

The syntax and semantics of locative *there*-sentences in Italian

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In this paper we examine the syntactic and semantic properties of Italian locative *there*-sentences. We present an analysis according to which they represent instantiations of a structure in which *there be* is a predicate derived by syntactic incorporation of *ci* with *essere* (*esserci*). The predicate *esserci* takes two arguments, a Theme and a Location. The hypothesis that *esserci* has a predicative function (Moro 1997) – instead of a copular one, as proposed under alternative theoretical approaches – is grounded on our empirical observation that *esserci* displays variation in meaning in the different contexts of use, a property that only predicates, and not copulas, may have. After considering existing analyses, we perform a thorough corpus investigation to support our hypothesis, we identify and classify the relevant variation, and we put forth a classification of locative *there*-sentences based on the semantics of the arguments, i.e. whether they denote a concrete or an abstract entity. From a theoretical point of view, we propose that the observed meaning variation of the predicate *esserci* in locative *there*-sentences is derived by application of the principle of semantic co-composition (Pustejovsky 2012).

KEYWORDS: locative *there*-sentences, argument structure, syntax-semantics interface, co-composition, corpus analysis, Italian.

1. Introduction

There-sentences belong to a group of structures that in syntactic studies are traditionally analysed as copular constructions called ‘nominal predicates’.¹ These include various subtypes such as: equatives, locatives, possessives and existentials. As the term ‘nominal predicates’ suggests, in these accounts it is assumed that the predication is expressed by the noun, adjective or adpositional phrase with which *to be* co-occurs. These constructions are thus analysed as distinct from structures in which *to be* plays the role of predicate (Jezek 2011).

In this paper we will *examine there*-sentences, which are usually included in the ‘existentials’ subtype in syntax, and we will consider in particular the type that co-occurs with a locative expression.² An example in Italian, the language we will focus on in our study, is the following:

- (1) C' era pubblico in sala.
There be.PST.3SG audience in hall
'There was audience in the hall'

The aim of our work is to discuss the syntactic and semantic properties of Italian expressions like (1) under the hypothesis that they are instantiations of a structure in which *there be* is a predicate (*esserci*) and the nominal and adpositional phrases are its arguments, bearing the roles of Theme and Location, respectively. We call these expressions 'locative *there*-sentences'.³

The proposal that the form *esserci* is a predicate is not new, and different accounts of its formation have been provided in the literature (for an overview, see §2 and §3); however, the topic is still controversial. In this contribution we offer a perspective focusing on the syntax/semantics interface. We propose that *esserci* is a predicate derived by syntactic incorporation of the argument *ci* with *essere* in its locative interpretation. We argue that in the incorporation process, the locative meaning of the argument *ci* has merged with the locative meaning of *essere*, delivering a lexical form (*esserci*) that predicates the bringing into presence of an entity in the situational context, in relation to a location.

Our work is corpus-based, as we extract data from a collection of authentic texts. This allows us to provide quantitative and qualitative data about the syntactic and semantic uses of the construction under investigation. The corpus we used is *PAISÀ (Piattaforma per l'Apprendimento dell'Italiano su Corpora Annotati: Lyding et al. 2014)*, which contains different types of text automatically extracted from the web for a total of about 250 million tokens. The results of our empirical investigation support the hypothesis that *esserci* is a predicate, as it appears to display variation in meaning in the different contexts of use, a property that only predicates, and not copulas, may have.

From a theoretical perspective, we account for the meaning of *esserci* and its variation observed in the corpus relying on the semantic principle of co-composition (Pustejovsky 1995 2012), according to which the variation in meaning of a predicate is due to the influence of the semantics of the co-occurring arguments, and the larger syntactic context in which it appears.

The paper is articulated as follows. In §2 we review the literature on locative *there*-sentences that we deem relevant to our study, and in §3 we provide a survey of the semantics of *esserci* in Italian studies. In §4 we introduce our theoretical framework, while in §5 we describe the methodology we adopted to collect, annotate and classify the data according to specific semantic features. In §6 we provide the quantita-

tive and qualitative analyses of the results. §7 summarizes our proposal, and sets out our concluding observations.

