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The syntax, semantics, and pragmatics of the focus particle *to* in Czech

1. Introduction

This paper aims to provide an account of the syntactic, semantic, and pragmatic behavior of a demonstrative-like particle *to* 'that', which optionally appears in Czech *wh*-questions and focus fronting constructions.[1]

(1) Kam jste **to** odešel?
where-to $aux_{past.2pl}$ that left
'Where did you go?'

(2) %BOTY **to** včera nemohl najít (, ne kabát)
shoes that yesterday not.could find not coat
'It was shoes that he couldn't find yesterday, not a coat'

I will argue for the following two points: (i) syntactically, *to* can be identified with a Focus head in the clausal left periphery (Rizzi 1997); (ii) semantically, *to* is a particle modifying open propositions (Rooth's 1985 *focus semantic value*) in the following two ways: it induces the presence of a covert contextually given propositional modifier and it triggers a factive presupposition. The morphological affinity of the Focus particle *to* with the demonstrative determiner will receive a natural explanation in terms of shared core semantics.

Let us start with some basic observations about *to.* As opposed to standard demonstrative pronouns, which agree with the associated nominals, *to* always appears in neuter, singular, and nominative/accusative—arguably the default form. The following example shows that *to* does not agree with the fronted operator, which immediately rules out the hypothesis that the appearance of *to* is a case of (clitic) doubling.

(3) Kterého studenta **to/*toho** Marie potkala?
Which $student_{acc.sg.masc}$ $that_{nom.sg.neut/acc.sg.masc}$ Marie met
'Which student did Mary meet?'

In fact, the operator can be of any category that can function as an A-bar operator in Czech: NPs, adverbials, and even VPs.

(4) a. Jakou knihu si **to** Petr objednal?
which book refl that Petr ordered
'Which book did Peter order?'

b. Kdy/Kde si **to** Petr objednal tu knihu?
when/where refl that Petr ordered the book

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[1] *To* in *wh*-questions seems to be acceptable for all speakers of Czech, if the relevant context is provided. The example in (1) is taken from the Czech National Corpus (Český národní korpus, ČNK). *To* with contrastive focus, on the other hand, is not accepted by all speakers, which is indicated by the mark %. The anonymous reviewer informs me that *to* is very common in the dialect of Ostrava, a city in the North-East of the Czech Republic. In the remainder of this paper, I will use my own judgments and ignore possible speaker variation.

'Where did Peter order the book?'

(5) a. Knihu O TUČŇÁCÍCH jsem si **to** objednal [, ne o tuleních]
book about penguins aux$_{1sg}$ refl that ordered not about seals
'It was a book about penguins that I ordered [, not a book about seals].'

b. MINULÝ TÝDEN/PŘES AMAZON si **to** Petr objednal tu knížku
last week via Amazon refl that Petr ordered the book
'It was last week/via Amazon that Peter ordered the book.'

b. OBJEDNAT KNÍŽKU **to** Petr chtěl
order book that Petr wanted
'It was ordering a book that Peter wanted to do'

The invariable *to* is always unstressed and occupies a relatively fixed position in the clause: it follows all second position clitics (auxiliary and pronominal), exemplifed below by the sequence *jste mu ho*, and precedes other unstressed referential demonstrative pronouns, *tam tehdy*. The sentence in (6) also clearly shows that the *wh-/focus*-operator does not need to be adjacent to *to*.

(6) V kolik hodin {***to**} jste mu ho {**to**} tam tehdy {***to**} chtěli dát?
in how.many hours that aux$_{past.2sg}$ him$_{dat}$ him$_{acc}$ that there then that wanted give
Lit. 'At what time did you want to give it to him there then?'

The paper is organized as follows. In section 2 I propose a syntactic analysis of *to*. I argue that it optionally realizes a Focus head, which needs to be licensed by a *wh-/*focus-operator in its specifier (Rizzi 1997). The arguments for this position are drawn from weak crossover effects and from the distribution of *to*, which is limited to the class of quantificational A-bar dependencies (Lasnik and Stowell 1991). Section 3 unfolds the main semantic characteristics of *to*. I will argue that *to* has two major functions: it facilitates a factive presupposition and it restricts the denotation of its syntactic complement—an open proposition. We will see that these two properties of *to* constitute a natural extension of the alternative semantics proposed by Rooth (1985). The ultimate interpretation of clauses with *to* relies on context. Section 4 will give some examples of what pragmatic range *wh*-clauses with *to* can take. Among other cases, we will have a look at non-scalar *wh*-exclamatives, which will be analyzed as questions presupposing the truth of all its (contextually relevant) answers. Section 5 comments on the relation of the left-peripheral information structural head and its demonstrative kin. Section 6 concludes the paper.

