

## 4. Monoclausal configurations with infinitives in Croatian

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This paper investigates monoclausal properties of configurations with infinitives in Croatian. These configurations are contrasted with biclausal configurations with infinitives embedded by non-restructuring Croatian predicates. Croatian predicates embedding infinitives are first classified into the verbal classes proposed by Landau (2000). Secondly, following Grano's (2015) account of restructuring inspired mostly by Cinque's cartographic approach (2004), three classes of Croatian predicates that participate in monoclausal configurations are identified: modals, aspectuals, and implicatives. These express meanings below Tense in Cinque's hierarchy (1999, 2004, 2006) and, unlike other subject-oriented predicates that can embed infinitives (e.g. desideratives, factives), give rise to monoclausal configurations displaying properties such as preserved synonymy under passivization, matrix licensing of negative polarity items, unavailability of finite complementation, and temporal uniformity.

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### 1. Introduction

The aim of this paper is to investigate monoclausal properties of configurations with infinitives in Croatian. Infinitival complements have generally been studied as complements that participate in biclausal configurations with covert subject in a complement clause. The unexpressed subject (PRO) can depend on the subject of the matrix clause or can be identified as the object of the matrix predicate. These cases are called subject- and object-control respectively, whereby control is intended as the relation between PRO and its antecedent (cf. Landau 2000: 1). In the previous case PRO is co-referential

with the subject of the matrix clause, while in the latter, called object-control, PRO is co-referential with the object.<sup>29</sup>

However, it has been noted that some  $V_{\text{finite}} + V_{\text{non-finite}}$  configurations form a kind of complex predicate in which the infinitive does not have the status of clausal complement. This phenomenon is known under the name of *clause union* (Aissen & Perlmutter 1976; Roussou 2009) or *restructuring* (Rizzi 1976; Cinque 2004, 2006; Wurmbrand 2003; Grano 2015, 2017). An array of different properties can point to monoclausality of these configurations, e.g. clitic climbing (s. Aissen & Perlmutter 1976; Rizzi 1978; Cardinaletti & Shlonsky 2004; Cinque 2004, 2006), long passivization (s. Wurmbrand 2003), exhaustive control, ban on overt embedded subjects, unavailability of finite complementation, “long-distance” licensing of negative indefinites, inverse scope (s. Grano 2015), etc.

Until recently, a restricted number of studies have been devoted to control and restructuring predicates in Croatian.<sup>30</sup> The aim of this paper is to attempt to fill this gap discussing several arguments for a monoclausal approach to certain configurations with infinitives in Croatian.

I expect that some classes of Croatian verbs participate in monoclausal configurations, therefore I aim at identifying and distinguishing them from verbs lacking monoclausal properties, i.e. verbs that can only involve clausal infinitival complements. Based on previous accounts on monoclausal configurations with infinitives, I will apply a set of tests as diagnostics for discerning between those two groups of verbal classes. I will observe that Croatian modals (e.g. *moći* ‘can’, *morati* ‘must’, deontic *imati* ‘have to’), aspectuals (e.g. *početi* ‘start’, *završiti* ‘end’, *nastaviti* ‘continue’) and implicatives (e.g. *uspjeti* ‘manage’, *izbjeći* ‘avoid’) – unlike other subject-oriented predicates<sup>31</sup> that embed infinitives, subject-control predicates (e.g. *odlučiti* ‘decide’, *obećati* ‘promise’, *ponuditi se* ‘offer’, *očekivati* ‘expect’) – give rise to monoclausal configurations displaying properties such as preserved

<sup>29</sup> Object control verbs in Croatian prefer finite complements introduced by *da* ‘that’, therefore object control constructions are rather rare (Batinić Angster 2019: 283). Object control verbs taking an infinitive are for example the Spanish “manipulation” verbs taken into consideration by Mikelenić & Bezljaj (*this volume*, Chapter 8).

<sup>30</sup> See below section 2.

<sup>31</sup> As a neutral label grouping together subject-control verbs and restructuring but subject-control-like verbs I use “subject-oriented predicates”. This allows me to exclude object-control and object-control-like verbs (s. Batinić Angster 2019).

synonymy under passivization, matrix licensing of negative polarity items (NPI), unavailability of finite complementation and of tense-mismatches.

## 2. Monoclausal $V_{\text{finite}} + V_{\text{non-finite}}$ configurations

One of the most often cited properties pointing to the monoclausality of apparently biclausal  $V_{\text{finite}} + V_{\text{non-finite}}$  configurations is the availability of clitic climbing (also known as scrambling) – a phenomenon in which «a clitic associated with an embedded verb is actually pronounced on the higher verb» (Krapova & Cinque 2018: 151). It has been observed that in some Romance languages object clitics can climb out of the non-finite clause only in some environments. In Italian for example object clitics are placed to the left of a finite verb or to the right of a non-finite verb and they can climb from an embedded non-finite verb to the matrix verb only in case it is a modal, aspectual, or motion verb, as noticed by Rizzi (1976: 4):

- (1) a. *Gianni deve/può/comincia a/viene a leggerlo.*  
 b. *Gianni lo deve/può/comincia a/viene a leggere.*  
 ‘Gianni must/can/begins to/comes to read it.’

While (2a) and (2b) are both well-formed, just like the (3a), the same does not hold in the sentence with verb *detestare* ‘detest’ (3b) as it does not permit the clitic climbing (Grano 2015: 11-12).

- (2) a. *Gianni cominciava a vederlo.*  
 b. *Gianni lo cominciava a vedere.*  
 ‘Gianni was beginning it to see it.’
- (3) a. *Gianni detestava vederlo.*  
 b. \**Gianni lo detestava vedere.*  
 ‘Gianni hated seeing it.’

At the same time, in Italian clitic climbing is restricted to non-finite complements as it is unavailable in the environment with a finite complement. In German, for example, the phenomenon known as long passivization is available only with some verbs, such as *versuchen* ‘to try’, but not with *planen* ‘to plan’ (Wurmbrand 2003: 19, 36):

- (4) *dass der Traktor zu reparieren versucht wurde*  
 that the tractor-NOM to repair tried was  
 ‘that they tried to repair the tractor’
- (5) \**dass der Traktor zu reparieren geplant wurde*  
 that the tractor-NOM to repair planned was  
 ‘that they planned to repair the tractor’

Numerous properties other than these have been associated with monoclausal configurations containing infinitives (s. above section 1). Albeit many of these properties are language-specific, and sometimes even speaker-specific (s. Wurmbrand 2003: 7; Cinque 2006: 44–45), it seems that a core class of verbs embedding infinitives in which monoclausal properties or restructuring effects are available can be identified in a cross-linguistically valid way, comprising modal, aspectual and motion verbs (Krapova & Cinque 2018), and beside the aforementioned, also causative (Wurmbrand 2003) and implicative verbs (Grano 2015). On the other hand, predicates without restructuring effects are found among factive and propositional verbs (e.g. *let*, *claim*, *forget*, *manage*, *decide*, *plan*), as Wurmbrand (2003: 6–7) notes.

