Structural and semantic factors in the *belief-intent* alternation in Basque

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Abstract

Clause-embedding predicates alternating between a complement expressing a belief and a complement expressing an intention seem to be quite widespread both inside and across languages. The two different meanings are expressed by different morphosyntactic types of complement clauses, in line with the more general observation that the semantic distinction between representational and preferential attitudes tends to be reflected by certain morphosyntactic differences between the complement clauses used. While this association between form and meaning generally holds in Basque, too, it is not completely strict: both indicative clauses and absolutive verbal nouns can be found expressing not only one, but marginally also the other meaning, raising the question whether in these cases other disambiguating factors play a role, possibly resulting from the different semantic properties of beliefs and intentions. The results of an online questionnaire show that, with very few exceptions, the type of complement clause is decisive in determining the meaning of a complement, corroborating the morphosyntactic split between representational and preferential attitudes. While indicative clauses in intent contexts seem in fact to express beliefs rather than intentions, verbal noun complements in belief contexts are either interpreted as intentions or judged ungrammatical. However, the use of a verbal noun complement in a belief context becomes much more acceptable when the complement is past tense and thus completely incompatible with an intent reading, showing that not only the morphosyntactic clause type but also the semantics of material inside the complement clause play a role.

1   Introduction

Languages typically have an inventory of different types of complement clauses (CC) that are used with different clause-embedding predicates (CEP), loosely based on the semantics of the latter. Some CEPs alternate between different types of CCs concomitantly with an alternation in meaning. One alternation that can be observed with quite a few different CEPs in English (Jackendoff 1985), but seems to be widespread also cross-linguistically, is between a CC that expresses a belief and a CC that expresses an intention. As (1) shows, in English the semantic

difference is reflected in the use of different CC types: a finite clause for beliefs and a *to-*infinitive for intentions.

(1) a. *B convinced A that the sky is green*.

     b. *B convinced A to give up linguistics*.

The same alternation is also found in Basque. Here, too, CC type seems to be the most important factor determining the semantics of the complement, since in general, beliefs are expressed by means of indicative clauses, as in (2a), and intentions by means of verbal nouns (VN), as in (2b).

(2) Basque (isolate; Spain, France; ETC: *Tropiko tristeak*, Claude Lévi-Strauss (Jon Alonso); Berria, 2005-05-31)

  a. *Anaia-a-Ø*   ***konbentzi-tu-ko*** *d-u-Ø*   *[egoera-a-Ø*   *gaizki*
     brother-SG-ABS **convince-INF-FUT** 3SG.ABS-AUX.TR-3SG.ERG situation-SG-ABS badly

     interpreta-tu *d-u-Ø-ela]*
     interpret-PFV   3SG.ABS-AUX.TR-3SG.ERG-COMP

     'She will convince her brother that he has interpreted the situation wrongly.'

  b. *[Madril-era* *joa-te-ko]*   ***konbentzi-tu***   *nind-u-Ø-en*
     Madril-ALL   go-NMLZ-PUR **convince-PFV**   1SG.ABS-AUX.TR-3SG.ERG-PST

     'She convinced me to go to Madrid.'

However, indicative intentions and VN beliefs do occur, which raises the question whether in these cases other factors disambiguate between the two readings. The results of a small corpus study suggest that the availability of such atypical form-meaning pairs depends on the plausibility of an intent interpretation, resulting primarily from tense and aktionsart of the embedded predicate. The role of these two factors as well as the potentially relevant factors of coreference relations and the semantic preference of the CEP for one or the other reading is then tested in an online questionnaire conducted with 1584 participants.

The paper is structured as follows: in Section 2, I will first give an overview of the general properties of the alternation and the CCs used, before proceeding to the specific situation in Basque. Section 3 discusses the factors that (possibly) influence the interpretation of a CC as a belief or an intention, Section 4 describes the design of the experiment and the sociolinguistic profile of its participants and Section 5 discusses the results. Section 6 concludes.

2 Beliefs, intentions and their coding

Jackendoff (1985) observes that there is a substantial class of CEPs in English that alternate between a CC expressing a belief and a CC expressing an intention, like in the examples in (3), which can be paraphrased as in (4):

(3) a. *B convinced A that the sky is green*.

    b. *B convinced A to give up linguistics*.   (ibid.: 445)

(4) a. *B made A come to believe that the sky is green*.

    b. *B made A come to intend to give up linguistics*.   (ibid.: 445–446)

The same pattern is also observed, for example, with *decide* (ibid.: 447; Grano 2019: 126):

(5) a. *A decided that the sky is green*.

       ≈ A came to believe that the sky is green.

    b. *A decided to give up linguistics*.

       ≈ A came to intend to give up linguistics.

Since both uses of *convince* (and *decide*) are relatively close in meaning and, moreover, this alternation is found systematically with a substantial class of verbs,[1] Jackendoff argues against attributing the alternation to an idiosyncratic polysemy of the verb *convince* (ibid.: 446–447). The fact that similar alternations occur in different languages all over the world, as we will see below, also corroborates this argumentation. Furthermore, Grano (2019: 128) gives the zeugma test in (6) as evidence against *persuade* being polysemous: if beliefs and intentions were different senses of a polysemous *persuade*, (6) would sound funny, similar to *John runs marathons as well as a successful company*. Since (6) is perfectly fine, *persuade* seems to be underspecified for the belief/intent distinction rather than polysemous.

(6) *I persuaded John [that the city is in danger and* PRO *to evacuate immediately].*

In order to obtain one or the other interpretation, the type of CC seems to be crucial: a belief is expressed by a finite CC and an intention by a *to*-infinitive. Although a close paraphrase of an intention like in (7a) by means of a finite CC as in (7b) is possible, they do not express exactly the same thing as the non-contradictory nature of (7c) shows:

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[1] Jackendoff (1985: 447) in addition to *convince* and *decide* lists *persuade, agree, occur to, pledge, swear, insist, consider, think about* and *debate* and later notes that the pattern extends also to factive verbs like *remember* and *forget* (ibid.: 458).

(7) a. *Sue convinced John to leave.*

    b. *Sue convinced John that he should leave.*

    c. *Although Sue convinced Jim that he* should *leave, she still didn't manage to convince him to* leave. (cf. Jackendoff 1985: 446)

In fact, the closest paraphrase of a non-finite CC by means of a finite CC in this context still expresses a belief: Mary caused John to form the belief "I should leave". In praxis, beliefs about what one should do commonly lead to the corresponding intentions, but this is not inevitably the case. (7b) may thus implicate (7a), but it does not entail it (cf. Grano 2019: 125).

However, it would be incorrect to think that in English finite clauses always express beliefs, whereas non-finite clauses always express intentions. With other CEPs, both CC types can be synonymous (Jackendoff 1985: 447):

(8) #*Although A claimed that he had given up linguistics, he still did not claim to have given up linguistics.*

(9) #*Although A promised that he would give up linguistics, he still did not promise to give up linguistics.*

Jackendoff (1985: 457) therefore divides CEPs that take both finite and non-finite CCs into three classes: those that always express beliefs, like *claim*, those that always express intentions, like *promise* and those that alternate, like *convince*. Thus, there is no one-to-one mapping between form and meaning of the CC but the meaning of a certain type of CC depends at least partly on the CEP. There are, however "marked" and "unmarked" or typical and atypical associations: in English, the typical realization of a proposition is a finite clause and the typical realization of an action is a non-finite clause. Consequently, CEPs realizing a proposition complement as a non-finite CC only should be rare or non-existent, just like CEPs realizing an action complement as a finite CC only. If one verb can have both a proposition and an action complement, the former will be realized as a finite CC, the latter as a non-finite CC (ibid.: 457–458).

Grano (2019), focussing on the CEP *persuade*, aims to develop a formal semantic model that can explain the semantic link between belief and intent readings as well as the crucial contribution of the distinction between finite and non-finite CCs in English. He analyses the verb *persuade* as meaning 'cause to have a rational attitude', with *rational attitudes* encompassing both beliefs and intentions. As for the CC, he postulates that English infinitival CCs that allow the addition of a subject marked with the preposition *for* (like *John intends for*

Bill to be happy) express preference modality, whereas finite clauses express doxastic modality (ibid.: 129). Although he does not give any reasoning for this, he takes the infinitival CC of *persuade* to be of the *for-to* type, too (ibid.: 132). Thus, when combining the semantic contributions of the CEP and the CC, this yields the observed pattern: a rational doxastic attitude expresses a belief and a rational preference attitude expresses an intention (ibid.: 131–132).

On a more general level, beliefs and intentions fall into the two main semantic classes of attitude verbs: *representationals*, which express a judgment of truth, and *preferentials*, which express a preference (Hacquard & Lidz 2019: 84). The split between these two classes is reflected in the morphosyntax of the respective CCs in Romance languages, English, German and Mandarin in that representationals take CCs with the morphosyntactic properties of declarative main clauses, while the CCs of preferentials differ from declarative main clauses in mood, word order, finiteness or the availability of modals and aspect markers (ibid.: 84–87; Huang et al. 2022). Using the terminology of Cristofaro (2003), representationals take *balanced* CCs and preferentials take *deranked* CCs.

The same pattern can be observed in CEPs from rather diverse languages that alternate between a belief and an intent reading. Such alternating CEPs are found in several languages all over the world and it is striking that, although there is a great diversity in the structures employed, in all the examples given in (10)-(15), belief is expressed by means of a balanced or at least tense/aspect-marked CC, whereas a deranked CC that lacks such marking (except for the perfective marking on the Russian infinitive in (13b)) expresses intent.

In Basque in (10), for example, a belief complement of the CEP *konbentzitu* 'convince' is expressed by means of a finite clause inflected for TAM and the two core arguments, just like an independent clause. The intent reading, on the other hand, is expressed by a VN in the purposive, which is not inflected for any verbal categories and could not be used as the predicate of an independent clause.

(10) Basque (isolate; Spain, France; ETC: *Tropiko tristeak*, Claude Lévi-Strauss (Jon Alonso); Berria, 2005-05-31)

a. *Anaia-a-Ø* **konbentzi-tu-ko** *d-u-Ø*   *[egoera-a-Ø*   *gaizki*
brother-SG-ABS **convince-INF-FUT** 3SG.ABS-AUX.TR-3SG.ERG situation-SG-ABS   badly

    interpreta-tu   *d-u-Ø-ela]*
    interpret-PFV   3SG.ABS-AUX.TR-3SG.ERG-COMP

    'She will convince her brother that he has interpreted the situation wrongly.'

b. *[Madril-era joa-te-ko]*   **konbentzi-tu**   *nind-u-Ø-en*
   Madrid-ALL   go-NMLZ-PUR **convince-PFV**   1SG.ABS-AUX.TR-3SG.ERG-PST

    'She convinced me to go to Madrid.'