2. Syntax of *to*

2.1 Background: the syntax of left periphery

I adopt the proposal of Rizzi (1997 and subsequent work), according to which the left periphery of clauses consists of a hierarchical sequence of heads, characterized by specific functions. Consider the following representation:

(7) *The left periphery of clauses* (from Rizzi 1997)
[$_{ForceP}$ … [$_{TopP}$ *topic(s)* [$_{FocP}$ *focus* [$_{FinP}$ … [$_{IP/TP}$ …]]]]]

The left periphery is delimited by by a Force head on the top of the hierarchy and a Fin(iteness) head on the bottom. Rizzi characterizes Force as a head encoding the relation of the clause to its external environment if the clause is embedded (e.g. which ForceP is selected by which V) or the relation to the discourse if the clause is matrix (e.g. interrogative vs.

declarative). Fin is a head which specifies the finiteness and can influence the choice of complementizer (e.g. the English finite-selecting *that* vs. non-finite-selecting *for*). The space in between Force and Fin is reserved for heads, whose specifiers host fronted constituents: topics, foci, and other kinds of operators. Rizzi argues that there is a unique Foc(us) head, which is c-commanded by a (sequence of) Top(ic) head(s). That is, topics, but not foci can stack.

2.2 Proposal

On the basis of the background assumptions and the observations made in the introduction, I suggest the following syntactic representation of sentences with the invariable *to:*

(8) [$_{\text{ForceP}}$ *wh/*focus *(clitics)* [$_{\text{TopP}}$ *(clitics)* [$_{\text{FocP}}$ <*wh/*focus> (**to**) [$_{\text{FinP/TP}}$ … <*wh/*focus> …]]]]

I propose that *to* optionally realizes the Focus head, whose presence is licensed by a focused constituent in its specifier. The optionality is restricted by the following descriptive implication:

(9) If *to* is present, then Foc is present and SpecFocP is filled

I assume that operator movement proceeds in steps, each of which is triggered by a component of the interpretation of the operator or the clause in which it appears. That is, each step is subject to an interpretational "criterion" (Rizzi 1997), a functional equivalent to feature-checking mechanisms (Chomsky 1995). The suggestion that A-bar movement may proceed in partial steps is present in other proposals, e.g. Boeckx and Grohmann (2004), who use the term *submove*. In the constructions under discussion, the operator (sub)moves to SpecFocP, where it receives a focus interpretation.[2] The second step of the operator movement targets the highest position of the tree, SpecForceP, and is motivated by clause-typing (cf. Cheng 1991).

Clitic placement in Slavic languages, Czech being no exception (see e.g. Lenertová 2004 for a useful discussion), is a complex matter, which I cannot discuss in detail here, for reasons of space. There is a whole array of views within the generative stream of thinking, ranging from purely phonological approaches (Bošković 2000) through mixed, syntax/phonology interface approches (Franks 2000), to purely syntactic ones, which treat the apparent phonological effects as an epiphenomenon rather than the driving force (Progovac 2000). This paper concerns only a very restricted set of data, namely root clauses involving A-bar-moved constituents, which typically occupy the first position in the sentence in Czech. I follow Progovac in assuming that clitics occupy a certain position in the left periphery of the clause. I assume that pronominal clitics occupy the topic domain and auxiliary clitics (tense, reflexivity) the force domain. Whether clitics form clusters (Progovac 2000) or adjoin to/spell-out separate functional heads in the left periphery (cf. Kayne 1994) is immaterial here.

2.3 Further evidence

In this section I will present two pieces of additional evidence supporting the proposed analysis. First, the licensing of *to* is sensitive to the type of A-bar dependency involved; second, weak crossover effects (WCO) are stronger when *to* is present.