I will now survey some of the contributions that have been made in the study of verbs that instantiate infinitival and restructuring configurations in Croatian and Serbian.<sup>32</sup> In the nineties, Progovac (1993, 1996) discusses the cases of transparency effects in Serbian obtained with modals such as *morati* ‘must’, which – as opposed to *kazati* ‘tell’ or *tvrditi* ‘claim’ – allows *ni*-NPI licensing and clitic climbing out of the embedded finite complement clause. She thus applies observations on restructuring on finite embedded contexts as well. Bošković (2001) considers restructuring to the extent of its interplay with clitic climbing in his work on clitics in S/C. Stjepanović (2004) investigates the phenomenon of clitic climbing both in non-finite context and in what appears to be a finite embedded *da*-complement clause triggered by verbs *morati* ‘must’ or *željeti* ‘want’.<sup>33</sup> The relation between restructuring

<sup>32</sup> Different authors use different labels for referring to Croatian, Serbian, and Bosnian. In the abbreviations used in the text – such as S/C or B/C/S – B stands for Bosnian, C for Croatian, and S for Serbian.

<sup>33</sup> Regarding the nature of restructuring, Bošković (2001) argued for the optionality of restructuring. Stjepanović (2004) on the other hand advocates the obligatoriness of restructuring with infinitives, whereas its status in finite environments depends on the choice of the matrix predicate.

and clitic climbing in Serbian was taken into consideration by other scholars as well, such as Aljović (2005) and Cinque (2006: 20–21). Recently a group of researchers investigated the phenomenon of clitic climbing in B/C/S in a series of corpus-based studies (Jurkiewicz-Rohrbacher *et al.* 2017; Hansen *et al.* 2018; Kolaković *et al.* 2019; Kolaković, Jurkiewicz-Rohrbacher *et al.* 2022). Although their focus of investigation led them to mention the raising-control dichotomy, the discussion of the two types of matrix predicates was marginal compared to their aim at identifying distributional properties of clitics and constraints on clitic climbing.<sup>34</sup> It is worth mentioning that Gračanin-Yukseš (2019) discusses the availability of clitic climbing in Croatian subject-control constructions and its unavailability in object-control constructions. She claims that object-control and subject-control constructions differ in their syntactic structure: while the embedded non-finite clause in an object-control configuration are structurally richer CPs, subject-control configurations lack the CP projection which is why clitics can climb in such environment. This leads Gračanin-Yukseš (2019) to conclude that subject-control configurations involve TPs or vPs.

Turning the attention to the properties of verbs embedding infinitives in general, it is worth mentioning other studies as well. Mihaljević (2009: 326–336) in an analysis of Croatian perception verbs such as *gledati* ‘watch’, *čuti* ‘hear’, *vidjeti* ‘see’, *slušati* ‘listen’ states that they do not introduce clausal complements for a number of reasons: they cannot be interrogative while at the same time direct questions are grammatical, they cannot be negated or modified with a temporal adverb with the temporal specification different from those expressed in a matrix clause. Gnjatović & Matasović (2013) examine control constructions offering a well-founded classification and description of Croatian control verbs, without including observations on restructuring effects. Batinić Angster (2019) considers the apparently long-distance bound possessive-reflexive anaphor *svoj* in the context of object-oriented permissive predicates that take infinitives, such as *dopustiti* and *pustiti* ‘allow, let’, *ostaviti* ‘leave’, *dati* ‘allow, let’, *dozvoliti* ‘permit’. The author shows their restructuring nature along with a list of other verbs categorized as follows: modals (*smjeti* ‘be allowed to’, *moći* ‘can’, *morati* ‘must’, *trebati* ‘need’, *imati* ‘have to, must’, *htjeti* ‘want’), some conative verbs (*uspjeti*

<sup>34</sup> It is worth mentioning, however, that they found out clitic climbing is not obligatory out of stacked infinitives, i.e. multiply embedded infinitives, or that they observed there could be differences related to the presence or absence of reflexive marker on verbs.

‘manage’, *nastojati* ‘try’, *pokušati* ‘try’, *usuditi se* ‘dare’, *izbjeći* ‘avoid’), verbs expressing different cognitive processes (*željeti* ‘want’, *voljeti* ‘love’, *mrziti* ‘hate’, *znati* ‘know’, *misliti* ‘think’, *nadati se* ‘hope’, *bojati se* ‘(be) afraid’), aspectuals (*početi* ‘start’, *nastaviti* ‘continue’, *završiti* ‘finish’, *stati* ‘stop’), some motion verbs (*ići* ‘go’, *doći* ‘come’). Recently, Croatian and Serbian infinitival and non-finite-like contexts were discussed in a number of studies on restructuring in a cross-linguistic perspective, on complementation and finiteness (Wurmbrand 2016; Stjepanović 2004; Todorović & Wurmbrand 2016; Wurmbrand *et al.* 2020) or in studies dedicated to certain classes of verbs that introduce infinitives (e.g. Veselinović 2017 on modals).

It is important to note that not all of the observations about restructuring considered at the beginning of this survey apply to Croatian. For example, the phenomenon of clitic climbing out of the finite complement clause embedded by a modal verb – therefore restructuring in finite contexts or «restructuring despite finiteness» (Wurmbrand 2016) – cannot be evaluated in Croatian when considering clausal complements to modals such as *morati* ‘must’, because in such environment a non-finite complement is the only one available (at least as far as my competence of native speaker is concerned).<sup>35</sup> In fact, Wurmbrand *et al.* (2020), Wurmbrand & Lohninger (2023) have already noted that the availability of finite and non-finite complements differs in Croatian and Serbian. They observed microparametric variation in South Slavic languages (Bosnian, Serbian, Croatian, and Slovenian) regarding the availability of infinitival complements and claimed that infinitives as complements seem to be more common and frequent in Croatian than in Serbian. Therefore, it is worth dedicating some attention to the properties of infinitival complements that characterize Croatian alone.

Before considering Croatian subject-oriented configurations with infinitives more in depth, I will introduce few important aspects of restructuring and define the theoretical approach to restructuring that influenced my discussion.

<sup>35</sup> A worthwhile remark about Croatian modals concerns their ability to introduce finite when it is in its impersonal form in the present tense and with an epistemic reading:

<i>Mora</i>	<i>da</i>	<i>su</i>	<i>uranili.</i>
must.PRS.3SG	that	be.PRS.3PL	come_early.PTCP.ACT.M.PL

‘It must be that they have come earlier.’

### 3. Theoretical background: verbal meaning and monoclausal effects

Two main strands of theoretical approaches to monoclausal  $V_{\text{finite}} + V_{\text{non-finite}}$  configurations may be identified in generative grammar, namely functional and lexical restructuring. The proponents of the so-called functional approach (e.g. Cinque 2004, 2006) consider the verb introducing the infinitive to be a functional head having the latter as the main predicate of the clause. On the contrary, the proponents of an alternative view (e.g. Wurmbrand 2003, 2004) argue for a dominantly lexical approach to restructuring, claiming that predicates embedding infinitives are mostly lexical verbs that select non-finite VP complements. In what follows I will refer mainly to works representing the functional perspective, because these contributions to the study of restructuring guided my analysis of Croatian verbs selecting infinitives.