2. Previous treatments of there-sentences

To our knowledge, one of the first scholars to write systematically about nominal predicates in linguistics is Jespersen (1924), who presents *to be* as a semantically empty form, that is, a form bearing agreement and TAM features but no predicate value.⁴

An in-depth study in terms of Generative Grammar is provided by Moro (1988, 1993, 1997, 2006a,b),⁵ who proposes an analysis of the existential as well as the equative clause as a small clause (SC), that is, as an “uninflected clausal constituent” (Moro 2006b: 212). Let us see how he represents both the equative (2a,b) and the existential clause (3) (Moro 2006b: 222-3):

- (2) a. *Some pictures of the wall are* [_{sc} t *the cause of the riot*].
b. *The cause of the riot is* [_{sc} *some pictures of the wall* t].

- (3) [*There*_i *are* [_{sc} *many girls* t_i]] ... [*in the garden*].

In (2a) we have an example of a canonical equative sentence⁶ with a noun phrase (*some pictures of the wall*) which, according to Moro’s analysis, has moved from the SC to occupy the position of the subject in the upper clause, while leaving a trace (t) in its base position. In (2b) there is an example of an inverted equative sentence, in which it is instead the predicative post-copular noun phrase (*the cause of the riot*) that is assumed to have raised to the same position in the upper clause.

The existential construction in (3) is regarded as “the counterpart of a copular sentence” (ibid.) and it too is treated as a case of an inverted copular sentence in which the expletive pronoun *there* is analysed as the placeholder of the predicate.⁷ This has been raised to the position in its upper clause leaving a trace in the SC, while the locative expression (*in the garden*) occurs separately as a coda.

In the case of Italian *esserci* as in:

- (4) *Ci’ erano* [_{sc} [*molte copie del libro* t_i] *nello studio*]. (Moro 1997: ex. (31))
There be.PST.3PL many copies of.the book in.the study
‘There were many copies of the book in the study’

ci is assumed to be the predicate in the SC and, as a clitic, it is incorporated into the copula. In Moro’s words: “the copula as a functional element is ‘lexicalized’ by *ci* in the sense that the clitic element

makes the copula acquire the typical selectional property of an intransitive verb, namely that of selecting an argumental DP” (Moro 1997: 116). In this way the noun phrase *molte copie del libro* comes to be the subject argument of the inverse copular sentence.⁸

In addition, Moro (1988, 1997) discusses the issue related to the ‘definiteness effect’, according to which existentials in many languages are grammatical only under a reading in which the subject NP is indefinite, as English shows:⁹

- (5) a. *There is a cat in the garden.*
b. **There is the cat in the garden.*

This does not hold for Italian, in which the definite NP is instead grammatical:

- (6) C’ è il/un gatto in giardino.
There be.3SG the/a cat in garden
Lit. ‘There is the/a cat in the garden’

According to Moro, the variation between the two languages is due to the pro-drop parameter, which only applies to Italian, and to the difference between the existential and locative meaning of *there be/esserci* sentences. It is not our aim here to account for the difference in the definiteness effect restrictions in the two languages, therefore we only hint at this property referring to Moro (1997) and to the other references in this section for fuller and more technical explanations.

Summarizing, the theoretical points to highlight in Moro’s analysis are the non-predicative status of the *be*-form, the predicative status of the *ci*-form, and, finally, the non-argumental function of the locative constituent (see the syntactic position of the PP in (3) above).

A more recent investigation on *there*-sentences in typological terms is Creissels (2013, 2019), who calls these sentences ‘inverse-locational predication’ (7) as opposed to plain locational sentences (8):¹⁰

- (7) *There is a cat in the tree.*
(8) *The cat is in the tree.*

According to Creissels, (7) has to be distinguished from existential sentences, as it does not directly convey an existential meaning. Inverse-locational predications are typically used in communicative settings where the relevant information is the presence of an entity at some place, and its identification (Creissels 2019: 41), rather than its existence. In addition, Creissels is in line with other linguists who see a rela-

tionship among location, existence and possession, such as Clark (1978) and, more recently, Koch (2012).