Lasnik and Stowell (1991) argue for a division of A-bar dependencies into two categories, drawing arguments mainly from WCO phenomena. The first category is represented by the A-

[2] It has become standard in the cartographical approaches to syntax to assume that SpecFocP is the target position of *wh*-movement in (root) questions. See the discussion in 2.3.

bar dependencies involved in questions and focus fronting. Following an analytical tradition going back to Chomsky (1977), they assume that *wh*-phrases in questions are *quantificational operators*. The second category is represented by A-bar dependencies in relative clauses and topic fronting and is typical of *anaphoric (non-quantificational) operators*. Rizzi (1997) reformulates their idea within the cartographic program and claims that (i) quantificational operators move to SpecFocP, and (ii) anaphoric operators move to SpecTopP. Given these assumptions, it follows from the analysis in (8) that *to*, being a Focus head, must be licensed in the first category of A-bar dependencies, but not the second. This expectation is borne out. I have already given evidence that *to* is licensed in by interrogative and focus operators. The sentences below show that anaphoric operators (topics and relative operators) do not license the presence of *to*. The example in (11) shows a case of restrictive and appositive relativization, respectively.

(10) A: And what about Peter? Was he invited?
B: Petra (***to**) Marie na party nepozvala
Peter that Marie for party not.invited
'As for Peter, Mary didn't invite him for the party'

(11) a. Právě přišli ti studenti, které jsme (***to**) včera pozvali
just came the students who $aux_{past.1pl}$ that yesterday invited
'The students that we invited yesterday have just come'

b. Ještě čekáme na Petru, kterou jsme (***to**) včera pozvali
still $wait_{1pl}$ for Petra who $aux_{past.1pl}$ that yesterday invited
'We're still waiting for Petra, who we invited yesterday'

The second piece of evidence comes from WCO considerations. Lasnik and Stowell (1991) argue that only quantificational operators induce WCO effects, while anaphoric operators do not. Thus, while WCO effects are present in *wh*-questions and focus fronting, they are absent from relativization and topicalization (data from Lasnik and Stowell: 689 and 698).

(12) a. *Who_i does his_i boss dislike?

b. the book $which_i$ its_i author read

Now consider the situation in Czech. Dočekal (2005) and Sturgeon (2005) both observe that WCO effects in Czech are very weak and I agree with their judgments:

(13) ?$Koho_i$ $jeho_i$ přítelkyně pozvala?
who his girlfriend invited
'Who did his girlfriend invite?'

Of course, this state of affairs complicates the situation. Given the assumption that the syntactic representation generating question semantics is universal across languages, it is not immediately clear how to account for the absence of WCO effects in syntax. But to what extent does semantics actually care about what happens in the syntactic derivation of *wh*-questions? For all standard semantic theories, it is crucial for a question to contain a variable, whose presence implicates a set of alternative propositions.[3] This variable is mostly identified with the *wh*-word. The *wh*-movement itself is semantically non-vacuous only if one accepts that *wh*-words are quantifiers, an assumption which is by no means necessary for a semantic account (see e.g. Berman 1991, or Ginzburg and Sag 2000). If we assume that the quantifier-

[3] See section 3 for more discussion on question semantics and some references.

status of interrogative *wh*-words is subject to variation, the lack of WCO effects in some languages is not so surprising any more.[4]

Now suppose that interrogative *wh*-words in Czech can avoid moving to SpecFocP, and move to SpecTopP instead. Then the lack of WCO in (13) would match the lack of WCO in (English) relative clauses and topicalization.[5] Some evidence for this view comes from Grohmann's (2000, 2006) theory of *wh*-dependencies in German. Grohmann argues that *wh*-words in German questions move to SpecTopP. According to him, movement to SpecTopP correlates with the lack of superiority effects in multiple *wh*-questions. If it is true that Czech *wh*-phrases can move to SpecTopP, Grohmann makes the right prediction, since Czech displays no superiority at all:

(14) Kdo má koho rád? // Koho má kdo rád?
who$_{nom}$ has who$_{acc}$ glad // who$_{acc}$ has who$_{nom}$ glad
'Who likes who?'

Now let us turn back to *to*. The descriptive implication in (9) says that if *to* is present, then Foc is present, and therefore SpecFocP has to be filled in order to license the presence of the head. Consequently, *wh*-questions containing *to* are expected to trigger WCO. In my intuition, this is indeed the case:[6]

(15) ?*Koho$_i$ **to** jeho$_i$ přítelkyně pozvala?
who that his girlfriend invited
'Who (did/was it that) his girlfriend invite(d)?'

To sum up, the fact that the distribution of *to* is restricted to *wh*-questions and cases of focus fronting supports the view that *to* realizes Foc. Moreover, the different behavior of WCO in clauses with and without *to* seems to suggest a flexible approach to the quantificational status of interrogative *wh*-phrases: they can behave either as quantifiers or (quasi-)anaphors. Some languages pick the former option (English), some the latter option (German), and some use both, depending on the context (Czech). There is some further evidence in support of this idea. First, English WCO effects (as well as superiority) are alleviated (for some speakers) when complex *wh*-phrases are used. In this respect, notice that complex *wh*-phrases have been argued to be of a non-operator nature (van Craenenbroeck 2004); translated to the cartographic approach, this means that they occupy SpecTopP. Second, WCO judgments are very subtle and subject to speaker-variation. A flexible approach to the quantifier-status of interrogative *wh*-phrases is therefore desirable.