Restructuring effects are restricted only to some verbs ( $V_{\text{finite}}$  in  $V_{\text{finite}} + V_{\text{non-finite}}$  configurations), but the reason why it is so is still a matter of discussion. Grano (2015), inspired by works by Wurmbrand (1998, 2001) and Cinque (2004), highlights two correlations that seem to be relevant for explaining that restriction: the one between restructuring and the partial/exhaustive control split (first noted by Wurmbrand 1998) and the correlation between restructuring and Cinque's (2004) IP hierarchy of inflectional heads.<sup>36</sup>

Following Wurmbrand's (2001, 2003) survey of infinitives in five languages (German, Dutch, Italian, Spanish, Japanese), Grano (2015) classifies the predicates she identified as restructuring into the semantic classes proposed by Landau (2000). Grano's (2015) integration of their works – reported in Figure 1 – aims at distinguishing between verbs that participate in exhaustive control from those that participate in partial control. The scholar realizes that the vast majority of exhaustive control predicates tends to restructure, whereas partial control predicates are

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<sup>36</sup> As for the nature of restructuring, according to Cinque (2004), monoclausality is the defining property of restructuring predicates that remains stable throughout the derivation. Albeit Cinque (2004) and Grano (2015) agree in that restructuring classes of verbs realize functional heads, Grano (2015, 2017) believes their functional nature is derived and originally lexical taking as evidence that a grammaticalization process starts from lexical and develops into functional.

generally non-restructuring predicates. As a result, Grano (2015: 15) posits a generalization according to which exhaustive verbs are restructuring, while the partial control verbs are not.<sup>37</sup>

Table 1. Grano's (2015: 15) integration of Wurmbrand's (2001) classification of restructuring predicates and Landau's (2000) exhaustive control (EC) and partial control (PC) verb classes

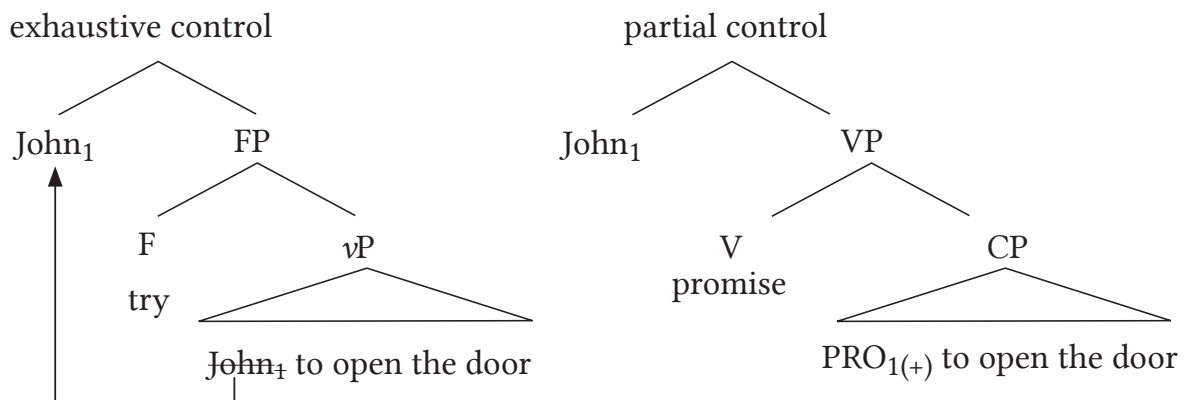
Landau's classes	Wurmbrand's predicates	Restructuring status (Wurmbrand 2001: 342)				
		German	Dutch	Italian	Spanish	Japanese
<b>EC: aspectual</b>	<i>begin</i>	+	+	+	+	+
	<i>continue</i>	N/A	N/A	+	+	+
	<i>start</i>	N/A	N/A	+	+	+
	<i>finish, stop</i>	N/A	N/A	+	+	+
	<i>be about to</i>	N/A	N/A	+	+	+
	<i>(be) used to</i>	+	+	+	+	N/A
<b>EC: modal</b>	<i>can, may</i>	+	+	+	+	+
	<i>must, need</i>	+	+	+	+	+
	<i>know how</i>	N/A	+	+	+	N/A
	other (semi-)modals	+	+	+	+	+
<b>EC: implicative</b>	<i>manage/succeed</i>	+	+	±	±	+
	<i>forget</i>	+	+	±	±	+
	<i>fail</i>	+	N/A	N/A	N/A	+
	<i>dare</i>	+	+	±	-	N/A
<b>EC: (other)</b>	<i>try</i>	+	+	±	±	±
<b>PC: desiderative</b>	<i>want</i>	+	+	+	+	+
	<i>intend</i> (≈ <i>want, mean</i> )	+	+	±	±	N/A
	<i>refuse, reject</i>	-	+	-	-	-
	<i>prefer</i>	-	-	-	-	-
	<i>decide, choose</i>	-	-	-	-	-
	<i>plan</i>	-	-	-	-	-
	<i>offer</i>	-	-	-	-	-
	<i>wish</i>	-	-	-	-	-
	<i>propose</i>	-	-	-	-	-
<b>PC: factive</b>	factive	-	-	-	-	-
<b>PC: propositional</b>	propositional	-	-	-	-	-

<sup>37</sup> Grano (2015) at the same time, however, admits that some partial control predicates tend to restructure, namely desiderative verbs, and that some exhaustive verbs, such as weak implicatives, may fail to restructure.

In Table 1 the abbreviation N/A following some predicates means that it was not possible to apply the classification to them ('not applicable'). The sign  $\pm$  indicates that the verb in question is subject to inter-speaker variation or that its behaviour is not uniform.

The exhaustive control constructions, as Grano (2015) claims, have monoclausal syntax whereby a predicate takes a  $vP$  complement with subject raising – which explains why restructuring effects are available only with those predicates. On the other hand, the structure of partial control constructions is biclausal in that partial control verbs have true control status instantiating a CP complement with PRO as a subject. The difference in the two structures is illustrated below in Figure 1.

Figure 1. The structures instantiated by a restructuring verb *try* and a non-restructuring *promise* (Grano 2015: 17)



Cinque's (2004, 2006) account of restructuring predicates is outlined in his cartography research programme. He observes that the ordering of restructuring predicates is fixed just like the ordering of inflectional morphemes and adverbs (proposed in Cinque 1999) and claims that this is a consequence of them being realization of functional heads in the inflectional layer of the clause. Cinque (2004, 2006: 12) proposes an IP hierarchy that constitutes a cross-linguistically valid functional portion of the clause, an excerpt of which is reported in Krapova & Cinque (2018: 11), and in (6).<sup>38</sup>

<sup>38</sup> Combining the hierarchy proposed by Cinque (1999: 106) and a portion of it laid out in Cinque (2006: 12), the order of all the relevant functional heads is as follows: MoodP<sub>act</sub> > MoodP<sub>evaluative</sub> > MoodP<sub>evidential</sub> > ModP<sub>epistemic</sub> > TP(Past) > TP(Future) > MoodP<sub>speech</sub> > ModP<sub>necessity</sub> > ModP<sub>possibility</sub> > ModP<sub>alethic</sub> > AspP<sub>habitual</sub> > Asp<sub>repetitive</sub> > AspP<sub>frequentative</sub> > ModP<sub>volitional</sub> > AspP<sub>celerative</sub> > TP(Anterior) > AspP<sub>terminative</sub> > AspP<sub>continuative</sub> > AspP<sub>retrospective</sub> > AspP<sub>proximative</sub> > AspP<sub>durative</sub> > AspP<sub>generic/progressive</sub> > AspP<sub>prospective</sub> > ModP<sub>obligation</sub> > ModP<sub>permission/ability</sub> > AspP<sub>completive</sub> > VoiceP > AspP<sub>celerative(II)</sub> > AspP<sub>repetitive(II)</sub> > AspP<sub>frequentative(II)</sub>.



