move is regulated by the two principles in (47) and (48).

(46) **Current Question (CQ)**
The question mutually accepted by the interlocutors as the most immediate goal of the discourse becomes the Current Question.

(47) **Discourse Principle**
Utterances should be maximally relevant to the CQ.

(48) **Focus Principle**
Some part of a declarative utterance should be such that its ExFClo is entailed by the ExClo of the CQ.

According to the Discourse Principle, a declarative utterance is always an answer to the Current Question. When the CQ is not explicit, it will be accommodated. Given the Focus Principle, accommodation is driven by the focus structure of the declarative sentence, i.e. by Givenness licensing. Consider, e.g., the corrections repeated in (49) and (50). The focus structure *[Zelda praised herself$_F$]* allows accommodation of both *Whom did Zelda praise?* and *Who praised Zelda?*. Due to the Discourse Principle, when a native speaker informer is confronted with a minimal discourse as in, e.g., (49) and is asked to judge its felicity, she first tries to establish the CQ speakers A and B are answering. Assuming that a correction rejects a proposed answer to the CQ, the native speaker uses both assertions in (49A) and (49B) in order to establish the CQ. Of the two questions the focus structure of (49B) is compatible with, only the object *wh*-question is compatible with speaker A´s assertion (i.e. *Zelda praised Oscar* can only be a coherent answer to the object *wh*-question). A native speaker, then, accommodates the question *Whom did Zelda praise?*. In the case of (50), exactly parallel reasoning leads a native speaker to accommodate the subject *wh*-question. In this case, however, accommodation of *Who praised Zelda?* leads to a violation of the Current Question Rule. Speaker B is seen as addressing a CQ which she knows is unanswerable. Native speakers, then, are more reluctant to accommodate the subject wh-question, which leads to a reduced accessibility of SA.

(49) A: Zelda praised Oscar.
B: No, she praised herSELF. *OA*

(50) A: Oscar praised Zelda.
B: ?No, she praised herSELF. *SA*

The same situation arises in association with focus cases, as in, e.g., (51) and (52). According to (48) a part of *Zelda didn't praise herSELF* should be Given wrt the CQ. This could be the form without negation, i.e. *Zelda praised herself*$_F$. As above, this allows accommodation of two CQs. In (51), the presence of *She praised Oscar* forces accommodation of *Whom did Zelda praise?*. In (52), the presence of *Oscar praised her* forces accommodation of *Who praised Zelda?*, which leads to a violation of the Current Question Rule in the usual manner.

(51) Zelda didn't praise herSELF. She praised Oscar. *OA*
(52) Zelda didn't praise herSELF. ?Oscar praised her. *SA*

4.4. Too many alternatives?

Adopting the Beaver and Clark/ Roberts model also explains why the alternatives that are generated by focus on a reflexive anaphor are either SA or OA, but never both. This is illustrated here with a case of free focus. Consider, first, the correction in (53), which is based on Schwarzschild (1999, (50)); (53B) is taken to reject that Zelda praised Oscar, not that Oscar praised Zelda, or both that Zelda praised Oscar and Oscar praised Zelda. Why is that?

(53) A: Zelda praised Oscar and Oscar praised Zelda.
B: No, Zelda praised HELEN.

A simple intuition is that focus feeds the rhetorical relations between utterances in discourse. We could assume, then, that only those propositions that entail the ExFClo of the correction are rejected. (53B) rejects the proposition that Zelda praised Oscar because it entails ExFClo(53B) ($\exists$x. Zelda praised x), but not the proposition that Oscar praised Zelda, because it does not entail ExFClo(53B). The intuition fails, however, for parallel cases with reflexive anaphors, as in (54). (54B) is taken to reject that Zelda praised Oscar and, not that Oscar praised Zelda, or that Zelda praised Oscar and Oscar praised Zelda. The simple account above predicts that both propositions are rejected, since both entail ExFClo(54B) ($\exists Q_{eet,et}$.(Q(praised))(Zelda)), as shown in (55).

(54) A: Zelda praised Oscar and Oscar praised Zelda.
B: No, Zelda praised herSELF.