Rapanui, too, uses a CC in the form of an independent clause (Kieviet 2017: 523) for the belief reading in (11a) and a CC without any aspect marking bearing the subordinator *mo*, which also forms purpose and conditional clauses (ibid.: 542), for the intent reading in in (11b).

(11) Rapanui (Austronesian, Polynesian; Chile; Kieviet 2017: 335, 506)

a. *He* **mana'u** *e Puakiva [ko ha'uru 'ana]*
   NTR **think**   AG Puakiva   PRF   sleep   CONT

    'Puakiva thought that (Kava) was asleep.'

b. *He* **mana'u** *[mo haka titika i te vaka ki Tahiti]*
   NTR **think**   for   CAUS   straight   ACC   ART   boat   to   Tahiti

    '(When the wind did not die down,) they decided to steer the boat to Tahiti.'

Similarly in Yimas, a belief complement of *kacapal-* 'forget' is expressed by means of a juxtaposed independent clause in (12a) and the intent reading in (12b), on the other hand, by a nominalized verb bearing the noun class marker of the TALK class:

(12) Yimas (Lower Sepik; Papua New Guinea; Foley 1991: 397, 386)

a. **Pia-ka-kacapal**   *[patn*   *na-n-wu-t]*
   TALK.P-1SG.A-forget   betelnut(V)   V.SG.P-2SG.A-get-PRF

    'I forgot that you got betelnut.' (literally: 'I forgot some talk/idea: you got betelnut.')

b. *[Patn*   *wayk-r-mpwi]*   **pia-ka-kacapal**
   betelnut(V)   buy-NMLZ-TALK   **TALK.P-1SG.A-forget**

    'I forgot to buy betelnut.'

Russian at first sight shows the same pattern, a balanced CC for the belief reading in (13a) and an infinitive for the intent reading in (13b), but it is conspicuous that the intent complement contains perfective marking, which sets the Russian example apart from the aspectless intent

CCs in the other examples. Aspect in Russian (or Slavic languages in general) is, however, closer to derivation than to inflection ("grammatical derivation" according to Breu 2000: 23) and has thus to be analysed differently from purely inflectional aspect marking.

(13) Russian (Indo-European, Slavic; Kasenov 2023)
  a. *Vasja* **duma-et** *[čto my id-ëm pi-t' pivo]*
    Vasja **think-3SG** COMP 1PL go-1PL drink-INF beer

    'Vasja thinks that we are going to drink beer.'

  b. *Vasja* **duma-et** *[vy-pi-t' piv-a]*
    Vasja **think-3SG** PFV-drink-INF beer-GEN

    'Vasja intends to drink beer.'

In Tommo So in (14), while the intent reading with the CEP 'be afraid' is expressed by a verb form bearing only the infinitive ending, the belief reading is expressed by a more complex construction: the CC is inflected for aspect and person and has in fact the same form as an independent polar question (McPherson 2013: 382, 453). It is embedded as a complement of the verb *gè* 'say', which in turn functions as a medial verb of a verb chain with the verb *níŋ-íyé* 'be afraid' as the final verb. McPherson's consultants analyse this structure as follows: "*gè* lends a sense like 'believe', as in, 'Believing he would hit me, I was afraid'" (ibid.: 454).

(14) Tommo So (Dogon; Mali; McPherson 2013: 453, 458)
  a. *[[Wó=ǹ bέn-dὲ-m(=ma)] g-àà]* **níŋ-íy-aa=wɔ**
    3SG=OBJ hit-IPFV-1SG(=or?) say-PFV **be_afraid-MP-PFV=be**

    'He is afraid that I will hit him.'

  b. *[Dúú ḿmo=nɛ dɔ́ɔ́-dim]* **níŋ-íy-aa=wɔ**
    side 1SG.POSS=OBL arrive-INF **be_afraid-MP-PFV=be**

    'He is afraid to get close to me.'

In Hinuq in (15), both CCs are deranked, i.e. their predicate is in a form that is different from the predicate of an independent clause, but still they differ in the presence vs. absence of tense and aspect marking: whereas the intent reading in (15b) is expressed by a purposive converb that is only marked for gender, in the belief complement in (15a) the resultative participle expresses relative past time reference, contrasting with the habitual participle used for relative future, present and generic time reference (Forker 2013: 608). The construction consists of an auxiliary and an imperfective participle and thus corresponds to the "compound past" of independent clauses (ibid.: 216).

(15) Hinuq (Nakh-Daghestanian; Russia; Forker 2013: 611, 251)

   a. *Diž   neteqen **šuƛ'e-me** [eli cadaq kino-mo-ł-er   b-exnaː-ho zoq'ʷe-s- łi]*
     1SG.DAT never **forget-NEG** 1SG together film-OBL-LCONT-LAT HPL-go-ICVB be-RES-ABST

     'I will never forget that we went together to the movies.'

   b. *Hało-z   **šuƛ'e-n** [hag   yašik' hezzoq'imur y-aq-ayaz]*
     3SG.M.OBL-DAT **forget-UWPST** DEM.DIST.IV box back IV-close-PUR

     'He forgot to close the box again.'

The verb *muʔnima* in Yakkha (Sino-Tibetan, Kiranti; India, Nepal) also seems to follow the same pattern: it is listed as meaning 'forget to do' with an infinitival CC and 'forget about something' with an inflected CC in Schackow's (2015: 465) grammar.

This differential treatment of belief and intent CCs aligns not only with the observation that representational attitudes are associated with balanced CCs and preferential attitudes with deranked CCs but also with the observation that the morphosyntactic complexity of CCs in languages roughly corresponds to their semantic complexity (e.g. Givón 1990; Cristofaro 2003; Wurmbrandt & Lohninger 2023). Beliefs are Propositions, the most elaborate complement type in Wurmbrandt & Lohninger's (2023) classification: they bear a truth value and have independent time reference. Intentions, on the other hand, are Situations: they can be located in a time different from that of the matrix clause, but their time reference is predetermined by the CEP and they lack a truth value (ibid.: 188–189). The question remains open to what extent the morphosyntactic distinction between beliefs and intentions is based on the structural size of the CC type or its (non-)correspondence to independent main clauses. While the Hinuq example (15), where both CCs are deranked but differ in structural complexity, points to the former, Basque offers evidence for the latter, as we will see in Section 5.2.

Hacquard & Lidz (2019) hypothesize that the correlation between form and meaning observed in the CCs of attitude verbs is an important cue for children acquiring the abstract meanings of these verbs. Apparently, it can also be exploited to use the same CEP to express both representational and preferential attitudes.

However, the division is not always as neat as it appears in the data presented so far. A CC type that is suitable to express Propositions is not necessarily banned from expressing semantically less complex complements (Wurmbrandt & Lohninger 2023: 215) and thus the same CC type may be used for different semantic types of complements, as we have already seen in (8) and (9) for English.

Basque, too, has two types of CCs which can in principle occur expressing either beliefs or intentions, namely indicative clauses and VNs in the absolutive or instrumental. Although the

most common association is for indicative clauses to express beliefs and for VNs to express intentions, both are also found with the respective other meaning: (16) is an example of a VN belief, whereas (17) and (18) are indicative intentions. Note that indicative clauses expressing intentions have a fixed TAM marking: with subject control CEPs like in (17), the CC obligatorily contains future marking, whereas with an object control CEP like in (18), it contains the modal *behar izan* 'must'.

(16) *[Matxinada-a-Ø delitu-a-Ø uka-tu-a-Ø iza-te-a-Ø] aurreikus-ten*
rebellion-SG-ABS offence-SG-ABS deny-PFV-SG-ABS be-NMLZ-SG-ABS anticipate-IPFV

gen-Ø-u-en
1PL.ERG-3SG.ABS-AUX.TR-PST

'We were anticipating that the criminal offence of rebellion would be rejected.' (ETC: Berria, 2018-04-11)

(17) *[Eraikuntza enpresa bat-ea-n lan-a-Ø eman-go z-i-e-Ø-la]*
construction company INDF-SG-INE work-SG-ABS give-FUT 3SG.ABS.PST-AUX.DITR-3PL.DAT-3SG.ERG-COMP

agin-tzen z-i-e-n
promise-IPFV 3SG.ABS.PST-AUX.DITR-3PL.DAT-3SG.ERG-PST

'S/he used to promise them that s/he would give them work in a construction company.' (ETC: Berria, 2011-10-30)

(18) *[Bakoitz-a-k bere pertsonalitate-a-Ø era-tu behar d-u-te-la]*
everyone-SG-ERG 3SG.POSS.REFL personality-SG-ABS form-INF must 3SG.ABS-AUX.TR-3PL.ERG-COMP

aholka-tu d-i-e-Ø bestalde
advise-PFV 3SG.ABS-AUX.DITR-3PL.DAT-3SG.ERG on_the_other_hand

'He advised them, on the other hand, to form their own personalities.' (ETC: Argia, 2013-09-15)

Unlike what Jackendoff (1985: 457–458) claims for English, in Basque belief VNs and indicative intents seem to occur also with alternating CEPs: (19a) shows *ukatu* 'deny' with an intent CC and (19b) and (19c) with belief CCs of two kinds, the first one a VN and the second one an indicative clause. (20a), on the other hand, shows *bururatu* 'occur, come to mind' with a belief CC and (20b) and (20c) with intent CCs of two kinds, a VN and an indicative clause.