Cinque head	Corresponding predicates	Restructuring status
Asp <sub>inceptive</sub>	<i>to start</i>	+
Mod <sub>obligation</sub>	<i>have, must</i>	+
Mod <sub>ability</sub>	<i>can, be able</i>	+
Asp <sub>frustrative</sub>	<i>forget</i>	%
Asp <sub>success</sub>	<i>manage</i>	%
Mod <sub>permission</sub>	<i>can, may</i>	+
Asp <sub>conative</sub>	<i>try</i>	%
Asp <sub>completive</sub>	<i>finish</i>	+

The table shows that the meanings of predicates that participate in monoclausal configurations correspond to heads below Tense on the functional spine of the clause proposed by Cinque (2004, 2006). This leads Grano (2015: 62) to the hypothesis in (7):

- (7) **Restructuring hypothesis (final)**: A verb *V* restructures just in case the meaning of *V* is subsumed by the meaning of an inflectional-layer functional head *F*, and either *F* is below Tense *or* *V* is non-subject-oriented.

Above Tense, predicates that lack restructuring status are listed, and here we can find predicates with the following meanings: speech act, evaluative, evidential, epistemic. In conclusion, we can observe that the functions matrix verbs realize, i.e. their meanings, correspond to specific syntactic properties of the configurations in which they participate. In other words, the presence or absence of monoclausal effects in a configuration depends on the choice of the matrix predicate, as cross-linguistic evidence suggests.

#### 4. Monoclausal $V_{\text{finite}} + V_{\text{non-finite}}$ configurations in Croatian

The monoclausal character of  $V_{\text{finite}} + V_{\text{non-finite}}$  configurations, signalled by the presence of transparency effects, is related to a particular functional notion expressed by a finite verb that introduces the non-finite one. It should be noted that Croatian infinitives are bare infinitives (e.g. *moram ići* ‘I must go, I have to go’), with few exceptions (s. below interrogative verbs). Before considering arguments for a monoclausal approach to certain configurations with infinitives in Croatian, I will classify Croatian subject-oriented verbs.

## 4.1. Croatian subject-oriented predicates with infinitives: classification

Croatian predicates embedding infinitive can be classified into six out of seven semantic classes proposed by Landau (2000: 38). See in Table 3 a tentative classification of Croatian subject-oriented predicates selecting infinitives (with the exception of propositionals, see below).<sup>40</sup>

Table 3. Croatian subject-oriented predicates embedding infinitives classified into Landau's (2000) classes

Landau's (2000) classes	Corresponding verbs in Croatian
<b>modals</b>	<i>moći</i> 'can', <i>morati</i> 'must', <i>trebati</i> 'need', <i>smjeti</i> 'be allowed to', <i>imati</i> 'must, have to'
<b>aspectuals</b>	<i>početi</i> 'start, begin', <i>nastaviti</i> 'continue', <i>završiti</i> 'finish', <i>prestati</i> 'stop'
<b>implicatives</b> <sup>41</sup>	<i>uspjeti</i> 'manage', <i>izbjeći</i> 'avoid', <i>usuditi se</i> 'dare', <i>sjetiti se</i> 'remember', <i>zaboraviti</i> 'forget'
<b>desideratives</b>	<i>odlučiti</i> 'decide', <i>planirati</i> 'plan', <i>obećati</i> 'promise', <i>odbiti</i> 'refuse, reject', <i>željeti</i> 'want', <i>nadati se</i> 'hope', <i>ponuditi se</i> 'offer', <i>bojati se</i> '(be) afraid', <i>namjeravati</i> 'intend', <i>misliti</i> 'mean, intend', <i>odabrati</i> 'choose', <i>težiti</i> 'strive', <i>(biti) spreman</i> '(be) ready'
<b>factives</b>	<i>mrziti</i> 'hate', <i>voljeti</i> 'love, like', <i>(biti) žao</i> '(be) sorry', <i>(biti) drago</i> '(be) glad'
<b>interrogatives</b>	<i>pitati se</i> 'wonder', ask', <i>znati</i> 'know'
<b>propositionals</b> <sup>42</sup>	<i>tvrditi</i> 'claim', <i>izjaviti</i> 'assert, declare', <i>vjerovati</i> 'believe', <i>pretpostavljati</i> 'suppose'

<sup>40</sup> The list of Croatian predicates is not exhaustive, it comprises a selection of members of each class.

<sup>41</sup> Among implicatives Landau (2000: 38) lists *decline*, and *refuse* among desideratives. Since in Croatian a single verb (*odbiti*) corresponds to both of them, I decided not to include it in my survey of Croatian verbs.

<sup>42</sup> The Croatian verb *misliti* in Table 3 is included in the class of desideratives. However, its main meaning corresponds to that of English *think*, a propositional verb in Landau's (2000: 38) classification, embedding a finite complement. That is the reason why I do not list it among propositionals with infinitives. When *misliti* expresses the meaning 'intend' or 'mean', thus belonging to desideratives, it selects a non-finite complement verb.

Modal and aspectual verbs express meanings pertaining to the notions of modality and aspect. More specifically, considering functions in Cinque's (2004) hierarchy of functional heads, modals can express epistemic, deontic or dynamic modality.<sup>43</sup> Epistemic predicates are higher than Tense on the functional spine of the clause, whereas obligation (e.g. *morati* 'must', *trebati* 'need', *imati* 'must, have to'), permission (e.g. *smjeti* 'be allowed to'), and ability (e.g. *moći* 'can') predicates are comprised below Tense in Cinque's hierarchy.

Aspectuals can realize inceptive (e.g. *početi* 'start, begin'), continuative (e.g. *nastaviti* 'continue'), terminative (e.g. *prestati* 'stop'), or completive (e.g. *završiti* 'finish') meanings. All these meanings are listed under Tense.

As for the class of implicative verbs, the truth of their complement is entailed if they are positive (e.g. *uspjeti* 'manage', *izbjeći* 'manage not to do'), whereas it is denied in case of negative or negated implicatives (e.g. *ne uspjeti* 'fail, not manage') (cf. Karttunen 1971; Landau 2000: 37; Grano 2015: 9). To put it differently – as Landau (2000: 37) clarifies it following Karttunen (1971) – implicatives «presuppose that the truth of the entire sentence is a necessary and sufficient condition for the truth (or falsity) of the complement». Taking into consideration the functions on Cinque's (2004) list, Croatian implicatives such as *uspjeti* and *izbjeći* express success, while some of them express the frustrative function (e.g. *zaboraviti* 'forget'), both listed below Tense. Clearly, verbs such as *sjetiti se* 'remember' and *zaboraviti* 'forget', despite belonging to Landau's (2000) class of implicatives, do not correspond to Cinque's (2004) function success. The class of implicatives in Croatian deserves a more thorough discussion which however goes beyond the scope of this paper. For this reason the following discussion will focus only on verbs *uspjeti* 'manage', *izbjeći* 'avoid' and *usuditi se* 'dare'.

The class of desiderative predicates in Landau's (2000) sense is a heterogeneous class comprising verbs expressing desire such as *željeti* 'want', intention (e.g. *namjeravati* 'intend', *planirati* 'plan', *odlučiti* 'decide').<sup>44</sup> Among these, verbs expressing volition (*željeti* 'want'), occupy a

<sup>43</sup> According to Landau (2000: 37, 60) dynamic modals expressing ability in English are unquestionably control predicates, whereas the others might be raising.

<sup>44</sup> Landau (2000) also includes verbs expressing command within the class of desiderative predicates, but I failed to find Croatian verbs expressing that meaning which are able to embed a non-finite complement and in which the implicit subject is coreferential with the matrix subject.

position below Tense in Cinque's (2004) terms, whereas those with speech act function (e.g. *obećati* 'promise') are listed above Tense.