3. The semantic composition of *to*

In this section, I will propose a semantic analysis of clauses with *to*. I argue that the semantic import of *to* can be decomposed into components, one being a function from a set of propositions to its subset (essentially modification) and the other other triggering a factive presupposition.

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[4] I am grateful to Jacek Witkoś for his comments, which made me formulate this idea in a more coherent way.

[5] Consequently, such *wh*-words would be interpreted "quasi-anaphorically"; the question in (13) would mean something like 'as for some/the people x, which of x did x's girlfriend invite?'. An alternative is that *wh*-phrases moving in root questions undergo scrambling (Pavel Caha, p.c.). With some additional assumptions, this yields predictions concerning long-distance *wh*-movement, since scrambling is clause-bound. I cannot go into this here for reasons of space.

[6] The anonymous reviewer reports that this example is (a little) odd, but not ungrammatical. As it is the case with many examples in this paper (given the substandard nature of the phenomenon discussed), the ultimate acceptability will depend on context and intonation.

3.1 Background: focus semantics

Since we are dealing with a focus particle, we are in need of a general semantic theory of focus. I adopt the framework of alternative semantics proposed by Rooth (1985, 1992, 1996). Rooth argues that every sentence which contains a focused constituent has two semantic values: an *ordinary semantic value* (OSV) and a *focus semantic value* (FSV). The denotation of the former matches the asserted proposition. The latter is a set of propositions created by replacing the focus by a variable of the corresponding type. The sentence in (16) contains a focus, namely *John*. The presence of a focused constituent creates a semantic representation given informally below.

(16) Mary loves $[\text{John}]_F$
OSV: Mary loves John
FSV: Mary loves *x*, i.e. {Mary loves John, Mary loves Peter, Mary loves Tom, etc.}

Rooth's theory is convenient for our purposes for three reasons. First, it is directly compatible with standard theories of question semantics (Karttunen 1977; Groenendijk and Stokhof 1984; Higginbotham 1996 *inter alia*), under which questions denote sets of propositions, i.e. essentially Rooth's FSV. Thanks to that, it is possible to attain a common treatment of both constructions under discussion, focus constructions and *wh*-questions. Second, the theory assumes that focus is a syntactic-semantic (and not only pragmatic) phenomenon and therefore is in principle compatible with a cartographic approach. Third, it leaves an open space for incorporating non-core focus features and phenomena, such as contrastivity or exhaustiveness. Rooth himself says: "[…] the common core [the semantics described above] might turn out to be the weak semantics of the prominence feature in English, with some constructions and morphemes expressing additional semantic content – such as existential presupposition or exhaustive listing – in addition to and in terms of the basic semantics." (Rooth 1996: 296)

It can be shown easily that the focus associated with *to* is not the weak "prominence" or information focus that Rooth discusses. Consider the following sentence containing a constituent answering a neutral information question, which is a canonical case of information focus. Importantly, *to* is unacceptable:

(17) A: Who did Mary call yesterday?
B: PETROVI (***to**) včera Marie volala
Petr that yesterday Mary called
'Mary called Peter yesterday'

So the question at stake is: What is the "additional semantic content" expressed by *to*?[7]

3.2 Proposal

I propose that *to* can be decomposed into two features, which I call [R(estrict)] and [F(active)]. I define them as follows:

(18) [R] is a function which restricts the FSV to a contextually well-defined set
[R]: $r(P)=P'.\ P=[[\text{IP}]] \wedge P' \subseteq P \wedge \exists Q[Q \text{ is a contextual property of propositions} \wedge \forall p[p \in P' \rightarrow Q(p)]]$

[7] At this point, Kiss's (1998) theory of *identificational focus* would deserve some discussion, since the Czech *to* is apparently a relative of focus fronting in Hungarian and cleft-constructions in English. However, the relations/correlations are far from straightforward, so I leave the issue aside.