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(19) a. *Senar ohi-a-ri [alaba-a-Ø ikus-te-a-Ø] uka-tu*
husband former-SG-DAT daughter-SG-ABS see-NMLZ-SG-ABS deny-PFV

z-i-o-Ø-n
3SG.ABS-AUX.DITR-3SG.DAT-3SG.ERG-PST

'She denied her ex-husband the possibility to see his daughter.' (ETC: Berria, 2005-10-12)

b. *Poliziaburu-a-k berriz [eraso-a-Ø gerta-tu izan-a-Ø] uka-tu*
police_chief-SG-ERG on_the_other_hand attack-SG-ABS happen-PFV be-SG-ABS deny-PFV

z-u-Ø-en
3SG.ABS-AUX.TR-3SG.ERG-PST

'The police chief, on the other hand, denied that the attack had happened.' (ETC: Berria, 2008-10-26)

c. *[Eboluzio-a-Ø gerta-tu ze-la] uka-tzen z-u-te-n*
evolution-SG-ABS happen-PFV 3SG.AUX.ITR-COMP deny-IPFV 3SG.ABS-AUX.TR-3PL.ERG-PST

'They denied that the evolution has happened.' (ETC: *Biziaren izaera*, C. H. Waddington (Iñaki Iñurrieta))

(20) a. *Burura-tu zai-o [Maria-Ø ere zigarro bat bezala-ko-a-Ø*
occur-PFV 3SG.ABS.AUX.EITR-3SG.DAT Maria-ABS too cigar INDF like-LK-SG-ABS

d-ela]
COP.3SG-COMP

'It occurred to him/her that Maria is like a cigar, too.' (ETC: *Begiak itxi eta kitto*, Xabier Etxaniz Rojo)

b. *[Har-en bila joa-te-a-Ø] burura-tu zitzai-da-n*
DEM.DIST-GEN search go-NMLZ-SG-ABS occur-PFV 3SG.ABS.AUX.EITR-1SG.DAT-PST

'It occurred to me to go in search of her/him.' (Artiagoitia 2003: 663)

c. *[Har-en bila joan-go nintze-la] burura-tu zitzai-da-n*
DEM.DIST-GEN search go-FUT 1SG.AUX.ITR-COMP occur-PFV 3SG.ABS.AUX.EITR-1SG.DAT-PST

'It occurred to me that I would go in search of her/him.' (ibid.)

The use of CEPs that can have both belief and intent CCs with CC types that can express both belief and intent increases the potential for ambiguous constructions, unless other factors come into play that disambiguate the readings. This will be explored in the following sections.

10

3 Factors influencing the reading

3.1 Structural properties of the CC

As we have seen in the section before, the form of the CC seems to be a major factor cross-linguistically in distinguishing between belief and intent readings.

In Basque, the four major types of CCs that are found with belief/intent CEPs are finite indicative CCs, finite subjunctive CCs, VNs inflected in the absolutive or instrumental and VNs inflected in the purposive.

Finite indicative clauses, the only balanced type, consist of a clause in an indicative-like[2] mood, inflected for mood, tense and aspect as well as up to three arguments, plus a complementizer. The clause has the same form as an independent clause except for the complementizer that is suffixed to the predicate:

(21) a. *Katu-a-k   sagu   bat-Ø   ekarr-i   d-i-zu-Ø*
          cat-SG-ERG   mouse   INDF-ABS   bring-PFV   3SG.ABS-AUX.DITR-2SG.DAT-3SG.ERG

      'The cat has brought you a mouse.'

      b. *[Katu-a-k   sagu   bat-Ø   ekarr-i   d-i-zu-Ø-la]*
          cat-SG-ERG   mouse   INDF-ABS   bring-PFV   3SG.ABS-AUX.DITR-2SG.DAT-3SG.ERG-COMP

          ikus-i   d-u-t
          see-PFV   3SG.ABS-AUX.TR-1SG.ERG

      'I have seen that the cat has brought you a mouse.'

Finite indicative CCs are used mainly with utterance, perception, epistemic and other attitude predicates like *esan* 'say', *entzun* 'hear' or *uste izan* 'think'.

Finite subjunctive clauses are also inflected for up to three arguments, but not for aspect. Their mood value is fixed and the tense value agrees with the tense of the matrix clause. Subjunctive CCs are primarily used with desiderative and directive CEPs (Artiagoitia 2003: 640).

VNs are formed in Standard Basque by adding the suffix *-t(z)e* to the verb stem. They can be inflected in all cases and have slightly different syntactic properties depending on the case. Absolutive VNs are probably the most versatile CC type in Basque. They are found in a wide variety of contexts ranging from utterance predicates as in (22) to implicative predicates as in (23), but seem to express most typically complements that are semantically smaller than Propositions (cf. Artiagoitia 2003: 661–665). Instrumental VNs can be seen as a variant of absolutive VNs since the instrumental functions as an oblique for demoted P arguments in

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[2] Under "indicative-like" I subsume all moods that can appear in declarative main clauses, namely indicative, apodosis conditional and potential.

certain contexts (cf. Zúñiga & Fernandez 2021: 629–635 on what they call "lexically constrained antipassive"), but they are by far less common and might differ slightly in the kinds of semantic contexts they appear in.

(22) *[Bilera hori-ek sekretu-ak iza-te-a-Ø] uka-tu z-u-Ø-en*
meeting DEM.MED-PL.ABS secret-PL.ABS be-NMLZ-SG-ABS deny-PFV 3SG.ABS-AUX.TR-3SG.ERG-PST

'S/he denied that those meetings were secret.' (ETC: Berria, 2005-10-05)

(23) *Ertzaintza-k [gizon susmagarri-a-Ø harrapa-tze-a-Ø] lor-tu z-u-Ø-en*
police-ERG man suspicious-SG-ABS catch-NMLZ-SG-ABS manage-PFV 3SG.ABS-AUX.TR-3SG.ERG-PST

'The police managed to catch the suspicious man.' (ETC: Berria, 2008-07-05)

VNs in non-locational cases can distinguish between past/perfective and non-past/imperfective (Artiagoitia 2003: 666) and, as (22) shows, they do not impose any restrictions on the overt expression of their subjects. Purposive VNs, on the other hand, in general do not appear with overt subjects (although Duguine 2012 has some examples), which might, however, be due to semantic reasons since they are primarily used with directive CEPs, which usually exhibit object control (Artiagoitia 2003: 704). They cannot distinguish tense or aspect but can be said to express prospective aspect, as they are used exclusively for events that are to happen after the matrix event (Euskaltzaindia 2021: 1227).

While subjunctive clauses and purposive VNs are restricted to the expression of future-oriented actions, absolutive and instrumental verbal nouns as well as indicative clauses can in principle appear expressing both beliefs and intentions, as we have seen in Section 2.

3.2 Semantic properties of belief and intent clauses

Besides the more language-specific structural factors, there are also language-independent semantic factors disambiguating between beliefs and intentions, namely the more restricted semantic properties of intentions:

1. Intentions are attitudes towards actions (Jackendoff 1985: 451–452).
2. The attitude holder is able to carry out the action volitionally or is at least in some way *responsible* for its realization (Grano 2017: 595–597).
3. The action is to happen after the moment the attitude holder forms the intention.

This leads to several restrictions on aktionsart, tense/aspect and agent reference of the embedded clause: the tense/aspect marking has to be compatible with a future and/or prospective interpretation and prototypically the predicate is dynamic and agentive with its agent coreferential with the attitude holder. If the latter two criteria are not met, an intent reading

may still be possible[3] as in (24), taken from Jackendoff (1985: 456), which implies that Bill has control over when the addressee receives the letter. In other cases, especially if the CC is marked for another tense/aspect, an intent interpretation is infelicitous, as in (25) (ibid.).

(24) *Bill promised that you would receive the letter in the morning.*

(25) a. *#A promised to be tall.*

b. *#A promised to have received a letter.*

There are, on the other hand, no such restrictions on beliefs:

(26) a. *A claimed to work on Saturdays.*

b. *A claimed to be tall.*

c. *A claimed to have received a letter.*

This means that some CCs by virtue of their aktionsart, tense/aspect value or agent referent are only suitable to express beliefs.[4]

3.3   Patterns in the corpus

In order to get a first impression of the factors that might play a role in licensing different constructions with belief-intent CEPs in Basque, a small corpus study was conducted using data from *Egungo Testuen Corpusa* (ETC). This corpus contains 355 million tokens from texts published in the 21st century, mainly newspapers but also novels, non-fictional books and Wikipedia. It has the disadvantage that it does not allow to get context beyond the sentence, although occurrences from the magazine *Argia* and sometimes other newspapers can be found in their respective archives and Wikipedia is publicly available.

For the study eight alternating verbs that occur with both indicative clauses and absolutive (or instrumental) verbal nouns were selected: the directive speech act verbs *gogorarazi* 'remind' and *konbentzitu* 'convince', the commissive speech act verb *zin egin* 'swear', the commissive/directive speech act verb *proposatu* 'suggest', three non-communicative verbs referring to the acquisition or existence of beliefs and intentions, namely *bururatu* 'occur, come to mind, have the idea[5]', *erabaki* 'decide', *pentsatu* 'think, plan', as well as the verb *ukatu* 'deny'

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[3] Cf. Grano (2017: 616–618) on the question whether this is coercion or not. It is not coercion in his analysis of intention reports, which does not require the attitude holder to be the actual agent of the embedded action but only to stand in a *responsibility relation* with it. In his view, constructions with coreferential and non-coreferential agents or non-agentive predicates only differ in "the ease with which we can imagine a scenario that would verify the relevant RESP-relation" (ibid.: 624).

[4] For more differences between beliefs and intentions, cf. Grano 2017.

[5] *Bururatu* does not have an exact English equivalent. The English-Basque dictionary of Elhuyar gives "to occur to sb, to come into one's mind; to think of sth/sb". It is an achievement describing the appearance of a thought in the mind of the attitude holder. See (20) for some examples of its usage.

which will be discussed briefly below. The sample was inspired by the verbs listed by Jackendoff (1985), but also includes other CEPs that appear to follow a similar pattern.

It has to be noted that the verb *ukatu* 'deny' does not fit perfectly in the class of CEPs alternating between a belief complement and an intent complement without any concomitant changes. Its argument structure is slightly different for belief and intent constructions: when expressing a belief, it is monotransitive, like in (22) above, although like all utterance predicates it allows to add an optional addressee in the dative, like in (27a). When expressing intent, on the other hand, it is generally ditransitive, although constructions without dative do occur, with arbitrary control as in (27c) or with a non-controlled subject.[6] It would need to be tested whether the attitude holder is the same argument in both constructions. Semantically there are also more differences between the belief and the intent reading, e.g. the belief reading entails a speech act and the intent reading does not.

(27) a. *[Klima aldaketa-a-Ø gizaki-a-k eragi-ten d-u-Ø-ela]*
    climate change-SG-ABS human-SG-ERG cause-IPFV 3SG.ABS-AUX.TR-3SG.ERG-COMP

    uka-tu-ko d-i-zu-te behin eta berriz
    deny-INF-FUT 3SG.ABS-AUX.DITR-2SG.DAT-3PL.ERG-COMP once and again

    'They will deny to you again and again that climate change is caused by humans.' (ETC: Argia, 2008-11-09)

  b. *Senar ohi-a-ri$_i$ [_$_i$ alaba-a-Ø ikus-te-a-Ø] uka-tu*
    husband former-SG-DAT daughter-SG-ABS see-NMLZ-SG-ABS deny-PFV

    z-i-o-Ø-n
    3SG.ABS-AUX.DITR-3SG.DAT-3SG.ERG-PST

    'She denied her ex-husband the possibility to see his daughter.' (ETC: Berria, 2005-10-12)

  c. *Sistema-a-k [_ saio-a-Ø has-te-a-Ø] uka de-za-ke-Ø*
    system-SG-ERG session-SG-ABS start-NMLZ-SG-ABS deny 3SG.ABS-AUX.TR-POT-3SG.ERG

    'The system can deny the possibility to log in (after entering the wrong password three times).' (ETC: *Sistema eragileak*, Askoren artean)

For each of the eight verbs, the first 100 occurrences with a CC were annotated for form and meaning of the CC.