Both positive and negated factives embed complements whose truth is presupposed (Kiparsky & Kiparsky 1970; Landau 2000: 37–38; Grano 2015: 9). Some of them are emotive factives (e.g. (*biti*) *žao* '(be) sorry') expressing the speaker's «subjective value of a proposition rather than knowledge about it or its truth value» (Kiparsky & Kiparsky 1970: 169). According to Cinque's (2004) IP hierarchy emotive factives are evaluative and as such precede Tense.

Croatian interrogatives embedding non-finite complements such as *pitati se* 'wonder' introduce interrogative complements mostly via the complementizer *kako* 'how'. They can also have other forms of interrogative complement clause characterized by the presence of the interrogative particle *li* introduced by *da* 'that'. In Cinque's (2004) IP hierarchy these realize the epistemic function.

As epistemic or declarative in nature (Landau 2000: 37), propositional predicates introduce complements whose «truth or falsity can be predicated», as Grano (2015: 9) states, exemplifying it with the following sentence: *John claimed to have solved the problem, which was true*. They introduce an infinitive in English. However, Croatian propositional verbs embed almost exclusively finite complements. Therefore, the list of Croatian propositional matrix predicates is highlighted in grey in Table 3 and they will not be considered any further.

#### 4.2. Croatian subject-oriented predicates with infinitives: monoclausal-type vs. biclausal-type

Assuming that the availability of restructuring effects is related to the meaning of the verb that selects an infinitive and taking Grano's (2015) observations presented in section 3 as valid, the following hypothesis can be made:

- (8) In Croatian monoclausal properties will be obtained with infinitives selected by modals, aspectuals and implicatives.

These three classes of predicates encode meanings below Tense in Cinque's (2004) hierarchy and, according to Landau (2000), in English they belong to the category of exhaustive control verbs. Desiderative verbs expressing volition, such as *željeti* 'want', although occupying a lower position with

respect to Tense, will be left aside since they are not at the same time exhaustive control (EC) predicates. As Landau (2000: 5) put it, the «*want*-type complements fall under PC [partial control]». <sup>45</sup>

Therefore, in Table 4, in which Landau's classes are crossed with Cinque's (2004, 2006) functions expressed by the members of particular classes, I distinguish between monoclausal-type and biclausal-type predicates in Croatian. On the one hand, modals, aspectuals, and implicatives should share monoclausal properties, while on the other hand, the remaining subject-oriented predicates should lack them. This latter group should include both desideratives and factives listed in Table 3. Propositionals and interrogatives are no longer included because, as seen in 4.1 above, very few of them can embed non-finite complements in Croatian.

Table 4. Croatian subject-oriented predicates with infinitives: monoclausal-type vs. biclausal-type

Landau's (2000) classes	Cinque's (2004, 2006) functions	Predicates with infinitives in Croatian	Configuration
modals	obligation, ability, permission	<i>moći</i> 'can', <i>morati</i> 'must', <i>trebati</i> 'need', <i>smjeti</i> 'be allowed to', <i>imati</i> 'must, have to'	monoclausal-type
aspectuals	inceptive, continuative, terminative, completive	<i>početi</i> 'start', begin', <i>nastaviti</i> 'continue', <i>završiti</i> 'finish', <i>prestati</i> 'stop'	
implicatives	success	<i>uspjeti</i> 'manage', <i>izbjeći</i> 'avoid', <i>usuditi se</i> 'dare'	
other subject-oriented predicates: desideratives, factives	volitional, evaluative, speech act	<i>odlučiti</i> 'decide', <i>planirati</i> 'plan', <i>obećati</i> 'promise', <i>željeti</i> 'want', <i>nadati se</i> 'hope', <i>ponuditi se</i> 'offer', <i>bojati se</i> 'afraid', <i>namjeravati</i> 'intend', <i>misliti</i> 'mean, intend', <i>odabrati</i> 'choose', <i>mrziti</i> 'hate', <i>voljeti</i> 'love, like', etc.	biclausal-type

In 4.3. I will continue to pursue the distinction between these two types of predicates: modals, aspectuals, and implicatives represent the monoclausal-

<sup>45</sup> The distinction between partial and exhaustive control will be considered in 4.3.1.

type, whereas the biclausal-type is represented by a rather heterogeneous group of verbs that can be classified as desideratives and factives (Landau 2000) or as verbs denoting volitional, evaluative and speech act functions in Cinque's (2015) sense.<sup>46</sup> It can also be observed that the biclausal-type predicates express a range of cognitive processes. In fact, some of them are often classified as attitude or attitude-ascribing predicates, e.g. mental attitude predicates, such as *željeti* 'want', *obećati* 'promise' (s. Pearson 2012, 2016). Sometimes I will refer to the biclausal type of predicates as *decide*-type predicates following Wurmbrand (2003): *odlučiti* 'decide' is an exemplary member of the class and a rather stable one in its restructuring nature.

### 4.3. Properties of monoclausal configurations with infinitives in Croatian

As stated in 4.2, I expect that monoclausal properties of configurations with infinitives in Croatian will be obtained with three classes of Croatian verbs: modals, aspectuals, and implicative. In what follows I aim at verifying this expectation, i.e. at testing the hypothesis given in (8). I will analyse the members of the three classes given in Table 4 by applying several tests for monoclausality to examples built and judged based on my intuitions. I will compare non-finite configurations taken by the – presumably restructuring – classes of verbs with the ones embedded by other – presumably non-restructuring – subject-oriented verbs. I will first consider the split between partial and exhaustive control, showing that the monoclausal-type verbs do not admit semantic mismatches between the matrix subject and the understood subject of the embedded predicate, thus exhibiting a property of exhaustive control verbs. I will then show that these configurations display other relevant properties such as preserved synonymy under passivization, matrix licensing of negative polarity items, unavailability of finite complementation and, finally, temporal uniformity. The latter

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<sup>46</sup> Beside the one I follow in this paper, there is another influential approach recently proposed, i.e. the three-way classification in attitude, *irrealis* and tenseless or in proposition, event and situation complements (see e.g. Wurmbrand *et al.* 2020; Kovač *et al.* 2022; Wurmbrand & Lohninger, 2023). One of the aspects in which this approach significantly diverges from the position taken here is reflected in conceiving of the distinction between monoclausal and biclausal properties of complex structures as a scale rather than a binary opposition.

property regards the unavailability of tense-mismatches between matrix and embedded event descriptions and the availability of simultaneously interpreted event descriptions.

#### 4.3.1. Exhaustive control: unavailability of semantic mismatches

The bipartition of subject control in exhaustive (EC) and partial control (PC) is acknowledged among researchers of non-finite complementation. One of the aspects in which EC and PC differ is related to the identity relation between the controller and the controlee. In case of PC, the embedded non-finite predicate can be semantically plural notwithstanding the presence of syntactically singular subject in the matrix clause. In other words, in PC structures mismatches in semantic plurality are allowed since PRO can appear with a collective reading being thus incompatible with a syntactically singular matrix subject (cf. Grano 2015: 8–9; Pitteroff *et al.* 2017: 141–143).

Consider the difference between (9) and (10) (Pitteroff *et al.* 2017: 141–143).

- (9) *John<sub>i</sub> wanted/preferred PRO<sub>i+</sub> to gather at six.*      PC  
 (10) \**John<sub>i</sub> tried/managed PRO<sub>i+</sub> to gather at six.*      EC

When the matrix subject is singular, lexically collective predicates such as *gather* are disallowed with *try* and *manage* as matrix predicates, while perfectly acceptable if introduced by *want* and *prefer*. The same can be observed when the collectivizer *together* is placed in a complement clause (Landau 2000: 44–45): whereas (11) and (12) are acceptable, the same cannot be claimed for (13) (Grano 2015: 9).