(55) a. Zelda praised Oscar $\rightarrow \exists Q_{eet,et}$. (Q(praised))(Zelda) *for Q=DETRANS*
b. Oscar praised Zelda $\rightarrow \exists Q_{eet,et}$. (Q(praised))(Zelda) *for Q=PASS*

An alternative way to explain (54) is to assume that the rejection is influenced by the choice of accommodated CQ. On the basis of ExFClo(54B) one can accommodate either *Whom did Zelda praise?* or *Who praised Zelda?*. If the former is accommodated, *Zelda praised herself* is proffered as the only true complete answer to that question, so the proposition that Zelda praised Oscar is rejected. Similarly, accommodating *Who praised Zelda?* would lead to rejection of the

proposition that Oscar praised Zelda. The question *Who praised Zelda?*, however, is not accommodated since it leads to a violation of the Current Question Rule.

5. An intermediate theory of association with focus

Beaver and Clark´s (2008) assumption that conventional association with focus manifests a grammatical dependency on the Current Question, explains Generalization Two, i.e. the fact that SA do not arise with a certain class of FAOs.

5.1. Degrees of association with focus

As mentioned before, Rooth (1992) distinguishes between three possible theories of focus sensitivity: (i) weak theories, (ii) strong theories, and (iii) intermediate theories. I illustrate using the exclusive *only*, following the scalar account of the particle in Beaver and Clark (2008), Coppock and Beaver (2011), given in (56)/ (57). As usual, *only* expresses quantification over a set of propositions C. *Only* comments on the relative strength of the different propositions in C. Its presuppositional component, requires that no proposition in C is weaker or unranked with respect to the prejacent of *only* (i.e. the proposition expressed by the LF without *only*). This is achieved through the use of MIN, as defined in (57a) ($\geq$ represents the strength ranking, which in the cases dealt with here is based on entailment). The ordinary semantic component of *only* requires that no proposition in C is stronger than the prejacent. This is achieved through the use of MAX, as defined in (57b).

(56) $[\![\text{only}]\!] = \lambda p. \text{MIN}(p). \text{MAX}(p)$ (after Coppock and Beaver 2011)

(57) a. $\text{MIN}(p) = \exists q \in C\ [\text{true}(q) \wedge q \geq p]$

b. $\text{MAX}(p) = \forall q \in C\ [\text{true}(q) \rightarrow p \geq q]$

The question, then, is how the value of the variable is determined and why it is dependent on focus placement. In a strong theory, C is contextually resolved. Pragmatic principles, like, e.g., the Discourse Principle in (47), determines that, in most cases, it is resolved to the same object that acts as the antecedent for Givenness licensing. In the Roberts/ Beaver and Clark model, where every declarative sentence is an answer to the CQ, the relevant object is the CQ. Association with focus, then, is only indirect, through, e.g., the CQ.

In a weak theory, association with focus is written directly in the semantics of *only*. In, e.g., Rooth (1985) the quantifier ranges over the propositions in the sentences alternative value. MIN and MAX, then, could be defined as in (58).[9]

(58) a. $\text{MIN}(p) = \exists q \in [\![p]\!]^f\ [\text{true}(q) \wedge q \geq p]$ (after Coppock and Beaver 2011)

b. $\text{MAX}(p) = \forall q \in [\![p]\!]^f\ [\text{true}(q) \rightarrow p \geq q]$

[9] $[\![\varphi]\!]^f$ is the Alternative Semantic Value as in Rooth (1985). In the current version $[\![\varphi]\!]^f = \{p \mid p \rightarrow \text{ExFClo}(\varphi)\}$. As is well known since Rooth (1992), the set of alternatives is further contextually restricted.

Although strong theories derive association with focus for *only*, they leave open the possibility that the truth-conditional content will not always be affected by the placement of focus; although the free variable can, and generally will, be resolved to the denotation of the CQ, it does not have to be. The (non-) existence of such cases has been the main empirical argument between defenders of weak and strong theories. Beaver and Clark (2008) provide a variety of tests that distinguish between weak and strong association with focus. Crucially, they show that not all FAOs behave alike, and that a typology of FAOs should include the three categories mentioned above; QAOs, FrAOs, and CAOs. Among those, only CAOs exhibit a conventionalized dependency. Crucially, the conventionalized dependency is not a dependency with the alternative meaning, but a dependency with the Current Question. The discourse function of CAOs is to comment, in one way or another, on the CQ. The exclusive *only*, e.g., comments on the relative strength of possible answers to the CQ.