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[6] There is also a dialectal use with subject control and the meaning 'refuse', which corresponds to the belief construction a bit better:

(i) *[_$_i$ inola-ko erakusket-eta-n parte har-tze-a-Ø] uka-tu z-u-Ø$_i$-en*
    anyhow-LK exhibition-PL-INE part take-NMLZ-SG-ABS deny-PFV 3SG.ABS-AUX.TR-3SG.ERG-PST

  'S/he refused to participate in any exhibitions.' (ETC: Berria, 2019-09-14)

Only clauses in which the CC was clearly an argument of the CEP in question were considered, excluding occurrences with two coordinated CEPs as well as clefts (as exemplified in (28a)) or clauses where the CC is referred to with a resumptive pronoun (as exemplified in (28b)).

(28) a. *Hemen gera-tze-a-Ø   da   proposa-tu d-u-te-n-a-Ø*
        here   stay-NMLZ-SG-ABS   COP.3SG   suggest-PFV   3SG.ABS-AUX.TR-3SG.ERG-REL-SG-ABS

        'Staying here is what they suggested.'

    b. *Etxe-Ø-ra joan daitez-ela,   hori   proposa-tu d-u-Ø*
        house-SG-ALL go   AUX.ITR.SUBJV.3PL-COMP   DEM.MED   suggest-PFV   3SG.ABS-AUX.TR-3SG.ERG

        'They should go home, this is what s/he suggested.'

The semantic annotation of CCs that have the necessary semantic properties to be interpreted as intentions (as discussed in Section 3.2) has to be taken with a grain of salt, however. The semantic context was often not clear enough to completely rule out one or the other reading, so that the decision for one reading reflects not only usage but also interpretation during annotation.

	IND			ABS/INS			other
CEP	**B**	**I**	**?**	**B**	**I**	**?**	
bururatu 'come to mind'	38	1	7		53		1
erabaki 'decide'	13	5	5		67		10
gogorarazi 'remind'	94		2			1	3
konbentzitu 'convince'	67		1		2		30
pentsatu 'think, plan'	91		1	1	5	1	1
proposatu 'suggest'	2		2		83	2	11
ukatu 'deny'	77			14	9		
zin egin 'swear'	28	63	7		1		1

Table 1: Complementation patterns of studied CEPs.

Table 1 summarizes the complementation patterns of the eight CEPs and the meanings the respective CCs occur with. Since the focus is here on the two CC types allowing both belief and intent readings, all other CC types (mostly purposive VNs and subjunctive clauses) are classified as "other". In the case of *gogorarazi* and *konbentzitu*, these are in fact the preferred ways to express intentions and absolutive/instrumental verbal nouns are rather infrequent. *Konbentzitu* is the only verb in the sample that, due to its argument structure with the addressee in the absolutive, takes verbal nouns in the instrumental instead of the absolutive.

	indicative	absolutive/instrumental VN	total
belief	411	15	426
intent	70	217	287
total	481	232	713

Table 2: Semantics of indicative clauses and absolutive or instrumental VNs in the studied corpus.

Although absolutive and instrumental verbal nouns as well as indicative clauses can express both beliefs and intentions, there are very clear preferences: as Table 2 shows, the overwhelming majority of indicative clauses express beliefs, whereas the overwhelming majority of absolutive/instrumental VNs express intentions. Most deviations in both cases are due to one verb each: 14 out of 15 VN beliefs are complements of *ukatu* 'deny', while 63 out of 70 indicative intents are complements of *zin egin* 'swear'. This will be discussed below in some more detail. Thus, while there is no strict mapping between form and meaning of a CC type, there are nevertheless very strong preferences that allow to classify indicative intent clauses and VN belief clauses as atypical form-meaning pairs.

CEP	belief	intent
gogorarazi 'remind'	94	3
pentsatu 'think, plan'	92	6
ukatu 'deny'	91	9
konbentzitu 'convince'	67	32
bururatu 'come to mind'	38	55
zin egin 'swear'	28	65
erabaki 'decide'	13	82
proposatu 'suggest'	2	94

Table 3: Proportion of the two meanings with each CEP..

Another difference in preference for either a belief or an intent complement can be observed among the CEPs. As Table 3 shows, although all eight verbs can have CCs expressing either beliefs or intentions, the frequency of those meanings is rather different, dividing them into two groups: *belief-prominent* CEPs that take belief CCs much more often than intent CCs and *intent-prominent* CCs that take intent CCs more often than belief CCs.

As mentioned above, there are striking differences between *ukatu* 'deny' and *zin egin* 'swear' on the one hand and the rest of the studied CEPs on the other hand with regard to the proportion of atypical CCs. In fact, as already shown in Table 1, most VN beliefs in the studied sample are found with *ukatu* and most indicative intents are found with *zin egin*.

Ukatu is what Cattell (1978) calls a *response-stance* predicate: it expresses a reaction to an assertion that was already brought forward in the discourse context and the content of its CC is thus given. Cross-linguistically, such CCs tend to show morphosyntactic similarities with nominals (Bogal-Albritten & Moulton 2018: 215) and it is thus not surprising that the use of a VN is more frequent in this context than with the other CEPs, the content of whose CCs is non-given. As for *zin egin*, on the other hand, the reasons for its deviating behaviour remain unclear. Since VN beliefs were so infrequent in the sample, with only 15 instances, occurring with 2 different CEPs, the sample was extended with all 27 occurrences of VN + *konbentzitu*,[7] which yielded 6 additional VN belief clauses. It is striking that all VN beliefs in the (extended) sample are either past tense like (29a) or stative like (29b) and (29c). This suggests that atypical belief clauses are found typically in contexts that are difficult or impossible to interpret as intentions, but it might also be an artefact of the annotation process since without much context, past and stative clauses were the ones most easily recognizable as beliefs. Syntactic considerations seem to play a role, too, since 16 out of 21 VN beliefs have a subject that is coreferential with the attitude holder in the matrix clause, as in (29a) and (29b), whereas this is the case in only 8 of the first 21 indicative belief complements of *ukatu*. Overt non-coreferential subjects do, however, also occur, as (29c) shows.

(29)   a. *[Erabaki   bat-Ø   har-tu   izan-a-z]   konbentzi-tu-ta, azken-eko oliba-a-Ø*
          decision   condemn-PFV   take-PFV be-SG-INS   convince-PFV-RES last-LK   olive-SG-ABS

       jaurtiki-Ø   d-u-t   gau-ea-n
       throw-PFV   3SG.ABS-AUX.TR-1SG.ERG night-SG-INE

       'Convinced that I had made a decision, I threw the last olive into the night.' (ETC: *Lagun armatua*, Raul Zelik (Edorta Matauko))
       b. *Neu-re   buru-a-Ø   [erantzukizun   aktibo-a-Ø   ez   iza-te-a-z]*
          1SG.EMPH-GEN   head-SG-ABS   responsibility   active-SG-ABS NEG   have-NMLZ-SG-INS

       konbentzi-tze-rik   izan-da   ere
       convince-NMLZ-PTT   have-RES also

       'Although I was able to convince myself that I did not have any active responsibility' (ETC: Berria, 2006-08-20)

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[7] The choice of this CEP was motivated primarily by convenience: the limited number of results for the regular expression *tz?eaz* immediately preceding the lemma allowed to look at all of them and discard those that were in fact not VNs. In this way, the number of non-past VNs can be directly compared to the number of past tense VNs occurring with the same CEP, which have to be searched for by means of a different regular expression.

c. *[Talde gehi-en-ak   sasoi-Ø-tik   kanpo ego-te-a-Ø]   pentsa-tu*
   team   many-SUP-PL.ABS fitness-SG-ABL out   be-NMLZ-SG-ABS think-INF

   daite-ke-en   arren
   AUX.ITR.3SG-POT-SUB   although

   'although (it is the beginning of the season and) one might think that most teams are not in good shape' (ETC: Egunkaria, 2001-10-02)

The observations from the corpus study lead to the following hypotheses:

1. Indicative beliefs and VN intentions are atypical.
2. Stative VN beliefs are more acceptable than their dynamic counterparts.
3. Past tense VN beliefs are more acceptable than their non-past counterparts.

Following these hypotheses, a questionnaire was designed in order to test which CC type can express which meaning given certain conditions. Although an effect of belief/intent prominence of the CEP was not visible in the corpus study, this factor was included in the questionnaire, too.

4   Testing the factors

4.1   Design of the study

The experiment was designed to test the effect of three factors on the availability of atypical form-meaning pairs: belief/intent prominence of the CEP, tense of the embedded clause and agentivity of the embedded clause, the latter consisting of the three-way opposition *dynamic predicate with coreferential agent* vs. *dynamic predicate with non-coreferential agent* vs. *stative predicate with non-coreferential subject*. Excluding intent contexts with stative predicates and/or non-coreferential subjects, which are generally more difficult to construe (cf. Section 3.13.2), this yields 14 logically possible combinations, shown in Table 3. Since non-future CCs cannot even be coerced to express intentions and the further factor of agentivity is thus unlikely to play a role, with non-future CCs the number of combinations to be tested was reduced to one with a belief-prominent and one with an intent-prominent CEP.

targeted meaning	CEP	tense	agentivity
belief	belief-prominent	non-future	coreferential agent
belief	belief-prominent	non-future	non-coreferential agent
belief	belief-prominent	non-future	stative
belief	belief-prominent	future	coreferential agent
belief	belief-prominent	future	non-coreferential agent
belief	belief-prominent	future	stative

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belief	intent-prominent	non-future	coreferential agent
belief	intent-prominent	non-future	non-coreferential agent
belief	intent-prominent	non-future	stative
belief	intent-prominent	future	coreferential agent
belief	intent-prominent	future	non-coreferential agent
belief	intent-prominent	future	stative
intent	belief-prominent	future	coreferential agent
intent	intent-prominent	future	coreferential agent

Table 4: Possible combinations of tested factors.