Recent contributions on *there*-sentences are also Bentley (2013), Bentley *et al.* (2013, 2015), and Cruschina (2012). They mainly deal with *there*-sentences in Romance languages and dialects, and with the diachronic and synchronic micro-variation of finite agreement on *to be* in *there*-sentences in Italian and its dialects (Ciconte 2011).

They consider existential sentences as “constructions with non-canonical morphosyntax which express a proposition about the existence or the presence of someone or something in a context” (Bentley *et al.* 2015: 1). They distinguish four types of *there*-sentence in Italian (Cruschina 2012: 5):

- (9) a. existential *there*-sentences
 b. inverse locatives
 c. deictic locatives
 d. presentational *there*-sentences

as in:

- (10) a. *Ci deve essere una soluzione.*
 There must to be a solution
 ‘There must be a solution’
 b. *C’ è tua sorella, in cucina.*
 There be.3SG your sister in kitchen
 ‘There is your sister in the kitchen’
 c. *Guarda: c’ è Maria.*
 Look there be.3SG Maria
 ‘Look: there is Maria’
 d. *C’ è mia sorella che canta in chiesa stasera.*
 There be.3SG my sister that sings in church this.evening
 ‘There is my sister who sings in church this evening’

Cruschina (2012: 84-5) differentiates between existential (10a) and inverse locative *there*-sentences (10b) according to the definiteness effect:¹¹ if the NP is indefinite the sentence is existential, while if it is definite the sentence is an inverse locative. The structure they propose for these sentences is the following:

- (11) (adpositional phrase) + (proform)¹² + copula + NP + (adpositional phrase)
 (Bentley *et al.* 2015: 4)

In (11) only the copula and the NP are obligatory elements, as the proform, considered an expletive, is not present in all languages. Examples of (11) are (12) with the structure Proform + copula + NP + PP, and (13) with the structure PP + Copula + NP and no proform:

(12) Italian

C' è solo un uomo nella mia vita. (Bentley et al. 2015: 5)
there be.3SG only one man in.the my life
'There is only one man in my life'

(13) Salentino

Statt attenta ca intru a sta frutta ave tanti sementi. (Bentley et al. 2015: 8)
Stay.IMP.2SG.REFL careful that inside to this fruit have.3SG many seeds
'Be careful! In this fruit there are many seeds'

Bentley, Ciconte and Cruschina share with Francez (2007) the 'pivot-as-predicate hypothesis', that is, the interpretation of the postverbal NP as a non canonical subject or a 'pivot', which is a predicate but, similarly to a subject, controls the agreement properties of the copula.¹³

In the present paper, based on the analysis of the data drawn from the corpus, we will examine only what Creissels calls inverse-locational predication (see (7)) in Italian. Our proposal is in line with Moro's (1997) since both proposals state that *esserci* is a predicate; however, while in Moro's analysis the predicate is the *ci* form which lexicalizes *essere*, we propose that *ci* is originally an argument, and as an argument it is incorporated into the verb *essere*, determining the lexicalization *esserci*.

3. *Esserci and locative there-sentences in the Italian literature*

Before addressing the treatment of *esserci* and locative there-sentences in the Italian literature below, it is convenient to recall that in linguistics and in the logical-philosophical tradition *essere* has long been regarded as a predicative verb as well as a copula, and that in its predicative uses it has been claimed to be polysemous (see Moro 2010 for a thorough and critical overview). The linguistic literature focuses in particular on two meanings:¹⁴ 'asserting the existence of something' (14), retained as the core predicative use of *essere* for example in Benveniste (1960), and the locational-spatial meaning (15), regarded as the core use of the verb in Jackendoff (1983):

(14) *Non angosciarti per ciò che non è.*
Don't panic for what RELPRON NEG be.3SG
'Don't panic for what is not'

(15) *Il libro è sul tavolo.*
The book be.3SG on the table
'The book is on the table'

In the logico-philosophical literature (besides Moro 2010, see also Panunzi 2010 for an in-depth discussion), an additional predicative use has been attributed to *essere*, that of signaling an intensional relation of identity between two linguistic expressions denoting the same entity. According to this hypothesis, the meaning of *essere* in contexts such as (16) is that of establishing the equivalence between two different denotations that identify the same object, instead of between a referential expression and a predication (as in the copular uses).

