Resumption in relative clauses between syntax and processing
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1 Introduction One of the main ongoing debates in linguistics concerns the relationship between the roles that grammatical constraints and non-grammar-specific, processing considerations play in explaining language phenomena (see for instance the discussion between Sprouse et al. (2012) and Hofmeister et al. (2012) on the source of island effects). This paper contributes to this central debate by delineating the respective contributions of syntax and processing in the domain of resumption in Slavic relative clauses (RCs). We argue that i) the two (well-known) superficially different relativizing strategies in Slavic (see (1) and (2)) should receive the same underlying syntactic analysis, ii) that an apparent optionality in the use of resumption is not due to processing differences but rather due to differences in the underlying syntax, and iii) that another (hitherto unidentified) type of resumption that arises as a result of processing, non-syntactic constraints should be distinguished.

2 Two Common Strategies The two ways of constructing RCs in Slavic are here illustrated by Slovene examples: RCs can be either introduced by a pronoun (1), or by a complementizer (2), in which case a resumptive clitic pronoun is obligatorily present as well.

(1) Poznam človeka, katerega so iskali.

(2) Poznam človeka, ki so *(ga) iskali.

Both: ‘I know the man they were looking for.’

We argue that resumption in Slovene relative clauses cannot be explained by stipulating the presence of a syntactic island, and that a different mechanism is at work (see below). This follows from the observations that (i) resumption in RCs functions as a primary strategy, not associated with any reduced grammaticality, and (ii) resumption in Slovene in general cannot be used as a last resort to repair illicit extractions. This argument is strengthened by the fact that both types of relative clauses become ungrammatical when we try to relativize out of known island configurations; the presence of resumption in (3) cannot obviate the movement restriction. The same sensitivity is demonstrated for Bosnian/Croatian/Serbian (B/C/S) as well.

(3) *človek, ki je Janez jazen, ker ga je Peter odpustil

(*‘the man that John is angry because Peter fired’)

This sensitivity to islands is taken as an indication that both (1) and (2) involve wh-movement. We argue that in fact the two strategies of relativization share one and the same underlying syntax, and are formed by the relative pronoun moving to [Spec,CP]. The configuration can, however, be spelled out in two different ways, depending on the (essentially free) choice between either the pronoun or the complementizer being overt. Resumption arises at spell-out to ensure the recoverability of the case information pertaining to the relativized position. Case morphology is spelled out on the relative pronoun when overt, giving rise to (1). However, when the complementizer is overt, the pronunciation of the relative pronoun is suppressed (since only one of the two elements can be overt at the same time). In that situation, case is expressed by the resumptive pronoun as a partial spell-out of a lower copy of the relative pronoun instead, resulting in (2).

3 Apparent Optionality of Resumption Apart from RCs that follow the pattern in (1) with a complementizer and a resumptive pronoun, there also exist data displaying an apparent optionality in the use of resumption. Accusative direct object resumption in complementizer-introduced RCs seems optional in B/C/S. The same has been established in descriptions of Polish and Czech RCs (see references in this section). Due to optionality, these examples might at first glance i) lend themselves to a possible processing account where the use of resumption would ostensibly depend on the complexity of the examples and vary across speakers, or ii) necessitate a less strict recoverability requirement. We argue, to the contrary, that complementizer-introduced relatives without resumption are actually a distinct syntactic construction with a derivation different from the one underlying (1) and (2). It is important to note that there are restrictions as to when resumption can be ‘dropped’ concerning animacy; contrast the B/C/S examples from Bošković (2009):

(4) auto što (ga) je kupio

(5) čovjek što *(ga) je sreo

‘the car that he bought’

‘the man that he met’

Such animacy effects have been observed for Czech (cf. Toman 1998) and Polish as well (cf. Broihier 1995; Golab & Friedman 1972). Bošković (2009) notes a further gender distinction (only masculine/neuter head nouns can appear without resumption, cf. (6)), and adds a number distinction (only singular nouns possible without resumption, cf. (7)) that has previously gone unnoticed:

(6) stolica što ??(ju) je kupio

(7) brodovi što su ??(ih) kupili

‘the chair that he bought’

‘the ships that they bought’
To sum up, resumption may be absent when the relativized object is accusative, inanimate, masculine/neuter, and singular. When Slavic declination paradigms are considered, it becomes apparent that objects with these properties carry null morphology (i.e. the accusative is not marked and equals the nominative). We claim that it is this paucity of features requiring overt morphology that allows for an alternative derivation: unlike in (1) and (2), the head noun itself – and not a pronoun – is base-generated inside the RC and moves towards the matrix clause to become the RC head. This raising derivation is limited to nouns with the properties described above since they do not induce a conflict of morphological instructions at spell-out (cf. Gračanin-Yuksel (2010) for a description of further such matching effects in B/C/S). There is no resumption involved because there are no case features that would otherwise be left unpronounced. The analysis predicts reconstruction effects to only be present in complementizer-introduced RCs without resumption, since only there the relative head is related to the RC gap via movement, and this is indeed borne out (cf. Szczegielniak (2004) for Polish).

4 An Extension: Russian The approach can be extended to account for the situation in Russian as well. Complementizer-introduced RCs, which would normally require resumption and are generally available in other Slavic languages, are very restricted in Russian (cf. Golab & Friedman 1972). They are limited to exactly the contexts described in the previous section, where resumption is not obligatory, and only appear without it. Compare the inanimate (8) vs. animate (9) accusative object relativization in Russian:

(8) Eto derevo chto ja videl vchera. this tree that I saw yesterday
(9) ??Eto devushka chto ja videl vchera. this girl that I saw yesterday

‘This is the tree that I saw yesterday.’ ‘This is the girl that I saw yesterday.’

In contrast, pronoun-introduced RCs are widely used. Russian thus has the syntactic construction described in the section above (resulting in (8)), and the common syntactic construction from section 2 as well, but only the first spell-out option (pronoun-introduced RCs) is possible. Clitic pronouns do not exist in Russian. We assume the following: while recoverability of case is a requirement in Russian as well, the resumption mechanism to ensure recoverability is not available (there are no clitics that would serve as resumptive elements in the lexicon). Hence, complementizer-introduced RCs that require resumption are not an option in Russian.

5 Processing-driven Resumption Thus far we have only discussed uses of resumption in relative clauses that are a result of morphosyntactic requirements, and as such absolute in nature. However, resumption driven by processing considerations can be identified as well, its properties contrasting starkly with syntax-driven resumption. As we have seen, the strategy involving a relative pronoun patterns with a gap at the site of relativization (cf. (1)). Using resumption is not accepted in short-distance RCs introduced by a pronoun. However, a broad survey (76 speakers of Slovene, Polish, and B/C/S in total) soliciting judgements on an acceptability scale shows that once the distance between the relativized site and the head of the relative clause is increased by further embeddings, and/or linearly by insertion of adverbs, the use of resumption becomes more and more acceptable, to the point where the mean scores for examples with resumption are not significantly different from those for corresponding examples with gaps. This corroborates individual native speakers’ reports of resumption in those cases being optional:

(10) Poznam človeka, katerega mislim, da (ga) iščejo. know.1sg man.acc which.acc think.1sg that he.acc.el look-for.3pl

‘I know a man who I think they are looking for.’

At the same time, such examples are not considered part of the standard variety of language. Based on i) the non-obligatory nature of such resumption, ii) the fact that it more readily appears in spoken varieties, and iii) the fact that is sensitive to the complexity and length of the dependency, we conclude that this type of resumption (though again involving a partial spell-out of an additional copy) is driven by processing considerations and facilitates the formation of the long-distance relative dependency.

6 Conclusion The present paper connects the dots of disparate and partial empirical observations in the literature, and together with original findings ties them into a coherent account of the rather complex situation concerning resumption patterns in Slavic relative clauses. It teases apart the syntax-driven use of resumption from the processing-driven one, and demonstrates the necessity of maintaining a distinction between the different types.