The aim was to choose CEPs that occur with both complementation patterns relatively frequently in order to ensure that a construction does not sound odd to speakers simply because the CC type is not commonly used with the CEP in question. This might be the case, for example, with instrumental VNs of *konbentzitu* or indicative CCs of *proposatu*, which are rather infrequent as shown in Table 1. Among the intent-prominent CEPs, the one with the most indicative clauses is *zin egin*, which, however, rarely occurs with VN complements. The second one, *bururatu* 'occur, come to mind' was thus a better choice. Among the belief-prominent CEPs, the one with the most VN occurrences would be *ukatu* 'deny', which, however, as mentioned in Section 3.3, deviates from other CEPs in this class in argument structure and givenness of the content of its CC. So instead the CEP with the second most VN occurrences was chosen, namely *pentsatu* 'think, plan'.

Since the constructions to be tested are the dispreferred ones, a production task would probably more often than not simply yield the preferred constructions. The factors were thus tested with a judgement task. Participants were given a short description of a situation describing either a belief or an intention. The stimuli were a sentence containing an indicative CC and the same sentence containing a VN CC, and participants were asked which of the two options describes the situation correctly. They could choose one, both or none of the options and had the opportunity to write a comment in a comment field. For the option(s) they did not choose, they were asked why they do not think it describes the situation correctly. The possible answers were "it sounds strange", "it means something else" and again a comment field. Offering also the preferred construction as an option allowed to control for other factors that might lead to unacceptability: if participants do not accept the preferred construction either, this indicates that their rejection is due to some other factors that are unrelated to the CC type.

The experiment was conducted entirely in Basque. Giving the context description in the target language without using the target structure (i.e. the CEP to be tested) already in the description

sometimes lead to a slight semantic discrepancy between the description and the stimuli,[8] which was noted by some attentive participants. This problem could have been avoided by giving the context in Spanish and French, but on the other hand, this might have primed the structures most similar to the ones in the contact languages.

All CEPs in the stimuli were in the perfective present, which expresses perfect, narrative present and hodiernal past and is equally compatible with belief and intent readings, unlike the imperfective that might favour a stative belief reading with *pentsatu*. The attitude holder was always third person. Word order was always CC-CEP. The two stimuli were always given with the dispreferred construction first, i.e. VN–indicative in belief contexts and an indicative–VN in intent contexts.

For each of the combinations in black in Table 4, one context was created, as well as two additional intent contexts, one with *pentsatu* and one with *bururatu*. The contexts and the targeted meanings of the stimuli are given in (30).

(30) a) belief, *pentsatu* – past – non-coreferential agent:

Context: Leire has told her friends that she is coming with the bus at 7 o'clock, but since she is always late, nobody is surprised when the bus arrives without her.

Targeted meaning of stimuli: 'They thought that Leire had missed the bus.'

b) belief, *pentsatu* – future – coreferential agent:

Grandma is turning 90 tomorrow and they are going to have a big party. Everyone is walking around busily and Zihara is a bit lost in the midst of the chaos, not knowing how to help. For this reason, she is happy when her mother tells her to sweep.

Targeted meaning of stimuli: 'Zihara thought that she was finally going to do something useful.'

c) belief, *pentsatu* – future – non-coreferential agent:

They have organized a *pilota*[9] tournament in the village. Joxemari isn't very interested in it, but he wants to see his grandchildren play, and since his son told him that the children would play at 3 o'clock, he comes to the *pilota* court around 3. There he learns, however, that there has been a change in the program and the children are going to play at 4 o'clock.

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[8] For example, the context for the two stimuli supposed to express 'It came to Amaiur's mind that s/he was going to travel outside of Europe for the first time in his/her life and s/he got nervous' was 'Amaiur is going to Egypt on vacation. S/he has never been outside of Europe and when s/he realizes this, s/he gets a bit nervous.'. Quite a few participants remarked that coming to mind is not the same as realizing, which is of course correct.

[9] A ball game that is very popular in the Basque Country.

Targeted meaning of stimuli: 'Since he thought that the children were going to play at 3 o'clock, Joxemari came too early.'

d) belief, *pentsatu* – future – stative:

Alaitz's nieces/nephews are going to visit her on the weekend. For this reason she declines when Nerea suggests to go to a classical concert on Saturday night: "It will be boring for the children."

Targeted meaning of stimuli: 'Alaitz thought that the concert would be boring for the children.'

e) belief, *bururatu* – past – non-coreferential agent:

Aritz has agreed with Maddi to meet at five o'clock, but it is already 17:20 and Maddi hasn't appeared. Aritz starts to wonder: "Maybe we have misunderstood each other?"

Targeted meaning of stimuli: 'It came to Aritz's mind that they had maybe misunderstood each other.'

f) belief, *bururatu* – future – coreferential agent:

Amaiur is going to Egypt on vacation. S/he has never been outside of Europe and when s/he realizes this, s/he gets a bit nervous.

Targeted meaning of stimuli: 'It came to Amaiur's mind that s/he was going to travel outside of Europe for the first time in his/her life and s/he got nervous.'

g) belief, *bururatu* – future – non-coreferential agent:

Xuban has made a cake and intends to leave it on the balcony so that it cools faster, but then he remembers the birds that eat everything left on the balcony, and he decides to leave the cake inside.

Targeted meaning of stimuli: 'It came to Xuban's mind that if he leaves the cake on the balcony, the birds will eat it.'

h) belief, *bururatu* – future – stative:

After having been hot for a week, it is cold again. Garazi thinks that it's a pity, but then she remembers that her brother had been complaining about the heat the whole week. So he will be happy.

Targeted meaning of stimuli: 'It came to Garazi's mind that her brother will be happy.'

i) intent, *pentsatu* – future – coreferential agent:

Harkaitz and Ander are going to adopt a cat next weekend. They have spent a long time searching for a name and they have found that they like "Pirritx" a lot.

Targeted meaning of stimuli: 'Harkaitz and Ander plan to name the cat Pirritx.'

j) intent, *pentsatu* – future – coreferential agent:

Liher's friends are planning to organize a surprise party for his birthday. In school they cannot talk without Liher noticing and they have thought about other possibilities. Meeting in the afternoon in a café seemed like a good idea to them.

Targeted meaning of stimuli: 'In order for Liher not to notice, they planned/decided to meet in the afternoon in a café.'

k) intent, *bururatu* – future – coreferential agent:

The young people are playing football on the beach. It is hotter than expected and suddenly one of them has an idea: "Let's all swim in the sea, what do you think?"

Targeted meaning of stimuli: 'It came to someone's mind that they should all swim in the sea.'

l) intent, *bururatu* – future – coreferential agent:

As Joana is waiting for her friends on the town square, she starts talking to Ibai, and since he is also waiting for his friends, they decide to have a coffee together. They enjoy themselves very much and Joana wants to repeat this as soon as possible. Tomorrow afternoon she has no plans and she has the idea to invite Ibai for another coffee.

Targeted meaning of stimuli: 'It came to Joana's mind to invite Ibai tomorrow for another coffee.'

These twelve tasks were then divided into two questionnaires, ensuring an equal distribution of each value of the tested parameters across the two questionnaires, and each participant was assigned one of them randomly.

The questionnaire was created using SoSci Survey (Leiner 2024) and made available on www.soscisurvey.de. It was distributed predominantly via social media.
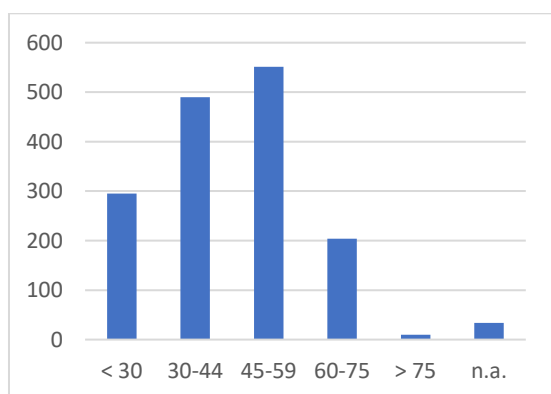
4.2 Participants

The questionnaire was filled in by 1584 participants. They came from all seven provinces of the Basque Country, but participants from the small Northern provinces Lapurdi, Low Navarre and Zuberoa, located in the French part of the Basque Country, make up only 2% of all participants from inside the Basque Country (while these provinces are home to 6% of Basque speakers (cf. Eusko Jaurlaritza et al. 2021)). Figure 1 shows the number of participants per province.
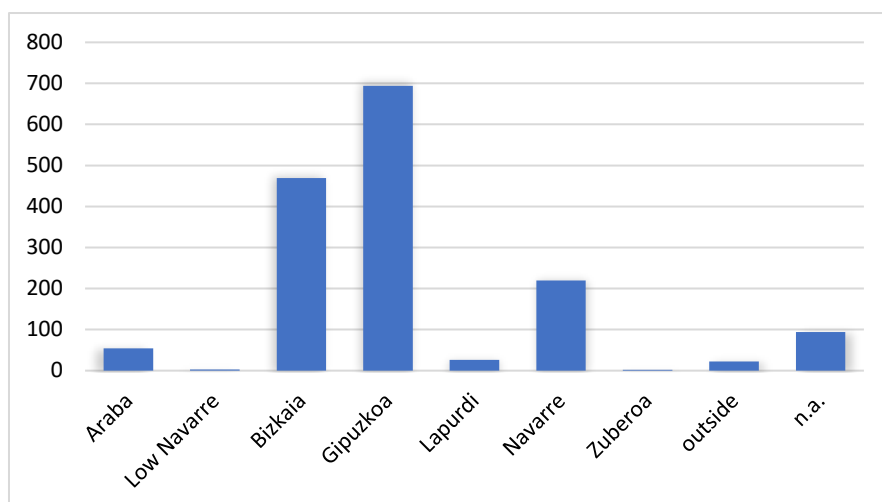
Figure 1: Origin of participants.