- (11) *John claimed/wanted to (have) solved the problem (together).*      PC  
 (12) *John enjoyed solving the problem (together).*      PC  
 (13) *John began/had to/managed to solve the problem (\*together).*      EC

This split is tied to the choice of the matrix predicate, which was noted by Landau (2000). Propositional, desiderative, factive, and interrogative predicates are predicate classes that tend to allow partial control. Predicates that do not allow it are modals, aspectuals, and implicatives.<sup>47</sup>

<sup>47</sup> See Landau (2000) and Grano (2015). However, as reported by various linguists and experimental evidence (e.g. White & Grano 2014; Pitteroff *et al.* 2017) the availability of PC or EC readings is subject both to cross-linguistic and intra-linguistic variation.

The correlation between the choice of the predicate and the cited effects is confirmed by Croatian predicates as well. Modals, aspectuals and implicatives disallow mismatches in semantic plurality, that is they disallow partial control readings, which can be observed in the contrast between (14a) and (14b).

- (14) a. \**On se morao<sub>mod</sub>/uspio<sub>impl</sub> PRO<sub>i+</sub> naći | počeo<sub>asp</sub> PRO<sub>i+</sub> nalaziti u šest.*  
 ‘He had/managed to meet<sub>pfv</sub> | started to meet<sub>ipfv</sub> at six.’  
 b. *On je morao<sub>mod</sub>/uspio<sub>impl</sub> riješiti | počeo<sub>asp</sub> rješavati probleme (\*zajedno).*  
 ‘He had/managed to resolve<sub>pfv</sub> | started to resolve<sub>ipfv</sub> the problems (together).’

Collective readings notwithstanding the presence of a singular matrix subject are allowed only with what, following Wurmbrand (2003), we can call *decide*-type predicates:

- (15) a. *On se odlučio/planirao/želio PRO<sub>i+</sub> naći | mrzio PRO<sub>i+</sub> nalaziti u šest.*  
 ‘He decided/planned/wanted to meet<sub>pfv</sub> | hated to meet<sub>ipfv</sub> at six.’  
 b. *On je odlučio/planirao/želio riješiti | mrzio rješavati probleme zajedno.*  
 ‘He decided/planned/wanted to resolve<sub>pfv</sub> | hated to resolve<sub>ipfv</sub> the problems (together).’

#### 4.3.2. Availability of synonymy under passivization

Availability of synonymy under passivization is known to be a diagnostic for distinguishing raising from control constructions (Davies & Dubinsky 2004: 6). If applied to Croatian, it can be observed that the passivized sentence remains synonymous to its active counterexample only if the infinitive is selected by modal, aspectual, and implicative verbs (16), while with control predicates such as *odlučiti* ‘decide’ the synonymy is not preserved (17).

- (16) *Profesor je trebao<sub>mod</sub>/uspio<sub>impl</sub> ispitati | počeo<sub>asp</sub> ispitivati<sub>i</sub> učenika.*  
 = *Učenik je trebao<sub>mod</sub>/uspio<sub>impl</sub> biti ispitan | počeo<sub>asp</sub> biti ispitivan.*  
 ‘Professor had/managed to interrogate<sub>pfv</sub> | started to interrogate<sub>ipfv</sub> a student.’  
 = ‘The student had/managed to be interrogated<sub>pfv</sub> | started to be interrogated<sub>ipfv</sub>.’
- (17) *Profesor je odlučio/planirao/želio ispitati | mrzio ispitivati učenika.*  
 ≠ *Učenik je odlučio/planirao/želio biti ispitan | mrzio biti ispitivan.*

‘Professor decided/planned/wanted to interrogate<sub>pfv</sub> | hated to interrogate<sub>ipfv</sub> the student.’  
 ≠ ‘The student decided/planned/wanted to be interrogated<sub>pfv</sub> | hated to be interrogated<sub>ipfv</sub>.’

Therefore, in Croatian decide-type predicates fail this test, whereas the three verbal classes – modals, aspectuals, and implicatives – display a characteristic of raising predicates.

#### 4.3.3. Matrix licensing of negative polarity items

Considering that under restructuring «apparently biclausal structures act as transparent domains for ordinarily clause-bound process» (Grano 2015: 11), it is important to investigate the distribution of negative polarity items (e.g. *nitko* ‘nobody’, *nikamo* ‘nowhere’, *ništa* ‘nothing’) in infinitival configurations.

Croatian is a negative concord language in which negative indefinites are licensed clause-internally. The so-called *ni*-NPIs (e.g. *nitko* ‘nobody’, *nikamo* ‘nowhere’, *ništa* ‘nothing’, etc.) are under the local scope of negation (cf. Laka 1990; Zovko Dinković 2013, 2021; Zovko Dinković & Ilc 2017; Zanuttini 1991; Grano 2015):<sup>48</sup>

- (18) a. *Ivan ne radi ništa.*<sup>49</sup>  
       Ivan not do.3SG.PRES nothing  
       b. \**Ivan radi ništa.*  
       Ivan do.3SG.PRES nothing  
       ‘Ivan does not do anything.’

While matrix licensing of NPIs out of the local and apparently embedded non-finite clause is possible when the infinitive is taken by a modal, aspectual, or implicative verb (19), it is degraded, if not unacceptable, with *decide*-type predicates (20).

<sup>48</sup> The examples are taken from Batinić Angster (2019).

<sup>49</sup> In this paper glosses will be provided for examples whose structure deviates from the structure of the English translation and these deviations are relevant for the argumentation. Glosses follow the Leipzig Glossing Rules (Bickel *et al.* 2015).

- (19) *Profesor nije uspio ispitati*  
 professor[NOM.SG] not\_be.3SG.PRES manage.PTCP.3SG.M examine.INF  
*nikoga.*  
 nobody.ACC.SG  
 ‘Professor didn’t manage to orally examine anybody.’
- (20) *Profesor nije odlučio ispitati*  
 professor[NOM.SG] not\_be.3SG.PRES decide.PTCP.3SG.M examine.INF  
*nikoga.*  
 nobody.ACC.SG  
 ‘Professor didn’t decide to orally examine anybody.’

Considering that Croatian NPIs require local licensors, the domains in which they can be licensed out of the non-finite clause are local. This is certainly the case when infinitives are introduced by modals, aspectuals, and implicatives. However, the judgements on that matter are subject to inter-speaker variation, some speakers might not find them ill-formed, despite being somewhat hard to process.

#### 4.3.4. Unavailability of finite complementation

The classes of Croatian predicates I assume to display restructuring effects – monoclausal-type predicates – cannot project finite clausal complements. Modals, aspectuals, and few implicatives require a non-finite complementation. Consider (21):

- (21) *\*Profesor je trebao<sub>mod</sub>/uspio<sub>impl</sub> da ispita | počeo<sub>asp</sub> da ispituje sve studente.*  
 ‘The professor had/managed to interrogate<sub>pfv</sub> | started to interrogate<sub>ipfv</sub> all students.’

As for the other subject-oriented predicates, grouped so far under the name of *decide*-type verbs or biclausal-type predicates, they do not display a homogeneous behaviour regarding the possibility of introducing a finite clausal complement.<sup>1</sup> The subject-oriented predicates in (22) can embed both non-finite and finite complements via the complementizer *da* ‘that’:

- (22) *Profesor je odlučio/obećao | se nadao/bojao da će ispitati sve studente.*  
 ‘The professor decided/promised | hoped/was afraid that he will interrogate all students.’