(19) [F] triggers a presupposition that there is a unique true proposition in *P'*, all others in *P'* being false
[F]: *Presupposition:* $\exists\iota p[p \in P' \wedge$ extension of $p=1 \wedge \forall q(q \neq p \rightarrow$ extension of $q=0)]$[8]

[R] takes a set of propositions *P* denoted by its complement (an IP) and returns its subset *P'* such that there is a contextually given property *Q* which every proposition of *P'* has. [F] takes *P'* and states that there is a unique proposition in *P'* which is true and every proposition which does not equal this proposition is false.

By transitivity, (10) can be reformulated as (20):

(20) If *to* is present, then [R] and [F] are present

Let us briefly illustrate how [R] and [F] work. Consider the following discourse, which consists of a question and a corresponding answer.

(21) A: Koho **to** Marie pozvala?
who that Marie invited
'Who did Mary invite?'

B: SVÉHO BÝVALÉHO PŘÍTELE (**to**) Marie pozvala
her exboyfriend that Marie invited
'It is her exboyfriend who Mary invited'

The presence of *to* in the question in (21) indicates that we are dealing with more than just a simple information question: simple listing of the people who Mary invited would sound inappropriate in any imaginable context. So let us take a plausible scenario. Suppose that Mary is organizing her birthday party. *A* and *B* are Mary's good friends and they could easily guess all the people that have been invited to Mary's party. However, Mary invited also someone rather unexpected. *B* already knows the identity of the unexpected invitee, but *A* only knows about the fact that there is one. In such a situation, *A* can ask the question in (21). By using *to*, *A* restricts the answer space to propositions that have a certain property *Q*, which we could describe as 'surprising'. Furthermore, *A* knows that there is a (unique) individual which makes the restricted open proposition true. Without this knowledge, it would not be possible for *A* to ask this question in the given situation.

(22) [R]: $r(P) = P'$. P=[[Marie invited x]] $\wedge$ $P' \subseteq P \wedge \exists Q.$ Q=**surprising'** $\wedge \forall p[p \in P' \rightarrow Q(p)]$
[F]: *Presupposition:* $\exists\iota p[p \in P \wedge$ extension of $p=1 \wedge \forall q(q \neq p \rightarrow$ extension of $q=0)]$

Note that in the answer, *B* makes use of the same world knowledge: he knows the modifying property *Q*, and he is aware of the presupposition of a unique true proposition. Therefore, *B* can use an overt *to* in the answer.[9]

By the way, note that we are dealing with a focus which is both contrastive, by means of [R] and exhaustive, by means of [F]. Interestingly, the set of contrastive alternatives is not gained by (contextual) listing, but rather by assigning the set of propositions a specific property, e.g. that all propositions in the contrastive set are *surprising*, as exemplified above. Thus, the contrastive set does not even need to be closed, it just needs to be well-defined.

Furthermore, it seems that [R] and [F] are both necessary for *to* to be able to surface. Using only [R] in the example above (and with the appropriate modification of the scenario) would

[8] I use "$\exists\iota$" as 'there is a unique…'.

[9] The answer in (21) could also be used as a rectifying statement. E.g. if *A* says *Imagine what happened! Mary invited her professor to the party,* then *B* can say the answer in (21) if knows that it was not her professor who Mary invited but rather her exboyfriend.

lead to the lack of a factive presupposition, i.e. the speaker would require an information about surprising facts without actually knowing whether there is any such fact present in the context. This reading is unavailable in (21). On the other hand, using only [F] would lead to a presupposition that Mary invited a single person, since by exhaustivity, all other relevant propositions (in the unrestricted set *P*) are presupposed to be false. This presupposition can be satisfied only accidentally (in a situation where all invitations were surprising, i.e. *P=P'*), but it seems that it can never be induced by *to* itself.

In section 4, I will give some further examples of how [R] can operate. In the rest of this section, I provide a few more examples illustrating the necessity of a factive presupposition, i.e. [F].

3.3 More evidence for factivity

We already saw that topicalization does not license *to* because the operator involved is of an anaphoric nature and therefore does not move to SpecFocP. However, we can go a step further here and look what happens in the case of contrastive topicalization. Contrastive topicalization corresponds to a situation with [R] but with no [F], since the assertion contains new information (marked by italics in the examples) and therefore cannot be presupposed. Consider the following examples, contrastive and shift topic respectively (the latter is a modified example from Dotlačil 2006):

(23) A: What about Peter and Mary? Did they like the movie?

B: PETROVI se (***to**) ten film *ne*líbil [, ale Marii *ano*]
Petr refl that the film not.liked but Marie yes
'Well, Peter didn't like the movie [, but Mary did].'

(24) A: Who did Mary kiss?