Participants came from all age classes, with the majority being younger than 60, as shown in Figure 2.
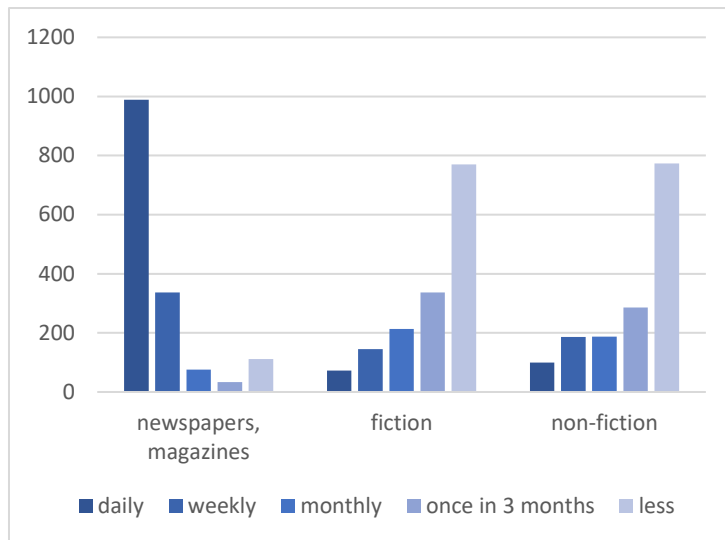

Figure 2: Age of participants.

The vast majority of participants speak Basque every day and read newspapers and magazines in Basque at least weekly (Figure 3 and Figure 4). They are thus familiar not only with spoken but also with written forms of the language.
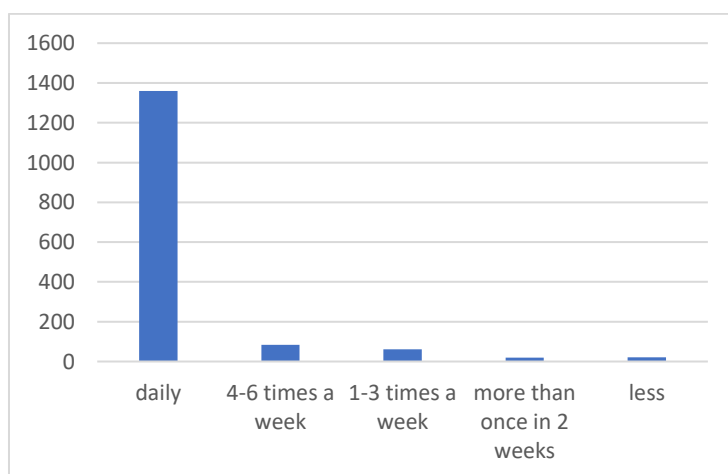
Figure 3: Frequency of speaking Basque.

Figure 4: Frequency of reading in Basque.

5 Results

5.1 Canonical readings of the CC types

	meaning	CEP	tense	agentivity	acceptance
a)	belief	belief-prominent	past	non-coreferential agent	12,2%
b)	belief	belief-prominent	future	coreferential agent	11,8%
c)	belief	belief-prominent	future	non-coreferential agent	5,8%
d)	belief	belief-prominent	future	stative	3,8%
e)	belief	intent-prominent	past	(partially) coreferential agent	47,9%
f)	belief	intent-prominent	future	coreferential agent	48%
g)	belief	intent-prominent	future	non-coreferential agent	2,5%
h)	belief	intent-prominent	future	stative	4,2%
i)	intent	belief-prominent	future	coreferential agent	57,4%
j)	intent	belief-prominent	future	coreferential agent	53,5%
k)	intent	intent-prominent	future	(partially) coreferential agent	14%
l)	intent	intent-prominent	future	coreferential agent	61,4%

Table 5: Acceptance of atypical form-meaning pairs in tested contexts.

	meaning	properties	reason for rejection		
			"sounds strange"	"means something else"	other
a)	belief	B-PST-NAG	69,5%	19,3%	11,2%
b)	belief	B-FUT-AG	9,3%	82,6%	8,1%
c)	belief	B-FUT-NAG	33,9%	49,4%	16,7%
d)	belief	B-FUT-STAT	44,3%	43,8%	11,9%

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e)	belief	I-PST-(AG)	67,3%	24,5%	8,3%
f)	belief	I-FUT-AG	14,7%	75,7%	9,5%
g)	belief	I-FUT-NAG	49,1%	42,8%	8,1%
h)	belief	I-FUT-STAT	55,4%	33,2%	11,4%
i)	intent	B-FUT-AG	38,7%	52,4%	8,9%
j)	intent	B-FUT-AG	57,8%	34,3%	8,0%
k)	intent	I-FUT-(AG)	29,2%	61,9%	8,9%
l)	intent	I-FUT-AG	34,5%	54,6%	10,9%

Table 6: Reasons for rejecting atypical form-meaning pair.

Table 5 summarizes the percentage of participants that accepted the atypical form in a context with certain properties. The acceptance rate was calculated based on those cases where at least one of the options was chosen, in order to filter out factors other than the form of the CC that might have influenced the judgement. Table 6 shows what reasons participants gave for rejecting the atypical form-meaning pair. "Sounds strange" and "means something else" where offered as choices, "other" refers to cases where participants chose neither but gave their reasons in the comment field. In many cases this was simply "it's wrong", in others it was something along the lines of "it's ok, but I prefer the other option" or "it's understandable but I wouldn't say it like that".

What is most conspicuous in Table 5 is that participants were in general more inclined to accept indicative intents than VN beliefs. While the former were, with one exception to be discussed below, accepted by slightly more than half of the participants, the latter generally had a very low score (with two exceptions). The reason for the high acceptance rate of indicative beliefs is, however, probably primarily pragmatic, since intentions and beliefs about what one will do largely coincide in practice. In (31), for example, if Harkaitz and Ander plan to name the cat Pirritx, they probably also think that they will do so.

(31)   Context i): Harkaitz and Ander are going to adopt a cat next weekend. They have spent a long time searching for a name and they have found that they like "Pirritx" a lot.

IND: *Harkaitz eta Anderr-ek$_i$ [_$_{\mathbf{i},j}$[10]   katu-a-ri   Pirritx   izen-a-Ø   jarr-i-ko*
　　 Harkaitz and Ander-ERG　　　　 cat-SG-DAT Pirritx name-SG-ABS put-INF-FUT

　　 d-i-o-te-la]　　　　　　　　　　 *pentsa-tu*　 *d-u-te*
　　 3SG.ABS-AUX.DITR-3SG.DAT-3PL.ERG-COMP think-PFV　 3SG.ABS-AUX.TR-3PL.ERG

　　 Targeted meaning: 'Harkaitz and Ander plan to name the cat Pirritx.'

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[10] Indices refer to grammatically possible (co-)reference, the intended reference is printed in bold.

Since "an intention report comes along with the expectation that the attitude holder believes the named outcome to be within the realm of possibility" (Grano 2017: 590), not believing in the realization of one's intentions is in many contexts pragmatically odd, but of course one can never be certain that nothing impedes the realization of one's intentions. Participants who did not accept the indicative clause in intent contexts in fact often argued that it expresses a higher degree of certainty than the VN complement and that, for example, Harkaitz and Ander only have a plan but cannot know for sure that this will indeed happen. One participant commented on indicative clauses in intent contexts: "orokorrean, zehatzagoak dira es[a]ldi hauek. bai ala bai betetzekoak." ("In general, these sentences are more concrete, they are to happen inevitably.")

For others, the control of the attitude holder over the action in the complement got lost in one way or the other when an indicative clause was used. Quite a few participants stated that it sounded like the CC had an agent different from the attitude holder: "Ez dirudi katuak Harkaitz edo Anderrengandik izena jasoko duenik, beste perstona batzuek izena jarriko diotela dirudi, eta Harkaitz eta Anderrek hori pentsatu dutela dirudi." ("It does not sound as if the cat is going to receive its name from Harkaitz or Ander, it sounds as if others will name it and Harkaitz and Ander have thought that.")

The same thought was also on the minds of the participants who commented on (32) that *Ibai* was lacking the ergative marker, interpreting the sentence as 'It came to Joana's mind that Ibai will invite her tomorrow for another coffee': apparently, for them the construction made sense only if the attitude holder Joana was not the agent of the embedded clause.

(32) Context l): As Joana is waiting for her friends on the town square, she starts talking to Ibai, and since he is also waiting for his friends, they decide to have a coffee together. They enjoy themselves very much and Joana wants to repeat this as soon as possible. Tomorrow afternoon she has no plans and she has the idea to invite Ibai for another coffee.

IND: $[\_\textbf{i,j}$ *Ibai-Ø* *bihar* *beste* *kafe-txo* *bat-Ø* *har-tze-ra* *gonbida-tu-ko*
Ibai-ABS tomorrow other coffee-DIM INDF-ABS take-SG-INE invite-INF-FUT

d-u-Ø-ela] *burura-tu* *zai-o* *Joana-ri*$_i$
3SG.ABS-AUX.TR-3SG.ERG-COMP occur-PFV 3SG.ABS.AUX.EITR-3SG.DAT Joana-DAT

Targeted meaning: 'It came to Joana's mind to invite Ibai tomorrow for another coffee.'

Another possibility going in the same direction is construing the attitude holder as not having control over what will happen to them. One participant commented on (33): "Ematen du zoriaren esku utziko dutela geldituko diren edo ez." ("It sounds like they will leave it to chance whether they will meet or not.")

(33)   Context j): Liher's friends are planning to organize a surprise party for his birthday. In school they cannot talk without Liher noticing and they have thought about other possibilities. Meeting in the afternoon in a café seemed like a good idea to them.

IND: *Liher-Ø   kontura-tu   ez   dadi-n   [arratsalde-a-n   _i,j   kafetegi-a-n*
       Liher-ABS   notice-INF   NEG   AUX.ITR.SUBJV.3SG-SUB   afternoon-SG-INE   café-SG-INE

       gera-tu-ko   dir-ela]   pentsa-tu   d-u-te_i
       stay-INF-FUT   AUX.ITR.3PL-COMP   think-PFV   3SG.ABS-AUX.TR-3PL.ERG

Targeted meaning: 'In order for Liher not to notice, they planned/decided to meet in the afternoon in a café.'

These intuitions show two things: first, for the speakers in question, indicative clauses can only express beliefs, and second, for many of them a belief reading works only if the attitude holder is not the agent of the embedded action, because otherwise they probably have difficulties to see why the complement would be construed as a belief and not as an intention.

Participants who did accept the indicative clauses, on the other hand, probably interpreted them as beliefs, too, but did not see a big difference between the belief and the intent reading. In order to tease them apart, one would have to come up with contexts where an intention is more clearly different from the corresponding belief.

One context where the difference is clearer is (34), where the coreference between the attitude holder and the embedded agent is only partial, so that the attitude holder can be less certain about the outcome than in cases where the intended action is carried out by themselves alone: intending for all to do something and believing that all will do it are clearly two different things.

(34)   Context k): The young people are playing football on the beach. It is hotter than expected and suddenly one of them has an idea: "Let's all swim in the sea, what do you think?"