- (16) *La sua sede di lavoro è la città dove abita.*
The his place of work be.3SG the town where lives
'His workplace is the town where he lives'

In particular, Frege argued that the value of *essere* in such constructions varies according to the referential status of the expression on the right of the verb: if this is a definite noun phrase, as in (16), one would have a reading of *essere* as identity predicate; in the case in which it is constituted by an adjective or by an indefinite nominal phrase, the reading would be that of copula.¹⁵ According to Russell, instead, the value of identity would be present also in cases where the nominal expression is undefined.¹⁶

Turning now to *esserci*, it is a longstanding debate in Italian linguistics whether *esserci* constitutes an autonomous lexical entry (separate yet related to *essere*), or whether one should consider structures like (1), repeated below in (17) for convenience, as a subtype of *essere*-sentences (thus, a syntactic construction) characterized by a particular semantic or pragmatic value.

- (17) *C'era pubblico in sala.* (= (1) above)
There be.PST.3SG audience in hall
'There was audience in the hall'

The position according to which *esserci* is a lexicalized form, thus an autonomous entry, has been embraced in the grammatical tradition (Salvi 1988, Salvi & Vanelli 2004), in corpus-informed theoretical studies (Panunzi 2010), and in semantic and lexicographic accounts (De Mauro 1999-2000). De Mauro, for example, includes *esserci* in the class of 'verbi complementari' (pro-complement verbs),¹⁷ whose members are verbs that exhibit a lexicalized form with one or more clitics and often display an idiomatic meaning; an example is *sentir-se-la (di affrontare una situazione difficile)* 'to have the courage, the strength (to face a difficult situation)'. Despite behaving as pronouns as regards their position within the verbal complex, the clitics of pro-complement verbs display pecu-

liar morphosyntactic features (Masini 2015), and are not true anaphoric pronouns that establish a reference with an entity in the discourse, but particles that have been incorporated into the verb yielding a lexicalized form with a non compositional meaning.¹⁸

In their account of sentences with *essere*, Salvi & Vanelli (2004) identify a relation between “frasi di localizzazione” (localization sentences) in which *essere* acts as a predicate of localization as in (18a), and “frasi presentative” (presentative sentences) as in (18b), where the locative is in prenominal position, and *ci* is required. They also note that the locative expression may appear post-nominally, and may remain unexpressed, as in (18c):

- (18) a. *Pietro è qui.*
 Pietro be.3SG here
 ‘Pietro is here’
 b. *Qui c’ è Pietro. (*Qui è Pietro)*
 Here there be.3SG Pietro
 ‘Here there is Pietro’
 c. *C’è Pietro (in casa).*
 There be.3SG Pietro in home
 ‘There is Pietro (at home)’

According to their account, *esserci* is an autonomous verb, and *ci* is a grammaticalized clitic form bearing the function of signalling a presentative value; *ci* cannot express a locative meaning given that the locative value is already covered by the (omissible, cf. (18c)) locational PP.¹⁹

The theoretical account in Salvi & Vanelli (2004) is in line with our proposal but differs from it inasmuch as, while according to Salvi and Vanelli *esserci* derives from a grammaticalization process, in our account it originates from a syntactic process of argument incorporation. Moreover, in our analysis *esserci* is polysemous, as it displays meaning variation in context, as we will show in §6.2.

4. Theoretical framework

We couch our study of locative *there*-sentences within an approach to verbal semantics according to which in verb-argument combinations, arguments are not only selected by predicates – as in the traditional compositional account – but also concur to determine the meaning that the verb acquires in the context of use. We resort to the principle of semantic co-composition (Pustejovsky 2012) to formalize this assumption.