(59) a. $MIN(p) = \exists q \in CQ\ [true(q) \wedge q \geq p]$ (Coppock and Beaver 2011, simplified)
b. $MAX(p) = \forall q \in CQ\ [true(q) \rightarrow p \geq q]$

4.2. *Always* vs. *only*: deriving Generalization Two

Consider now the contrast between *always* and *only* in licensing SA in (60) and (61). *Always* is a universal quantifier that ranges over a free variable, a variable over sets of events (von Fintel 1994). Since *always* is a FrAO according to Beaver and Clark, the relevant reading in (60) will come about if the variable is resolved to a set of events of the type 'x defends Oscar in e'. As long as the context makes such a set available, SA is possible. In the case of (61), SA will arise if *only* ranges over a set of propositions of the type 'x praised Zelda'. The crucial difference with (60) is that the set can only be picked up through the CQ *Who praised Zelda?*. Given the focus structure in (61) this CQ can be accommodated. It exhibits, however, a disjoint reference effect, so that the relevant set will include propositions like 'Oscar defends Zelda' but not 'Zelda defends Zelda'. Recall that the presupposition of *only* requires that there is at least one true proposition in CQ that is equal or stronger than 'Zelda praised Zelda'. Since 'Zelda praised Zelda' is not in CQ, there is no proposition in CQ to satisfy the presupposition of *only*. The deviance of SA in (61), then, is the result of presupposition failure.

(60) Zelda always praises herSELF. ?No one else ever praises her. *SA*
(61) Zelda only praised herSELF. #?No one else praised her. #?*SA*

More generally, given the discourse function of CAOs as providing comments on the CQ and the fact that CQ is part of their conventional meaning, subject wh-questions will always lead to violations of the Current Question Rule, but, crucially, for one and the same speaker. Whereas in examples like (2) speaker A gives an answer that does not conform to the assumptions of speaker Q, in, e.g., (61) the speaker must himself accept the CQ together with all its assumptions, as the CQ is part of the meaning of *only*. The speaker, then, puts forward a CQ (via accommodation) according to which *Zelda praised Zelda* is not a possible answer, and answers the question by asserting that *Zelda praised Zelda*, clearly a contradiction. It is predicted, then, that SA will not

improve if the CQ is explicit, as in (62A1), or even if it is explicitly rejected, as in (62A2), since it is immediately re-introduced through the lexical semantics of *only*.

(62) Q: Who praised Zelda?
A1: #?She only praised herSELF.
A2: No one praised her. #?She only praised herSELF.

6. Intensifiers in focus

Generalization Two was explicitly stated to cover naturally disjoint verbs only. It turns out that naturally reflexive verbs are more permissive in allowing SA; they are not subject to the restrictions of Generalization Two.[10] I claim that this is because of the availability of a second construal in which the anaphor is not a reflexivizer but an intensifier.

6.1. The data

OA and SA are both possible in examples with (i) free focus, as in, e.g., (63)/(64), (ii) QAOs, as in, e.g., (65)/(66), (iii) FrAOs, as in, e.g., (67)/(68), and (iv) CAOs, as in , e.g., (69)-(72). The distribution of SA in examples with naturally reflexive verbs is summarized in (73).

(63) Q: Whom did Zelda dress?
A: She dressed herSELF. *OA*

(64) Q: Who dressed Zelda?
A: ?She dressed herSELF. *SA*

(65) Zelda didn't dress herSELF. She dressed Oscar. *OA*
(66) Zelda didn't dress herSELF. ?Her father dressed her. *SA*

(67) Zelda always washes herSELF. She never washes other people. *OA*
(68) Zelda always washes herSELF. ?No one else ever washes her. *SA*

(69) Zelda only dresses herSELF. She never dresses anyone else. *OA*
(70) Zelda only dresses herSELF. ?No one else ever dresses her. *SA*

(71) First, Zelda washed Oscar. Then, she washed herSELF too. *OA*
(72) First, her mother washed Zelda. ?Then, she washed herSELF too. *SA*

(73) **Generalization Three**
With naturally reflexive verbs, Subject Alternatives are possible with all Focus-associating Operators.