On the other hand, not all verbs in the heterogeneous class of desideratives in Landau’s (2000) sense share the availability of both types of complementation.

For example, *željeti* ‘want’, the core member of the desiderative class, requires an infinitive, as well as *planirati* ‘plan’, *namjeravati* ‘intend’, *misliti* ‘mean, intend’,<sup>50</sup> *odabrati* ‘choose’:

- (23) \**Profesor je želio/planirao/namjeravao/mislilo da će ispitati sve studente.*  
lit. ‘The professor wanted/planned/intended that he will interrogate all students.’

Concerning (emotive) factives, it is worth noting that *da*-complementation is completely unacceptable with *mrziti* ‘hate’ and *voljeti* ‘love’ (s. (24a)), while it only tends to be unavailable with *(biti) žao* ‘(be) sorry’, *(biti) drago* ‘(be) glad’. Confront the ill-formed (24b) to the well-formed (24c).

- (24) a. \**Profesor je mrzio da će ispitivati sve studente.*  
professor.NOM.SG be.PRS.3SG hate.PTCP.ACT.M.SG that will.PRS.3SG  
interrogate.INF all students
- b. \**Profesoru je bilo drago/žao da će ispitati sve studente.*  
professor.DAT.SG be.PRS.3SG be.PTCP.ACT.N.SG glad/sorry that will.PRS.3SG  
interrogate.INF all students
- c. *Profesoru će biti drago da ispita | žao da ne ispita sve studente.*  
professor.DAT.SG will.PRS.3SG be.INF glad that interrogate.PRS.3SG |  
sorry that NEG interrogate.PRS.3SG all students

‘The professor will be glad to interrogate | sorry that he will not interrogate all students.’

However, it seems that all factives can introduce a finite complement clause via the complementizer *što* ‘that’:<sup>51</sup>

<sup>50</sup> See note 42 regarding the properties of the verb *misliti* as far as its different meanings are concerned.

<sup>51</sup> The alternatives to subordinate *što*-clause of the sentence (24a) are: *(mrzio) to što je ispita sve studente* and *(mrzio) činjenicu da je ispita sve studente*, both translated in English as ‘(hated) the fact that he interrogated all students’. The behaviour of factives would need further discussion which is beyond the scope of this paper, but see e.g. Krapova & Sočanac (2022).

- (25) a. *Profesor je mrzio što je ispitao sve studente.*  
 ‘The professor hated that he interrogated all students.’
- b. *Profesoru je bilo drago/žao što je ispitao sve studente.*  
 professor.DAT.SG be.PRS.3SG be.PTCP.ACT.N.SG glad/sorry that be.PRS.3SG  
 interrogate.PTCP.ACT.M.SG all students  
 ‘The professor was glad/sorry he interrogated all students.’

For the purpose of this study, it is important to note that the members of the three classes I claim to instantiate monoclausal configurations systematically disallow finite complementation in Croatian.

#### 4.3.5. Temporal uniformity

Another evidence for treating configurations instantiated by modal, aspectual and implicative verbs as monoclausal – thus as functional heads forming complex predicates with their non-finite complements – comes from the unavailability of distinct temporal modification. In this respect, monoclausal structures are characterized by temporal uniformity (s. McCawley 1979; Marušić & Žaucer 2006; Grano 2015). Consider the unacceptability of the following example:

- (26) \**Sutra će profesor ispitati studente prekosutra.*  
 ‘Tomorrow professor will examine the students the day after tomorrow.’

Although both *sutra* ‘tomorrow’ and *prekosutra* ‘the day after tomorrow’ in (26) are temporal adverbs of position referring to the future with respect to the speech event, they place the event of examining the students on two distinct, non-overlapping positions in time which is impossible in single event descriptions. That is the reason why we consider a sentence with two contrasting temporal adverbs of position such as (26) unacceptable.

On the contrary, (27) – despite the presence of two temporal adverbials – constitutes a single event description where the adverbial *rano ujutro* ‘early in the morning’ functions as a further specification of the adverb *sutra* ‘tomorrow’.

- (27) *Sutra će profesor ispitati studente rano ujutro.*  
 ‘Tomorrow professor will examine the students early in the morning.’

In a sentence with just one event description it is possible to have only one temporal adverbial of position, that is one temporal specification intended as placement of the event on the timeline (s. Marušič & Žaucer 2006: 1097). In other words, following Cinque (2004) and Krapova & Cinque (2018: 156), monoclausal structures have «single deictic Tense». In the context of  $V_{\text{finite}} + V_{\text{non-finite}}$  configurations, it will be possible to insert a temporal adverbial of position that conflicts with a matrix tense only in an embedded complement clause. We can therefore expect non-agreeing temporal adverbials of position only in configurations with biclausal-type predicates.

Considering the acceptability of the following two examples (28a) and (28b) with *odlučiti* ‘decide’ as the matrix verb – in which *jutros* ‘this morning’ modifies the deciding and *sutra* ‘tomorrow’ places the event of going to the cinema on the timeline – we can conclude that both of these examples have biclausal syntax and that the non-finite complement of the predicate *odlučiti* is a full-fledged CP just like the finite CP introduced by a complementizer *da* ‘that’.

- (28) a. *On je jutros odlučio da će sutra ići u kino.*  
 ‘This morning he decided that tomorrow he will go to the cinema.’  
 b. *On je jutros odlučio ići sutra u kino.*  
 ‘This morning he decided to go tomorrow to the cinema.’

The infinitive taken by *odlučiti* in (28b) is said to be temporally independent (s. Pitteroff *et al.* 2018) just like its finite counterpart in (28a)

If we now turn our attention to the same type of temporal modification in a configuration with a modal, aspectual, or implicative predicate (29), we clearly see that non-agreeing adverbs that signal tense-mismatches are disallowed:

- (29) \**On je jutros trebao<sub>mod</sub> /počeo<sub>asp</sub> /uspio<sub>impl</sub> ići sutra u kino.*  
 ‘This morning he managed to go tomorrow to the cinema.’

In conclusion, we can state that infinitives to modal, aspectual, and implicative predicates in Croatian are temporally dependent or anaphoric (s. Pitteroff *et al.* 2018) and that these three classes of predicates instantiate monoclausal configurations.

Grano (2015) notes the correlation between the exhaustive/partial control split and the temporal reading of infinitives. According to him, partial control predicates – i.e. those that cannot instantiate monoclausal configurations – disallow simultaneity readings of embedded infinitival complements with eventive (non-stative) semantics. English admits three possibilities of temporal relation expressed by the embedded infinitive: simultaneity, posteriority, or anteriority relation.

In the present discussion regarding the temporal interpretation of Croatian embedded infinitives, it is important to stress that, unlike English infinitives (e.g. *He managed to have opened the door*), they cannot be tensed (e.g. \**On je uspio biti otvorio vrata*). It is, nonetheless, relevant to consider the availability of their simultaneous and posterior interpretation with respect to the matrix tense and to identify whether it correlates or not with the type of matrix verb. Considering Grano's account (2015) we can expect that Croatian modal, aspectual, and implicative verbs impose simultaneity reading on their infinitives. On the other hand, the *decide*-type verbs should admit future or posteriority reading on infinitives they select.

Let's consider the simultaneity interpretation of infinitives embedded by *odlučiti* 'decide' using an adverbial that imposes such reading, such as *istog časa* 'in that same moment' or *upravo tada* 'right then':

(30) ?*Ivan je odlučio otvoriti vrata istog časa/upravo tada.*

'Ivan decided to open the door in that same moment/ right then.'