The principle of co-composition has been introduced to account for the shortcomings of the compositionality principle, particularly its inadequacy in representing the flexibility of meaning exhibited by words in context. As is widely known, the principle of compositionality is the basic principle used in logic and formal semantics to explain how word meanings combine to make larger meanings and to account for the infinite productivity of language. According to this principle, the meaning of a complex expression is systematically determined by the composition of the meanings of its component parts and the way they are put together, provided that the restrictions imposed by the constituents themselves are satisfied. An example is the restriction on the basis of which the noun *chair* in its literal meaning cannot be the subject of the verb *talk* (as in **that chair is still talking*) in that *talk* poses the restriction that its subject be a human. Specifically, the principle states that “given an expression E formed by the words X, Y, Z, the meaning ME is the composition of MX + MY + MZ” (Partee 1995).

The compositionality principle is generally assumed to be a fundamental property of natural languages. There is, however, good linguistic evidence that suggests that taking the meaning of the expression as the ‘sum’ of the meaning of its parts is not sufficient to account for what complex expressions are actually able to denote. On the one hand, there are several complex expressions, which either carry more meaning than what is expressed (as in *black tie dinner* meaning ‘a dinner where the participants are assumed to wear a black tie’) or mean something different from what is actually said (as in idiomatic expressions such as *show someone the door*). Furthermore, there is the problem of polysemy; given a word with multiple acknowledged meanings, how would the appropriate meaning be selected in context? How is the disambiguation of the senses of a polysemous word achieved in a strict compositional language? How does the adjective *next* for example acquire the spatial meaning in combination with *table* and the temporal meaning in combination with *train*? The principle of compositionality in its traditional formulation does not address the problem of how polysemous words are disambiguated.

From a theoretical perspective, the problems raised above have traditionally been addressed claiming that all the meanings that words display in actual use are stored in the lexicon as part of the information encoded by the word. On such a view, polysemous words encode a list of pre-defined meanings and a list of lexical restrictions, which specify the contexts in which the different meanings may be activated. According to this model, the selection of the relevant meaning occurs at the syntagmatic level (i.e. in the context of use), in agreement with

these restrictions. This is the standard way dictionaries are put together. New approaches to lexical meaning suggest however that ‘sense-enumerative lexicons’ as described above are uneconomic (they require long lists of meanings for each word), incomplete (words in context can potentially take on an infinite number of meanings), and inadequate (the boundaries between meanings are not rigid and tend to overlap). They contend that words are better conceived as flexible and permeable entities, and that “the meaning of each word is expected to vary from occurrence to occurrence as a function of the interaction with the other words it combines with, and of the situation of utterance” (Recanati 2012). The outcome of this interaction (referred to as modulation, adjustment, or fitting in the literature) generates the meaning of the sentence. These latter theories, therefore, claim that the syntagmatic dimension prevails in the definition of the lexical meaning, not as the level at which meanings are selected (as in the case of sense enumeration theories) but as the level at which meanings are generated.

A dynamic approach – as the one described above – requires a revision of how the process of meaning composition works. This is where the principle of co-composition (Pustejovsky 2012) comes into play, as a mechanism that in addition to the compositionality principle and together with other principles (in particular, type coercion, cf. Pustejovsky & Jezek 2008) is assumed to be active in the semantic processes of adjustment that occur when word meanings combine.

The principle of co-composition can be illustrated by examples of combinations of nouns with so-called light verbs, as in (19), where the Italian verb *prendere* ‘take’ acquires a different meaning depending on what is said to be taken:

- (19) *prendere un antibiotico* ‘take an antibiotic’ (‘ingest’)
prendere un treno ‘take a train’ (‘travel with’)

When co-composition applies, the meaning of the verb is refined contextually by the information provided by the argument. Specifically, in the case of *prendere* ‘take’, *antibiotic* and *train* provide the information that when they are ‘taken’, a different type of action is performed; an antibiotic is ingested and a train is travelled with. In Pustejovsky’s terms, the intended goal associated with the complement (a feature the author proposes to see as a part of the noun’s semantic structure called ‘*quale*’) unifies with the verbal meaning, resulting in a novel interpretation of the verb in context. Under this view, the verbal meaning is built up incrementally by combining words, and there is no need to assume a distinct sense of the verb for each use. As clarified above, this formal

procedure is different from the classic compositional procedure, because the underlying operation is not a mere arithmetical sum; in co-composition both the predicate and the complement are active in building the resulting interpretation.