[10] I define here the class of naturally reflexive verbs syntactically, as those verbs that allow an intransitive reflexive construal like *John washed/ shaved/ dressed/...* etc.

6.2. A second road to SA

I claim that the availability of SA with CAOs in (69)-(72) is the result of a possible construal of examples like (74a) in which the anaphor is not a reflexivizer in argumental position, as in (74b), but an adverbial modifier, as in (74c). In wide focus environments, the two construals in (74b) and (74c) are usually disambiguated by prosody; reflexivizers, as in (74b), prosodically subordinate to the predicate, whereas modifiers, as in (74c), are prosodically most prominent. In the narrow focus cases that are of interest here, the two construals are prosodically indistinguishable. The reflexive anaphor in the adverbial construal in (74c), then, is an intensifier, as in (75).

(74) a. Zelda dresses herself.
b. [$_S$ Zelda [$_{VP}$ dresses herself]]
c. [$_S$ Zelda [$_{VP}$ [$_{VP}$ dresses] herself]]

(75) John built the house himself.

In recent work, Howell (2011) identifies three types of non-argumental reflexive anaphors (Emphatic Reflexives, ERs); agentive ERs (what I call here agentive intensifiers), that indicate the direct involvement of the agent/ causer (non-assistance or non-delegation), as in (76a), additive ERs, as in (76b), and adnominal ERs, as in (76c) (examples from Howell 2011).

(76) a. John built the house himself.
b. John will wash the dishes, and Tom will do so himself.
c. The dean himself will chair the meeting.

Of interest here are the agentive intensifiers. The intuition I want to pursue is that the appearance of SA in the case of naturally reflexive verbs is the result of an adverbial modifier which contributes a non-assistance or non-delegation reading. As Lasersohn (1995) has noted, collectivizing adverbials, like *together* in (77a), and comitative phrases as in (77b), give rise to readings in which the plurality of John and Mary collectively built the house.

(77) a. John and Mary built the house together.
b. John built the house with Mary.

I propose to treat agentive intensifiers like *himself* as a sort of 'anti-comitative' (cf. Tsai 2005). Agentive intensifiers and comitative phrases can be alternatives to each other, as in (78). (78a), for example, asserts that that it is not true that there is no plurality including John that built the house, and infers that there is such a plurality. The intuition that the agentive intensifier contributes a non-assistance reading, is also confirmed by the examples in (79).

(78) a. John didn´t build the house himSELF. He built the house with Peter.
b. John didn´t build the house with PETER. He built the house himSELF.

(79) a. John didn´t build the house himSELF. Mary helped him (build the house).
b. Mary didn´t help John build the house. He did it himSELF.

A formal implementation of this idea must wait for another occasion. As a very first approximation consider the entry for *himself* in (80), based on the simplified version of Lasersohn´s entry for comitative *with* in (81). Comitative *with* creates a plural argument of which the predicate holds. The agentive intensifier *himself*, on the other hand, states that there is no plurality of which the subject is a member such that the predicate holds.[11] Given these simple semantics agentive intensifiers are of the same type as comitative phrases and can, thus, be alternatives to each other.

(80) $[\![\text{himself}_{\text{AER}}]\!] = \lambda P_{et} \lambda x.\ P(x).\ \neg\exists y \neq x.\ P(\{x,y\})$
(81) $[\![\text{with}_{\text{com}}]\!] = \lambda x. \lambda P_{et}. \lambda y.\ P(\{x,y\})$

In the case of naturally reflexive verbs, focused reflexives can contrast with comitative phrases and comitative paraphrases, as in (82) and (83). (81a), then, presupposes that Mary dressed and asserts that there is no person x such that the plurality consisting of Mary and x dressed. Given cumulativity of the plural argument and the reflexive predicate (Landman 2000), it follows that no one other than Mary dressed Mary.