B: No, NATÁLKA (* **to**) políbila *Honzu*
Well, Natálka that kissed Honza
'Well, (I don't know about Mary, but) Natalia kissed John'

Both sentences above are standard examples of contrastive topicalization and both are ungrammatical with *to.* The explanation offered by the present account is that *to* obligatorily involves [F], and the combination of a factive presupposition with an assertion containing new information (the negation in (23) and the object DP *Honzu* in (24)) is incompatible.

Another piece of evidence for obligatory [F] in *to* comes from a class of rhetoric questions. To get a better grasp of this, let us start with an example. Suppose you were invited for a party by Mary. You consider not going there because you are afraid that there will be some people that you can't stand. However, it is generally known that Mary invites only people who are very likeable. I can try to persuade you to go to the party by saying the following:

(25) (Prosím tě!) Koho nesympatického (***to**) mohla Marie pozvat?!
beg_{1sg} you who not.likeable that could Marie invite
'It's nonsense that Mary invited someone who is not likeable.'

As the English idiomatic translation suggests the question is equivalent to a universal negative statement. More precisely, it denotes a set of propositions which all negate that someone unlikeable {Hugo, Rolph, Andre, …} was invited. It follows that the presence of *to* results in gibberish, since [F], which *to* necessarily involves, presupposes that exactly one affirmative

proposition in the answer set is true. Thus, by using *to* in a rhetoric question of the relevant kind, we arrive at two contradicting statements, hence the unacceptability.[10]

The last piece of evidence supporting the presence of [F], as defined in (20), comes from focalizing quantifiers. It is generally not prohibited to focalize negative, existential, and universal quantifiers. However, quantifiers fail to assert something about a *unique* individual, which is presupposed by means of [F]. As expected, *to* is unavailable in these cases:

(26) NIKDO/NĚKDO/KAŽDÝ (***to**) včera na tu party (ne)přišel.
nobody/somebody/everybody that yesterday to the party (not)came
'(It was) nobody/somebody/everybody (that) came to the party yesterday.'

In this section I argued that *to* realizes two semantic features: [R], which restricts Rooth's *focus semantic value* to a set of propositions which all bear a certain contextual property, and [F], which corresponds to the trigger of a factive presupposition. I illustrated how both [R] and [F] work and then gave three pieces of evidence for the obligatory presence of [F]. The following section deals with the pragmatic range of [R].

4. The pragmatic range of [R]

In the preceding section (around the example (21)), I illustrated how [R] can operate: it takes the denotation of the question, a set of propositions, and returns its subset such that all propositions in the subset have a certain contextual property. Although the application of [R] happens in syntax and respects compositionality, its ultimate meaning depends on context and pragmatics. There are at least three specific applications of [R] which can be subsumed under the present analysis and which deserve a more detailed look: echo questions, questions denoting a set of explanations for a contextually given effect, and last but not least, *wh*-exclamatives.

4.1 Two readings of [R]

Consider the example below.

(27) Co jsi **to** do toho dopisu napsal?
what aux_{2sg} that in the letter wrote
'What did you write in the letter?'

I will first provide a general scenario and then, by its slight modifications, I will illustrate the meanings that the question in (27) can denote. Suppose that you have some problems with your boss (she doesn't want to let you go on holiday, she doesn't want to raise your salary, etc.). We chatted about this in the pub and I advised you to write a letter to your boss's boss about the things that annoy you about your boss—maybe things will get better then.

Now let us come to the first reading of (27), one which resembles an echo-question. Suppose we meet at another occasion and you are telling me that you've finally written the letter. You are a bit excited about it but I'm in a hurry, thinking about something else and not really listening. Then, I can ask (27). The contextual property Q that the application of [R] involves, could be referred to as 'things that have just been said'. The formal representation of the function [R] in this particular case is given below:

(28) $r(P)=P'.\ P' \subseteq P \wedge P=$[[you wrote x in the letter]] $\wedge \exists Q.\ Q=$**things just said'** $\wedge \forall p[p \in P' \rightarrow Q(p)]$

[10] I am grateful to Markus Egg, who brought this case to my attention.