The principle of co-composition has already been used to account for both the variation in the semantics of light verbs in English and Italian verb-noun combinations (cf. *inter alia* Jezek 2016, 2018), and the distinction between arguments and adjuncts (Jezek 2021). In this paper we will extend its application to the semantic analysis of locative *there*-sentences. We will show in §6.2 how this principle can be applied to these structures to account for the meaning of *esserci* and for its subtle variation in the different contexts of use.

5. Methodology: Data extraction, annotation and classification

As referenced in the introduction, we extracted the data from a large corpus of Italian, the PAISÀ corpus (*Piattaforma per l'Apprendimento dell'Italiano su Corpora Annotati*), a large collection of texts in Italian (250 million tokens) drawn from the Internet (Lyding *et al.* 2014). The reason for choosing PAISÀ among other available corpora for Italian is twofold: first, it is annotated at the syntactic level, and this allowed us to extract *there*-sentences automatically by using a query; second, it has a user-friendly graphical interface with several search options that can be freely accessed at < www.corpusitaliano.it/it/access/simple_interface.php >.

We first conducted a preliminary survey to identify the most frequent typologies of *there*-sentences on a sample of 1000 out of 33.471 occurrences retrieved of the syntactic pattern in (20):²⁰

(20) $C'è$ NP PP

In this first survey we identified different types of *there*-sentences based on the semantic role of the PP. First of all, we found that more than 1/3 of the occurrences of *there*-sentences include a locative PP, as in (1) above. About another 1/3 are sequences with a PP which acts as a modifier of the NP, therefore a pattern such as (21), and the corresponding examples in (22):

(21) $C'è$ [NP [PP]]

(22) a. *Non c'è clima di solidarietà nazionale.*
Not there be.3SG spirit of solidarity national
'There is no spirit of a national solidarity'

- b. *C' era chiarezza sulla posizione da prendersi.*
 There be.PST.3SG clarity on.the position to take.REFL
 'There was clarity about the position to be taken'

About 8% has a PP with temporal meaning:

- (23) a. *Nel 1988 c' è stata un'esecuzione per appropriazione indebita.*
 In.the 1988 there be.3SG been an execution for appropriation undue
 'In 1988 there was an execution for misappropriation'
 b. *C' è stata la remissione fino a marzo di quest'anno.*
 There be.3SG been the remission until to march of this year
 'The remission was valid until March of the present year'
 c. *C' è stato un picco di grandi impatti verso la fine della fase di bombardamento.*
 'There be.3SG been a peak of great impacts towards the end of.the phase of bombing'.
 'There was a peak of great impacts towards the end of the bombing phase'

Other structures with low frequency contain distributive or benefactive PPs:

- (24) a. *C' è differenza fra l'elemento colonna e pilastro. (distributive)*
 There be.3SG difference between the element column and pillar
 'There is a difference between the column and pillar element'
 b. *C' erano altre parti per soprano. (benefactive)*
 there be.PST.3PL other.PL parts for soprano
 'There were other parts for soprano'

Moreover, we also identified a number of idiomatic expressions (25), and of literal or figurative multiword-expressions with a certain degree of internal lexical flexibility (26) (cf. Jezek 2016: 208-210):

- (25) a. *Non c' è tempo da perdere.*
 Not there be.3SG time to waste
 'There is no time to waste'
 b. *Non c' è più nulla da fare.*
 Not there be.3SG more nothing to do
 'There is nothing more to do'
- (26) *C' è molta gente | poca benzina | spazzatura | corruzione ... in giro.*
 There be.3SG much people | little petrol | trash | corruption ... in round
 'There is a lot of people | little petrol | trash | corruption ... around/out there'