(82) a. Mary didn´t dress herSELF. She dressed with Zelda.
b. Mary didn´t dress with Zelda. She dressed herSELF.
(83) a. Mary didn´t dress herSELF. Zelda helped her (dress).
b. Zelda didn´t help Mary dress. She did it herSELF.

As in the previous sections, association with focus proceeds by accommodating a CQ. Given the syntax in (81c) and prosodic prominence on the intensifier, a CQ that could be accommodated can be paraphrased as *Did Mary dress herself or with someone else?*. Since the question is not an argument question, no issue of disjoint reference arises. It is accommodation of such a question that allows the appearance of SA in the case of CAOs, like *too*, repeated below in (84).

(84) First, her mother washed Zelda. ?Then, she washed herSELF too.

To conclude this brief sketch, notice that naturally disjoint verbs do not contrast with comitative phrases and comitative paraphrases. The syntactic construal in (74c), then, is not available with naturally disjoint verbs; the reflexive anaphors in (85) are, thus, reflexivizers in argumental position. Since agentive intensifiers are unavailable with naturally disjoint verbs, no derivation parallel to the one of (84) is available, and naturally disjoint verbs have no way to escape Generalization 2.

[11] In the case of comitatives further restrictions should make sure that the predication can only be collective and not distributive. No such restrictions should be present in the case of agentive intensifiers if we want to capture the relevant readings in the case of agentive intensifiers with naturally reflexive verbs. Notice also that in (80) I treat part of the meaning of *himself* as a presupposition, so that, e.g., (75) presupposes that John built the house.

(85) a. Mary didn´t praise herSELF. #She praised with Zelda.
b. Mary didn´t praise herSELF. #Zelda helped her (praise herself).

References

Ahn, B. (2012). Twin reflexives. Invited talk, Iniversity of Arizona Linguistics Colloquium.
Bach, E. (1980). In defense of passive. *Linguistics and Philosophy 3*, 297-34l.
Bach, E. and B.H. Partee (1980). Anaphora and Semantic Structure. In J. Kreiman and A. E. Ojeda (Eds.) *Papers from the Parasession on Pronouns and Anaphora*. Chicago Illinois, University of Chicago.
Baker, M., K. Johnson, and I. Roberts (1989). Passive arguments raised. *Linguistic Inquiry 20*, 219-51.
Barker, C. (2008). Possessives and relational nouns. In C. Maienborn, K. von Heusinger, and P. Portner (eds). *Semantics: An International Handbook of Natural Language Meaning*. Berlin: Mouton de Gruyter.
Beaver, D. and B. Clark. (2008). *Sense and Sensitivity*. Wiley-Blackwell.
Bonomi, A. and P. Casalegno (1993). Only: association with focus in event semantics. *Natural Language Semantics 2*, 1-45.
Bruening, B. (2011). By-Phrases in passives and nominals. To appear in *Syntax*.
Büring, D. (2003) On D-Trees, Beans, and B-Accents. *Linguistics & Philosophy 26:5*, 511-45.
Büring, D. (2008) What's New (and What's Given) in the Theory of Focus?. Ms. Berkeley Linguistic Society.
Chierchia, G. (1998/ 2004). A semantics for unaccusatives and its syntactic consequences. In A. Alexiadou, E. Anagnostopoulou, and M. Everaert (Eds.). *The unaccusativity puzzle: explorations of the syntax-lexicon interface*. Oxford: Oxford University Press.
Chierchia, G. (2004). Scalar implicatures, polarity phenomena, and the syntax/pragmatics interface. In A. Belletti (Ed.). *Structures and Beyond: The Cartography of Syntactic Structures*. New York: Oxford University Press.
von Fintel, K. (1994). Restrictions on quantifier domains. PhD Dissertation, University of Massachusetts, Amherst.
Fox, D. 2006. Free choice and the theory of scalar implicatures. Ms., MIT.
Geurts, B. and R. van der Sandt (2004). Interpreting focus. *Theoretical Linguistics 30*, 1-44
Groendijk, J. and M. Stokhof (1984). *Studies on the Semantics of Questions and the Pragmatics of Answers*. Amsterdam: University of Amsterdam.
Hamblin, C.L. (1973). Questions in Montague English. *Foundations of Language 10*, 41-53.
Howell, J. (2011). Meaning and prosody: On the web, in the lab and from the theorist's armchair. PhD dissertation, Cornell University.
Jackendoff, R. (1972). *Semantic Interpretation in Generative Grammar*. MIT Press, Cambridge, Mass.
Keenan, E. (1971). Names, quantifiers, and a solution of the sloppy identity problem. *Papers in Linguistics 4*.
Kehler, A. and D. Büring (2008). Be Bound or Be Disjoint!. NELS 38. Ottawa