Note that it is most likely that you told me more than just one proposition about what you wrote in the letter. This may appear as a problem for [F], since it presupposes a unique proposition. However, there is nothing in principle against the assumption that the uniqueness presupposition can also target a *set of propositions*. This results in a definite plural proposition. The important thing is that I am not interested in *everything* you wrote in the letter, I only want you to repeat what you just said. Thus, we can modify [F] as follows:

(29) [F]: *Presupposition:* $\exists \iota S[S \in P' \wedge \forall p(p \in S \rightarrow \text{extension of } p=1) \wedge \forall q(q \notin S \rightarrow \text{extension of } q=0)]$

Let us now set the scenario for the second reading of (27). Suppose you indeed wrote the letter as in the previous case. I find this out along with the information that you got fired. Apparently, you wrote something in the letter that offended your boss's boss so much that she decided to fire you. However, I don't know precisely what the thing could be. When I meet you again, I can ask you (27). In this case, the question is understood as requiring an answer, which gives an explanation of you having been fired, i.e. something like 'What did you write in the letter such that you have been fired because of it?'. Technically speaking, the question denotes only answers which are explanations of the observed effect.

(30) $r(P)=P'$. $P' \subseteq P \wedge P=$[[you wrote x in the letter]] $\wedge \exists Q$. $Q=$**explanation of a contextually given effect'** $\wedge \forall p[p \in P' \rightarrow Q(p)]$

It is also clear that the factive presupposition is satified, irrespective of whether the uniqueness presupposition involves a singular proposition or a number of them.

Interestingly, if the situation is such that there was no particular thing in the letter that caused your misfortune and it was just the case that your boss's boss is your boss's lover and she feels extremely touched by any criticism of her, it is possible to answer (27) by saying 'nothing'. Under the view proposed here, this is a completely felicitous answer, corresponding to a presupposition failure: 'I wrote *nothing particular* that (could have) caused my firing.' Importantly, the negative answer does not say that you wrote *nothing at all* in the letter. This follows, since the presupposition targets only the set of answers restricted by [R].

For the sake of completeness, let me add that both interpretations of (27), i.e. (28) and (30), are distinguished by a specific intonation. The former is pronounced with a high pitch over the whole sentence, which slightly falls down on the last syllable. The latter is pronounced more like a normal question: with a low pitch, which rises only at the stressed syllable of the last word (high pitch/pitch accent is marked by capitals). Furthermore, the former but not the latter can include a complementizer-like particle *že*, homophonous with the standard Czech declarative complementizer, and arguably signalling a speech-act presupposition:

(31) a. CO (**ŽE**) JSI **TO** DO TOHO DOPISU NApsal?
what comp aux_{2sg} that in the letter wrote
'What did (you say) you write/wrote in the letter?'

b. Co (***že**) jsi **to** do toho dopisu NApsal?
what comp aux_{2sg} that in the letter wrote
'What did you write in the letter (such that it caused the observed effect)?'

The following subsection dicusses the last relevant reading of (27)—a *wh*-exclamative.

4.2 The relation between questions and *wh*-exclamatives

Last but not least, *to* can appear in a class of *wh*-exclamatives. Let us set a scenario again. Suppose that you already wrote the letter to your boss's boss but decided to discuss it with me first. I am reading the letter and I can see that you wrote something that will surely cause your firing (say that you know that your boss's boss and your boss are lovers). In such a situation I can pronounce the following exclamation:

(32) (Můj bože!) Co jsi ??(**to**) do toho dopisu napsal?
my god what aux_{2sg} that in the letter wrote
'What did you write in the letter?'

There are two important things to note about (32). First, the sentence takes the form of a *wh*-question. Second, *to* is almost obligatory. Let us now see how the present analysis accounts for these two facts, the former of which holds for many languages. We have been assuming a theory where questions denote a set of answers, a focus semantic value in Rooth's terms. In order to account for the behavior of *to*, I proposed that *wh*-questions can contain a covert modifier restricting the range of answers by taking only those that have a certain, contextually determined property. Returning back to the now familiar scenario, the relevant contextual property of the propositions may be 'crazy, plausible to cause problems, etc.'.

(33) $r(P)=P'.\ P' \subseteq P \wedge P=$[[you wrote x in the letter]] $\wedge \exists Q.\ Q=$**plausible to cause problems'** $\wedge \forall p[p \in P' \rightarrow Q(p)]$

Now, the crucial difference between a question and an exclamation is in the type of the factive operator. In the case of interrogatives, it presupposes the existence of (a) unique true proposition(s) (it is like a definite), whereas in the case of exclamatives, it presupposes that *all* the relevant propositions are true (it is a universal).

(34) $\forall p\ [p \in P' \rightarrow$ the extension of $p=1]$

Consequently, exclamations of this type are not contrastive: there are no relevant propositions in *P'* that are false and an exclamation is therefore a form of a universal statement.[11] The motivation behind using a question/exclamative to express this kind of universal statement probably lies in pragmatics: it seems that an exclamation like (32) keeps a flavor of interrogative force, namely an aspect of wondering, which is desirable in the given context.