On the basis of this preliminary analysis, we decided to focus exclusively on *there*-sentences with a locative PP (locative *there*-sentences), and conducted our quantitative analysis on the basis of the following syntactic patterns:

- (27) a. *C'è NP PP*
 b. *PP c'è NP²¹*

In order to retrieve the data restricted to locative *there*-sentences we exploited the presence of the annotation of dependency relations in the PAISÀ corpus – particularly the ‘comp_loc’ relation – to extract the instances from the corpus corresponding to the structures in (27) above. This step allowed us to retrieve 463 instances of prenominal locative PP sentences, and 224 postnominal locative PP sentences. This suggests that the canonical position of the PP in locative *there*-sentences is the initial one, as the location sets the scene in which the object is located. Recall that Chafe (1976: 50) characterizes the initial PP as a topic (a ‘Chinese style topic’), in that “the topic sets a spatial, temporal, or individual framework within which the main predication holds (the frame within which the sentence holds)”. In line with Chafe, Erteschik-Shir (1997) calls this kind of topic ‘stage topic’.

We decided to perform the annotation of the 224 postnominal locative PP sentences and of 224 randomly selected instances of prenominal locative PP sentences, for a total of 448 instances. Specifically, we annotated the NPs and PPs in terms of their semantic features [+/-ABSTRACT] and [+/-CONCRETE], because we assumed that these features play a role in determining the meaning that *esserci* acquires in the contexts of use. We defined the two features as follows: CONCRETE is a property that characterizes tangible entities, whereas ABSTRACT characterizes intangible ones.²² Methodologically, the two authors annotated the data separately; then, they compared the result, discussed the few cases of disagreement that were mostly related to nouns that can be polysemous between a CONCRETE and an ABSTRACT reading (see for example *mercato* ‘market’ in (34)) and reached agreement on all instances.

In analysing the data, we identified four patterns, corresponding to the four possible combinations of the two tags ABSTRACT and CONCRETE that we used in the annotation:

(28) Post-nominal

1. CONCRETE NP CONCRETE LOC
C’era una bomba nell’edificio. ‘There was a bomb in the building’
2. ABSTRACT NP CONCRETE LOC
C’erano problemi nella sala d’attesa. ‘There were problems in the waiting room’
3. CONCRETE NP ABSTRACT LOC
C’era una signora nella mia stessa situazione. ‘There was a lady in my same situation’
4. ABSTRACT NP ABSTRACT LOC
Non c’era futuro nella loro relazione. ‘There was no future in their relationship’

(29) Pre-nominal

1. CONCRETE LOC CONCRETE NP:
Sul cruscotto c’è una tabella. ‘On the dashboard there is a table’

2. CONCRETE LOC ABSTRACT NP:
Nel rione c'è un forte afflusso turistico. 'In the district there is a big tourist inflow'
3. ABSTRACT LOC CONCRETE NP:
Nella sezione c'è un traditore. 'In the section there is a traitor'
4. ABSTRACT LOC ABSTRACT NP:
Nella contraddizione c'è verità. 'In contradiction there is truth'

In the annotation, besides the tags CONCRETE and ABSTRACT, we also used the tag OTHER for sentences that did not fit in the four categories. Among the postnominal concordances annotated with OTHER, there are several cases of structures where the PP is internal to the NP, as in (30):

- (30) a. C' erano dubbi sulla motivazione delle nomine.
There be.PST.3PL doubts on.the motivation of.the positions
'There were doubts about the motivation of the positions'
- b. C' era una diminuzione nella percentuale degli uomini che lavoravano.
There be.PST.3SG a reduction in.the percentage of.the men that work.PST.3PL
'There was a reduction in the percentage of men who worked'
- c. C' era un cambiamento nell'età alla quale una persona poteva lavorare.
There be.PST.3SG a change in.the age to.the which a person could to_work
'There was a change in the age at which a person could work'

In other cases, the PP played the role of an adverbial:

- (31) C' era legno in abbondanza.
There be.PST.3SG wood in abundance
'There was wood in abundance'

6. Results and analysis

In this section, we first report our quantitative results; then, we propose our qualitative analysis, which includes a semantic investigation of locative *there*-sentences and a co-compositional account of *esserci* and its arguments.