Kratzer, A. 1996. Severing the external argument from its verb. In J. Rooryck and L. Zaring (Eds) *Phrase Structure and the Lexicon*. Dordrecht, The Netherlands: Kluwer Academic Publishers.
Krifka, M. (1995). Focus and the interpretation of generic sentences. In M. Krifka, F.J. Pelletier, G. N. Carlson, G. Chierchia, G. Link, A. ter Meulen. *The Generic Book*.
Landman, F. (2000). *Events and Plurality*. Kluwer, Dordrecht.
Lasersohn, P. (1995). *Plurality, Conjunction and Events*. Dordrecht: Kluwer Academic Publishers.
Lechner, W. (2007). An LF-transparent theory of movement. GLOW XXX, University of Tromsø.
Lechner, W. (2012). Towards a theory of transparent reflexivization. Ms., University of Athens.
Pollard, C. and I.A. Sag (1992). Anaphors in English and the Scope of Binding Theory. *Linguistic Inquiry 23.2*, 261-303.
Reinhart, T. and E. Reuland (1993). Reflexivity. *Linguistic Inquiry 24*, 657-720.
Reuland E. and Y. Winter (2009). Binding withut identity: towards a unified semantics for bound and exempt anaphors. In *Anaphora Processing and Applications: 7th Discourse Anaphora and Anaphor Resolution Colloquium*. Berlin, Springer Verlag.
Roberts, C. (1996) Information structure in discourse: towards an integrated formal theory of pragmatics. In *OSU Working Papers in Linguistics 49. Papers in Semantics*. The Ohio State University.
Roberts, C. (2004). Context in dynamic interpretation. In L. Horn and G. Ward (Eds.). *Handbook of Contemporary Pragmatic Theory*. Blackwell.
Rooth, M. (1985). Association with focus. Ph.D dissertation. University of Massachusetts.
Rooth, M. (1992). A theory of focus interpretation. *Natural Language Semantics 1*,75–116.
Schlenker, P. (2005). Non-redundancy: towards a semantic reinterpretation of binding theory. *Natural Language Semantics 13*, 1–92.
Schwarzschild, R. (1999). GIVENness, AvoidF and other constraints on the placement of accent. *Natural Language Semantics 7*, 141-77.
Spathas, G. (2010). Focus on anaphora. LOT dissertation.
Stalnaker, R.C. (1972). Pragmatics. In D. Davidson and G.Hartman (Eds.). *Semantics of Natural Language*. Reidel: Dordrecht.
Stephens, N. (2006). Agentivity and the virtual reflexive construction. In B. Lyngfelt and T. Solstad (eds.), *Demoting the agent: Passive, middle and other voice phenomena*. Amsterdam: John Benjamins.
Szabolcsi, A. (1992). Combinatory grammar and projection from the lexicon. In A. Szabolcsi and I. Sag (Eds.). *Lexical Matters*. Stanford: CSLI.
Truckenbrodt, H. (1995). Phonological phrases: Their relation to syntax, focus, and prominence. Doctoral thesis, Massachussetts Institute of Technology.
Tsai, W.-T. D. (2005). Causality, comitativity, contrastivity, and selfhood. Paper presented in the 3rd Theoretical East Asian Languages Workshop, Harvard University.
Wagner, M. 2005. Prosody and recursion. MIT Dissertation.

giorgos.spathas@ifla.uni-stuttgart.de
g.spathas@gmail.com