To sum up, I argue that (non-scalar) *wh*-exclamatives are interrogatives which leave no "open space" for answers, since all the potential answers are presupposed to be true.

The intimate relation between questions and exclamations has, of course, not gone unnoticed. There are a number of analyses of exclamations which are based on interrogative semantics, e.g. Zanuttini and Portner (2003), to name a recent one. Interestingly, the findings of the present paper suggest a more fine-grained relation between the two: exclamations are close relatives of questions with a factive operator.[12]

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[11] As far as I can see, this is straightforwardly applicable only to non-scalar exclamatives. The kind of exclamatives mostly considered involves a scale/degree quantification, e.g. *How beautiful you are today!* seems to denote the proposition where the *wh*-word denotes a maximal degree: 'you are beautiful to a greatest degree today', cf. Zanuttini and Portner (2003) or Rett (2007). It is plausible that the kind of quantification involved is derivative from the semantic type of the *wh*-word.

[12] This class of interrogatives, discussed extensively in this paper, is not recongnized by Zanuttini and Portner at all. Actually, their analysis wrongly predicts that every question with a factive operator is an exclamative.

5. The relation of *to* to its demonstrative kin

Before we come to the conclusion, let us comment on the relation of the invariable *to* to its demonstrative kin *to* 'this/that'. I believe that the analysis of *to* presented here gives us an important insight concerning this relation. Apparently, the Czech invariable *to* bears not only a morphological, but also an intimate *semantic* relation to the demonstrative/definite determiner. First, both presuppose the existence of a unique individual belonging to the set denoted by its complement (the import of [F]). Second, both restrict the denotation of its complement by adding a certain, contextually given property (the import of [R]). As for the latter claim, note that the English definite article has been argued to involve an implicit (contextual) restriction on its complement noun (*the man* denotes e.g. *the man that we met yesterday*). In some cases, this restriction must be present overtly (*I did in the *(usual) way*). Similarly, the demonstrative *that* has been argued to be composed of a definite article a locative restriction, i.e. 'the+there', so *that man* means 'the man there'. It is precisely in this sense that the focus particle *to* presupposes a (propositional) restriction. Thus, the only difference between the nominal and the propositional *to* is that one relates to a set of individuals, expressed by a noun, and the other relates to a set of propositions, expressed by an open proposition (an IP which contains a variable). The former relation is accompanied (in Slavic) by phi-feature agreement, whose absence does not seem surprising in the latter case (a proposition bears no phi-features).

This neat correlation is slightly blurred by the fact that the Polish counterpart of the Czech invariable *to* functions as a Topic marker (Cegłowski and Tajsner 2006), a function virtually inverse to a Focus marker:

(35) Janka **to** Ania spotkała v kinie
Janek that Ania met in cinema
'As for Janek, Ania met him in the cinema'
(Cegłowski and Tajsner 2006: section 2)

How can this apparent paradox be resolved? Note that definite articles/determiners, apart from modifying their NP complement, can also function in a discourse anaphoric manner, i.e. they may relate to a discourse referent. I believe that this is precisely the function that the Polish *to* takes: being a Topic head (as Cegłowski and Tajsner argue), it marks its specifier as being topical, i.e. discourse anaphoric.

6. Conclusion

In this paper, I argued that the behavior of the demonstrative-like invariable morpheme *to* 'that' in Czech *wh*-questions and focus fronting cases matches what we expect from a Focus head, given the framework of Rizzi (1997). In section 3, I went further and identified the Czech Focus head with two semantic functions: a presupposition-trigger [F] and an answer-space-restrictor [R]. In section 4, the discussion led us to an appealing and fairly explicit view of the relation between questions and *wh*-exclamations. This was achieved by using two well-grounded ingredients: a standard question/focus semantics and the two operators proposed here on independent grounds. The minimal change that I had to assume is a universal factive operator in exclamations, as opposed to a definite one in questions.

Finally, I commented on the relation of information structural heads to their nominal demonstrative kins. I concluded that there is a deeper semantic reason why Foc and Top can take the morphological shape of demonstrative determiners. This finding becomes even more interesting in the light of a more general fact, namely that most European languages use pronominal morphology for expressing complementizers (i.e. heads in the left periphery). In this respect, the present study can be seen as a contribution to our understanding of the parallelism between nominal and verbal structures.

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