IND: *[Den-ak_{i+j, j}   itsaso-a-n   baina-tu-ko   dir-ela]   burura-tu*
       all-PL.ABS   sea-SG-INE   bath-INF-FUT   AUX.ITR.3SG-COMP   occur-PFV

       zai-o   norbait-i_i
       3SG.ABS.AUX.EITR-3SG.DAT   someone-DAT

Targeted meaning: 'It came to someone's mind that they should all swim in the sea.'

(34) has by far the lowest acceptance rate of all indicative clauses in intent contexts, namely 14%.[11] Like with the other indicative clauses in belief contexts, here, too, at least one participant

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[11] Interestingly, it was modelled on an example from the corpus:

got a reading with disjoint reference: "Bainatuko direnak beste batzuk dira, baina ez ideia hori izan duena" ("The ones who are going to swim are other people, not the one who had this idea.") For some others it sounded like an action in the remote future: "Etorkizun urruna dirudi, momentuko erabakiaren ordez" ("It sounds like a distant future instead of a decision in that moment.") Most participants, however, argued that if one person has the idea, this does not mean that all of them will in fact do it, thus again arguing with the higher certainty attributed to belief clauses: "Denak ba[i]natzeko gogoa izango dutela ziurtzat jotzen du" ("It presents it as certain that all of them will be up for swimming."), "Proposamen bat egin du, ez predikzio edo agindu bat." ("S/he has made a suggestion, not a prediction or a command.")

Thus if the belief reading is more clearly different from the intent reading, this is immediately reflected in a much lower acceptance of indicative clauses. The fact that the attitude holder does not have full control over the fulfilment of the intention in context k) does, on the other hand, not seem to be a problem when a VN is used: this construction was accepted by 90,4% of all participants.

It seems thus that for most speakers indicative clauses invariably express beliefs not intentions and their acceptance (and usage) in contexts where an intention can be construed as well is due to the large overlap between these situations.

Such an overlap between a belief and an intent reading was less available in the belief contexts. There was, however, one case where apparently many participants slipped to the intent reading, namely (35), where the use of *bururatu* was probably a bit too forced.

(ii) *Jadanik   erdi   izerdi-ta-n,   [den-ok   itsaso-a-n   baina-tu-ko   gine-la]   burura-tu*
     already   half   sweat-TRN-INE   all-PROX.PL   sea-SG-INE   bath-INF-FUT   AUX.ITR.1PL.PST-COMP   occur-PFV

zitzai-o-n   norbait-i,   Ludwig-i   uste   d-u-da-n-ez
3SG.ABS.AUX.EITR-3SG.DAT-PST   someone-DAT   Ludwig-DAT   opinion   3SG.ABS-AUX.TR-1SG.ERG-SUB-INS

'When we were already starting to sweat, someone, Ludwig I think, had the idea that we should all swim in the sea.' (EANC: *Euliak ez dira argazkietan azaltzen*, Joxemari Iturralde)

(35)   Context f): Amaiur is going to Egypt on vacation. S/he has never been outside of Europe and when s/he realizes this, s/he gets a bit nervous.

VN: *[_i,j*   *bere*   *bizitza-a-n*   *lehenengo*   *aldi-z*   *Europa-tik*   *kanpo-ra*
       3SG.POSS.REFL   life-SG-INE   first   time-INS   Europe-ABL   outside-ALL

bidaia-tze-a-Ø]   *burura-tu*   *zai-o*   *Amaiurr-i_i*   *eta*   *urduri-tu*
travel-NMLZ-SG-ABS   occur-PFV   3SG.ABS.AUX.EITR-3SG.DAT   Amaiur-DAT   and   get_nervous-INF

egin-Ø   *da*
do-PFV   AUX.ITR.3SG

IND: *[_i,j*   *bere*   *bizitza-a-n*   *lehenengo*   *aldi-z*   *Europa-tik*   *kanpo-ra*
        3SG.POSS.REFL   life-SG-INE   first   time-INS   Europe-ABL   outside-ALL

bidaia-tu-ko   *d-u-Ø-ela]*   *burura-tu*   *zai-o*
travel-INF-FUT   3SG.ABS-AUX.TR-3SG.ERG-COMP   occur-PFV   3SG.ABS.AUX.EITR-3SG.DAT

Amaiurr-i_i   *eta*   *urduri-tu*   *egin-Ø*   *da*
Amaiur-DAT   and   get_nervous-INF   do-PFV   AUX.ITR.3SG

Targeted meaning: 'It came to Amaiur's mind that s/he was going to travel outside of Europe for the first time in his/her life and s/he got nervous.'

Many participants remarked that they would not use the verb in this context and some said that the event of coming to Amaiur's mind had already happened earlier, referring to the moment when Amaiur had the idea to travel to Egypt, which would be an intent reading. This is further supported by the fact that almost 75% of those who chose the VN did not choose the indicative clause. The very high acceptance rate of the construction with a VN, namely 48%, thus apparently stems mostly from intent readings.

In the other belief contexts, however, participants often justified their rejection of the construction with a VN arguing that this would sound like an intention. For example, participants described (36) as follows:

"Inork ezer esan barik zerbait egitea erabaki duela esan nahi du." ("It means that she has decided to do something without anyone saying anything.")

"Zihararen ideia izan dela adierazten du, ez amarena" ("It expresses that it was Zihara's idea, not her mother's")

(36) Context b): Grandma is turning 90 tomorrow and they are going to have a big party. Everyone is walking around busily and Zihara is a bit lost in the midst of the chaos, not knowing how to help. For this reason, she is happy when her mother tells her to sweep.

VN: *Zihara-k$_i$* *[_$_{i,j}$* *azken-ea-n* *zerbait* *probetxuko-a-Ø* *egi-te-a-Ø]*
Zihara-ERG   last-SG-INE   something   useful-SG-ABS   do-NMLZ-SG-ABS

pentsa-tu *d-u-Ø*
think-PFV   3SG.ABS-AUX.TR-3SG.ERG

Targeted meaning: 'Zihara thought that she was finally going to do something useful.'

The same is true to some extent even when the embedded agent or subject is not coreferential with the attitude holder, although in these contexts the percentage of participants stating that the sentence "means something else" drops from 75,7-82,6% to 33,2-49,4% (cf. Table 6). On (37), participants commented that it sounds as if Alaitz wants to deliberately make the concert boring for the children. As one participant puts it: "Aditzera ematen du Alaitzek umeak asperrarazi nahi dituela gehiagotan ez etortzeko." ("It sounds like Alaitz wants to bore the children so that they don't come anymore.")

(37) Context d): Alaitz's nieces/nephews are going to visit her on the weekend. For this reason she declines when Nerea suggests to go to a classical concert Saturday night: "It will be boring for the children."

VN: *[Kontzertu-a-Ø* *ume-Ø-entzat* *aspergarri-a-Ø* *iza-te-a-Ø]* *pentsa-tu*
concert-SG-ABS   child-PL-DEST   boring-SG-ABS   be-NMLZ-SG-ABS   think-PFV

d-u-Ø *Alaitz-ek*
3SG.ABS-AUX.TR-3SG.ERG   Alaitz-ERG

Targeted meaning: 'Alaitz thought that the concert would be boring for the children.'

In a similar vein, for (38) a participant commented: "Txoriek zer jango duten ezin du Xubanek erabaki. Gainera, ez da hori berak nahi zuena." ("It's not Xuban who can decide what the birds will eat. Besides, that's not what he wanted.")

(38) Context g): Xuban has made a cake and intends to leave it on the balcony so that it cools faster, but then he remembers the birds that eat everything left on the balcony, and he decides to leave the cake inside.

VN: *[Bizkotxo-a-Ø balkoi-a-n utz-i-z gero txori-e-k ja-te-a-Ø]*
cake-SG-ABS   balcony-SG-INE leave-PFV-INS after bird-PL-ERG eat-NMLZ-SG-ABS

burura-tu zai-o Xuban-i
occur-PFV 3SG.ABS.AUX.EITR-3SG.DAT Xuban-DAT

Targeted meaning: 'It occurred to Xuban that if he leaves the cake on the balcony, the birds will eat it.'

Apparently the use of the VN is for many speakers so strongly associated with the intent reading that this overrides the semantic restrictions on intentions. The association persists even if speakers cannot make any sense of this interpretation. On (39), which has also a non-coreferential subject, a participant commented: "Garazik ezin du anaiaren poztasuna kontrolatu, semantikoki ez du zentzurik." ("Garazi can't control her brother's happiness, it doesn't make any sense semantically.") Another one could only imagine the construction expressing something else than the targeted belief reading even though they could not see what: "Arraroa da eta, aldi berean, ondo egotekotan (arrarotasun horretan "ondo"), beste zerbait esan nahiko luke" ("It is strange and at the same time, if it was correct ("correct" in its strangeness), it would mean something else")

(39) Context h): After having been hot for a week, it is cold again. Garazi thinks that it's a pity, but then she remembers that her brother had been complaining about the heat the whole week. So he will be happy.

VN: *[Anaia-a-Ø pozik ego-te-a-Ø] burura-tu zai-o Garazi-ri*
brother-SG-ABS happy be-NMLZ-SG-ABS occur-PFV 3SG.ABS.AUX.EITR-3SG.DAT Garazi-DAT

Targeted meaning: 'It occurred to Garazi that her brother will be happy.'

5.2   Properties influencing the reading of VN complements

The data is not conclusive as to whether aktionsart plays a role, since acceptance of VN beliefs is very low for both stative and two of the dynamic CCs (cf. Table 5). The results are much clearer regarding tense: if we exclude context f), where most participants choosing the VN did so with an intent reading in mind, the acceptance of belief VNs is higher in all past tense contexts than in all non-past contexts, although the gap between the past context with the lowest acceptance and the non-past context with the highest acceptance is probably negligible. The

median acceptance of VNs in past tense contexts is, however, more than six times as high as in non-past belief contexts.

tense	acceptance	median acceptance
past	12,2% - 47,9%	30,5%
non-past	2,5% - 3,8% - 4,2% - 5,8% - 11,8%	4,2%

Table 7: Acceptance in past and non-past contexts.

Nevertheless, it is apparent from Table 7 that there are notable differences inside the classes of past and non-past contexts. These seem to be due not to a semantic but a syntactic factor: the expression of the embedded subject. As already observed in the corpus study, overt subjects seem to be clearly dispreferred with VNs, since almost all clauses with a (coreferential) null subject got a better score than almost all clauses with an overt non-coreferential subject. Controlling for the factor of tense, this is true of all clauses:

	past	non-past
coreferential subject	47,9%	11,8%[12]
non-coreferential subject	12,2%	Ø 4,1%

Table 8: Subject coreference and tense.