(31) ?*Ivan je odlučio otići istog časa/upravo tada.*

'Ivan decided to go away in that same moment/ right then.'

In the examples (30) and (31) the act of deciding (the same holds for the acts of promising, hoping, etc.) seems to precede the event described by non-finite complements – being it the event of opening the door (30) or going away (31). That is the reason why these sentences sound infelicitous with a temporal adverbial imposing the simultaneity reading. The simultaneity interpretation should be acceptable only in case of the embedded statives, such as 'be happy' (Grano 2015: 109):

(32) *Ivan je odlučio biti sretan istog časa/upravo tada.*

'Ivan decided to be happy in that same moment/ right then.'

At the same time, modals, aspectuals, and implicatives allow or, better yet, force overlapping or simultaneity interpretation of the eventive infinitives they introduce:

- (33) *Ivan je trebao<sub>mod</sub> /uspio<sub>impl</sub> otvoriti | počeo<sub>asp</sub> otvarati vrata istog časa/upravo tada.*  
 ‘Ivan had/ managed to open<sub>pfv</sub> | started opening<sub>ipfv</sub> the door in that same moment/ right then.’
- (34) *Ivan je trebao<sub>mod</sub> /uspio<sub>impl</sub> otići | počeo<sub>asp</sub> odlaziti istog časa/upravo tada.*  
 ‘Ivan had/ managed to leave<sub>pfv</sub> | started leaving<sub>ipfv</sub> in that same moment/ right then.’

The time of opening the door in (33) or going away in (34) overlaps with the time of needing to do so, starting, or managing in doing so.<sup>52</sup>

Table 5 offers an overview regarding the availability of different temporal readings of infinitives selected by the Croatian subject-oriented verbs taken in consideration in this paper.

Table 5. Temporal relations expressed by infinitives to Croatian verbs

Verb classes	Croatian verbs	Simultaneity relation	Posteriority relation	Anteriority relation	Configuration
modals	<i>moći</i> ‘can’, <i>morati</i> ‘must’, <i>trebati</i> ‘need’, <i>smjeti</i> ‘be allowed to’, <i>imati</i> ‘must, have to’				monoclausal-type
aspectuals	<i>početi</i> ‘start, begin’, <i>nastaviti</i> ‘continue’, <i>završiti</i> ‘finish’, <i>prestati</i> ‘stop’	+	–	N/A	
implicatives	<i>uspjeti</i> ‘manage’, <i>izbjeci</i> ‘avoid’, <i>usuditi se</i> ‘dare’				
other subject-oriented predicates	<i>odlučiti</i> ‘decide’, <i>planirati</i> ‘plan’, <i>obećati</i> ‘promise’, <i>željeti</i> ‘want’, <i>nadati se</i> ‘hope’, <i>ponuditi se</i> ‘offer’, <i>namjeravati</i> ‘intend’, etc.	– (eventive complements) + (stative complements)	+	N/A	biclausal-type
	<i>mrziti</i> ‘hate’, <i>voljeti</i> ‘love’, <i>(biti) žao</i> ‘(be) sorry’, <i>(biti) drago</i> ‘(be) glad’ <sup>53</sup>	+	–	N/A	

<sup>52</sup> The fact that the aspectual verbs force a simultaneity reading of their complement verb explains why the respondents in Marini (*this volume*, section 7.2, example (12)) opted for the use of an imperfective form of the non-finite verb when it was preceded by the verb *početi* ‘begin’, a perfective favoured by the presence of *čim* ‘as soon as’, conjunction that usually introduces a perfective environment.

<sup>53</sup> Interestingly, (emotive) factives do not display biclausal-like properties with respect to temporal readings of embedded infinitives despite having an otherwise biclausal behaviour. The reason for that may lie in their habitual interpretation which rules out a temporal mismatch. This calls for a more fine-grained analysis, which I nonetheless will not tackle any further in this paper.

Investigating two groups of predicates that select infinitives, we observed the asymmetry regarding the availability of the split of temporal deixis between finite and non-finite domain and the availability of simultaneity readings if the selected infinitive is eventive. These findings support the idea that in Croatian infinitives embedded by modals, aspectuals, and implicatives contain no embedded Tense, while the non-finite complements to *decide*-type predicates do, with the exception of emotive factives. To sum up and following Grano's (2015) line of reasoning,<sup>54</sup> this amounts to stating that the  $V_{\text{finite}} + V_{\text{non-finite}}$  structure in the latter case – with the Tense being projected separately – is biclausal, whereas in the former case a monoclausal  $V_{[\text{mod/asp/impl}]_{\text{finite}}} + V_{\text{non-finite}}$  configuration is projected.

## 5. Concluding remarks

This study is based on the cross-linguistically well-confirmed observation that monoclausal properties of configurations with infinitives are tied to the choice of the matrix predicate, i.e. the meanings it encodes. Following that, I classified subject-oriented Croatian verbs embedding infinitives into semantic classes proposed by Landau (2000) for English. Considering Cinque's (2004, 2006) and Grano's (2015) theoretical accounts, I identified three Croatian verbal classes expected to give rise to monoclausal configuration: modals, aspectuals, and implicatives. Unlike other subject-oriented predicates taking infinitives, such as desideratives and factives, they belong to exhaustive control verbs and display properties such as preserved synonymy under passivization, matrix licensing of negative polarity items, unavailability of finite complementation and, furthermore, they constitute single event descriptions with their embedded context, i.e. their configurations exhibit temporal uniformity. Using this set of diagnostics, I showed that in Croatian  $V_{[\text{mod/asp/impl}]_{\text{finite}}} + V_{\text{non-finite}}$  configurations behave like complex predicates or monoclausal structures, thus confirming the hypothesis laid out in 4.2. In other words, according to the accounts we followed, a restructuring verb participates in monoclausal raising structures, which seems to be confirmed by Croatian data. However, we do not exclude the possibility that there

<sup>54</sup> It is worth noting that already Stowell (1982) suggested that temporal deixis involves the presence of a CP domain.

are other restructuring verbs, e.g. motion verbs, that were not taken into consideration in this paper.

In the course of this exploratory study of monoclausal configurations, other aspects worth of further investigation emerged. A more fine-grained semantic classification of both predicates that select infinitives and their complements – non-finite and finite – is needed. Studies dedicated to particular classes of Croatian predicates with infinitives (e.g. on implicatives, factives, etc.) could also result in valuable insights. Furthermore, a detailed morphosyntactic analysis of these configurations – considering tense, aspect, and mood (TAM) dependencies – might shed further light on the phenomenon. In addition, gathering data on this phenomenon via a corpus-based analysis or an experimental methodology would be beneficial to overcome the possible shortcomings of an intuition-based study such as this one. Finally, cross-linguistic studies focused on observing the phenomenon in a wider context of subordination, such as Wurmbrand *et al.* (2020), Kovač *et al.* (2022), or Wurmbrand & Lohninger (2023), offer a promising line of research.

## Appendix

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### Abbreviations

3	third person
ACC	accusative
ACT	active
asp	aspectual
DAT	dative
EC	exhaustive control
F	functional head

impl	implicative
INF	infinitive
ipfv	imperfective
M	masculine
mod	modal
N	neuter
NEG	negation
NOM	nominative
PC	partial control
pfv	perfective
PRO	null subject pronoun in non-finite clauses
PRS	present
PTCP	participle
SG	singular
V	verb

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