The VN belief clause with the highest acceptance, amounting to almost half of the participants, is thus the one in (40), which is both past tense and has a (partially) coreferential non-overt subject.

(40)   Context e): Aritz has agreed with Maddi to meet at five o'clock, but it is already 17:20 and Maddi hasn't appeared. Aritz starts to wonder: "Maybe we have misunderstood each other?"

VN: $[\_{i+j,j}$ *agian*   *elkar-Ø*   *gaizki*   *uler-tu*   *izan-a-Ø]*   *burura-tu*
          maybe   RECIP-ABS   wrong   understand-PFV   be-SG-ABS   occur-PFV

zai-o   *Aritz-i$_i$*
3SG.ABS.AUX.EITR-3SG.DAT   Aritz-DAT

Targeted meaning: 'It came to Aritz's mind that they had maybe misunderstood each other.'

In the contexts with a non-coreferential embedded subject, many participants did in fact state that the VN would only work if the subject of both clauses was the same. For (38), a participant commented: "Gaizki dago edozein gauza adierazteko. Ergatiboa (txoriek) traba egiten du beste esanahia izateko." ("It is wrong for expressing anything. The ergative (the birds) is an obstacle

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[12] Context f), whose acceptance rate is mostly due to an intent reading, was excluded here again.

for it to have another meaning.") With non-past VNs the reasons might be semantic as well as syntactic: for most speakers the VN can only express an intention, but it can be rather difficult to get an intent reading when the embedded agent is different from the attitude holder. The fact that the same effect can also be observed with past tense VNs, which cannot express intentions anyway, suggests, however, that there is in fact a dispreference of overt subjects with VNs for syntactic reasons.

Contrary to this observation, however, most comments on (41) suggest that the problem is not so much the overt subject but rather the CEP.

(41) Context a): Leire has told her friends that she is coming with the bus at 7 o'clock, but since she is always late, nobody is surprised when the bus arrives without her.

VN: *[Leire-k   autobus-a-Ø   gal-du   izan-a-Ø]   pentsa-tu   d-u-te*
Leire-ERG   bus-SG-ABS   miss-PFV   be-SG-ABS   think-PFV   3SG.ABS-AUX.TR-3PL.ERG

Targeted meaning: 'They think that Leire has missed the bus.'

(41) has the second highest acceptance rate of VN CCs in belief contexts, but nevertheless 87,2% of participants rejected it. Some commented that the structure cannot be used when the embedded subject is different from the matrix subject, but more often participants saw the problem with the CEP: "Galdu izana aditzarekin[ ]ez dator bat" ("Galdu izana does not fit with the verb"), "Izana + pentsatu arraroa" ("Izana + pentsatu is strange"), and they gave examples of other matrix predicates with which the CC would work, some of them given in (42). Note that the CC occupies all kinds of different syntactic contexts in these examples and in (42c) it is a P, just as with *pentsatu*.

(42) a. S
[Leire-k   autobus-a-Ø   gal-du   izan-a-Ø]   ez   zai-e
Leire-ERG   bus-SG-ABS   miss-PFV   be-SG-ABS   NEG   3SG.ABS.AUX.EITR-3PL.DAT

harri-tze-ko-a-Ø   irudi-tu
surprise-NMLZ-LK-SG-ABS   seem-PFV

'The fact that Leire had missed the bus didn't seem surprising to them.'

b. A
[Leire-k   autobus-a-Ø   gal-du   izan-a-k]   plan-ak   alda-tu
Leire-ERG   bus-SG-ABS   miss-PFV   be-SG-ERG   plan-PL.ABS   change-PFV

zizk-i-e-Ø-n
3PL.ABS-AUX.DITR-3PL.DAT-3SG.ERG-PST

'Leire having missed the bus changed their plans.'

c. P

[Leire-k   autobus-a-Ø   gal-du   izan-a-Ø]   espero   d-u-te
Leire-ERG   bus-SG-ABS   miss-PFV   be-SG-ABS   hope/expect   3SG.ABS-AUX.TR-3PL.ERG

'They hope/expect that Leire has missed the bus.'

d. Oblique

[Leire-k   autobus-a-Ø   gal-du   izan-a-z]   kexa-tu   dira
Leire-ERG   bus-SG-ABS   miss-PFV   be-SG-INS   complain-PFV   AUX.ITR.3PL

'They complained about Leire having missed the bus.'

Semantically, however, the suggested contexts have in common, and in this differ from *pentsatu*, that their CC is not assertive, but desiderative in the 'hope' reading of (42c) and factive in the other three cases. The latter is in line with the cross-linguistic observation that factive or given complements tend to be more similar to nominals morphosyntactically (see Bogal-Albritten & Moulton 2018: 215–216 for an overview), and also with the language-internal observation that *ukatu* 'deny', as discussed briefly in Section 3.3, occurs with VN beliefs much more frequently than the other CEPs in the sample.

The only alternative matrix clause offered for context e) (the past tense context of *bururatu*), given in (43), is factive as well:

(43) *Hau   da   marka-a-Ø, gu-Ø   gaizki   uler-tu   izan-a-Ø   ere!*
     DEM.PROX.ABS   COP.3SG   mark-SG-ABS   1PL-ABS   wrong   understand-PFV   be-SG-ABS   also

'Imagine that, that we had indeed misunderstood each other!'

A difference between belief-prominent *pentsatu* and intent-prominent *bururatu* with respect to the availability of atypical CCs, on the other hand, could not be observed. Table 9 compares the acceptance rates of the two CEPs. There are notable differences in some lines, but, besides favouring the exact opposite of what one might expect, they all can be explained by other factors: in the past tense, the difference is due to the presence or absence of an overt subject, with FUT-AG and FUT-NAG it is due to the more widespread construal of the CC as an intention in one of the cases and in the intent contexts it is due to the clearer difference between the belief and the intent reading in one of the contexts.

	belief-prominent	**intent-prominent**
belief: PST	12,2%	47,9%
belief: FUT-AG	11,8%	48%
belief: FUT-NAG	5,8%	2,5%
belief: FUT-STAT	3,8%	4,2%
intent	Ø 55,45%	Ø 37,7%

Table 9: Comparison between belief-prominent *pentsatu* and intent-prominent *bururatu*.

6 Conclusion

Cross-linguistically, there is a striking correlation between representational attitudes and the use of balanced CCs on the one hand and between preferential attitudes and the use of deranked CCs on the other hand. This enables a widespread alternation where the same CEP can express a representational and a preferential attitude using two different CC types for the two different readings.

Although there are deviations, by and large this correlation holds in Basque, too. What looks like indicative intent clauses at first glance, at closer examination turns out to rather express beliefs that overlap pragmatically with intentions, although a more detailed examination would be necessary in order to see whether this is true in all cases.

VNs, on the other hand, although apparently spilling over from response-stance and factive to assertive contexts in their progressive expansion to new contexts (cf. Trask 1995: 219), are still only very marginally acceptable as belief complements of belief/intent CEPs. In fact, speakers are reluctant to interpret them as beliefs even when an intent reading does not make any sense to them.

They improve, however, a lot when the CC is past tense. This shows that CC type alone is not decisive but material in the CC can improve the suitability of a CC type that is otherwise dispreferred in the given context. In fact, syntax and semantics interact in several ways: while the choice of CC type depends primarily on the semantic type of the complement, this structural criterion is relaxed if the intent reading is ruled out for semantic reasons. Belief complements thus have to be recognizable as beliefs either on structural or on semantic grounds. However, this seems to include only a very restricted set of semantic properties, possibly only tense, while mere semantic implausibility of the intent reading is not enough to yield a belief reading.

Belief VNs are, on the other hand, not only avoided when they could be mistaken for intents: other assertive attitude predicates like *esan* 'say' or *uste izan* 'think, be of the opinion', which only have one reading, do not combine with VN CCs either. Thus, apparently absolutive VNs are strongly dispreferred for expressing assertions, although they are in principle big enough to

express Propositions, as evidenced by their use as factive complements. What they lack, however, is the structural similarity to declarative main clauses, which seems to make them less suitable to express representational attitudes. This supports Hacquard & Lidz's (2019) claim that representational attitudes are cross-linguistically linked to the properties of declarative main clauses.

This study is only a first step towards understanding the complementation patterns of CEPs alternating between a belief and an intent reading and the factors determining one or the other reading in Basque. Many questions still remain to be answered, like the role of aktionsart or whether further elements in the CC that are likely to rule out an intent reading, like sentence adverbs and discourse particles, can increase the acceptability of VN belief clauses, too.

Furthermore, since the alternation seems to be very widespread cross-linguistically, it will also be insightful to look at the patterns in typologically, genetically and geographically diverse languages and see in what ways they are similar and different and what the pervasiveness of this alternation can tell us about the lexical semantics of the verbs in question and about human cognition in general.

Abbreviations

1	1st person	ITR	Intransitive
3	3rd person	LAT	Lative
IV	class IV	LCONT	Location with contact
V	class V	LK	Linker
A	A argument	MED	Medial
ABL	Ablative	MP	Mediopassive
ABS	Aboslutive	NEG	Negation
ABST	Abstract suffix	NFN	Non-finite
ACC	Accusative	NMLZ	Nominalizer
AG	Agentive	NTR	Neutral aspect
ALL	Allative	OBJ	Object
ART	Article	OBL	Oblique
AUX	Auxiliary	P	P argument
CAUS	Causative	PFV	Perfective
COMP	Complementizer	PL	Plural
CONT	Continuous	POSS	Possessive
COP	Copula	POT	Potential

DAT	Dative	PRF	Perfect
DEM	Demonstrative	PROX	Proximate
DEST	Destinative	PST	Past
DIST	Distal	PTT	Partitive
DITR	Ditransitive	PUR	Purposive
EITR	Extended intransitive	RECIP	Reciprocal
EMPH	Emphatic	REFL	Reflexive
ERG	Ergative	REL	Relative
FUT	Future	RES	Resultative participle
GEN	Genitive	SG	Singular
HPL	Human plural	SUB	Subordinator
ICVB	Imperfective converb	SUBJV	Subjunctive
INDF	Indefinite	SUP	Superlative
INE	Inessive	TALK	Talk class
INF	Infinitive	TR	Transitive
INS	Instrumental	TRN	Transnumeral
IPFV	Imperfective	UWPST	Unwitnessed past

Supplementary files

Supplementary file 1: Corpus study

Supplementary file 2: Responses of participants

Available at: https://osf.io/29r4j/?view_only=fd2c69b77d2849fa9ba37ac18500976d

Acknowledgements

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