6.1 Quantitative results

Table 1 and Table 2 report the number of occurrences, together with the absolute and the relative frequencies of the four structures identified in the corpus both with prenominal (Table 1) and postnominal (Table 2) locative PPs.²³

The syntax and semantics of locative *there*-sentences in Italian

	OCCURRENCES	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY
CONCRETE LOC CONCRETE NP	126	56.25%	65.96%
CONCRETE LOC ABSTRACT NP	15	6.69%	7.93%
ABSTRACT LOC CONCRETE NP	11	4.91%	5.75%
ABSTRACT LOC ABSTRACT NP	39	17.41%	20.41%
	191	85.26%	100%
OTHER	33	14.74%	
Total of occurrences	224		

Table 1. Quantitative data on *there*-sentences with Prenominal Locative PP.

	OCCURRENCES	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY
CONCRETE NP CONCRETE LOC	50	22.32%	37.03%
ABSTRACT NP CONCRETE LOC	47	20.98%	34.81%
CONCRETE NP ABSTRACT LOC	2	0.89%	1.48%
ABSTRACT NP ABSTRACT LOC	36	10.07%	26.66%
	135	54.26%	100%
OTHER	89	45.74%	
Total of occurrences	224		

Table 2. Quantitative data on *there*-sentences with Postnominal Locative PP.

Table 1 shows that by far the most frequent structure is the one with the sequence CONCRETE LOC CONCRETE NP (relative frequency 65,96%). This corresponds to contexts such as the following:

- (32) a. *Nel giardino c' è un orologio.*
 In.the garden there be.3SG a clock
 'In the garden there is a clock'

- b. *Sulla sinistra c' è una scala.*
 On.the left there be.3SG a staircase
 'On the left there is a staircase'
- c. *Sulla sonda c' erano varie attrezzature.*
 On.the probe there be.PST.3PL various tools
 'On the probe there were various tools'

We obtained a similar result in Table 2, in which the sequence CONCRETE NP CONCRETE LOC is the most frequent (relative frequency 37,03%). This means that, independently of the position of the locative, the most frequent combination is always the one in which concrete NPs are combined with concrete locative PPs. Examples of postnominal occurrences are the following:

- (33) a. *C' era pubblico in sala.*
 There be.PST.3SG audience in hall
 'There was an audience in the hall'
- b. *C' era il camino nelle stanze.*
 There be.PST.3SG the fireplace in.the rooms
 Lit. 'There was the fireplace in the rooms'

On the other hand, we noted a contrast between the two structures: for prenominal locatives the second most frequent structure is the one with both PP and NP being abstract (20,41%):

- (34) a. *Non c' era disponibilità nel mercato internazionale.*²⁴
 Not there be.PST.3SG availability in.the market international
 'There was no availability in the international market'
- b. *Nelle sue parole c' era una condanna*
 In his words there be.PST.3SG a disapproval
 'There was a disapproval in his words'

With postnominal locatives, instead, the second most frequent sequence is the one with concrete PPs and abstract NPs:

- (35) *C' erano problemi nella sala di attesa.*
 There be.PST.3PL problems in.the room of wait
 'There were problems in the waiting room'

The least frequent structure in both cases is the one with a concrete NP and an abstract PP (5,75 for prenominal locatives, and 1,48 for postnominal locatives).

- (36) *C' era una signora nella mia stessa situazione.*²⁵
 There be.PST.3SG a lady in.the my same situation
 'There was a lady in my same situation'

6.2 Qualitative results

The quantitative results presented in §6.1 reveal some interesting facts about the status of locative *there*-sentences. We can say that all these sentences evoke a situation in which two entities, a concrete or abstract object in the world and a physical or abstract location, are in a relation; the most frequent situation is one in which both the object and the location are concrete entities. At the same time, we observe a range of variation in the meaning of *esserci* that appears to be determined by the semantics of its arguments, i.e. whether the arguments denote concrete or abstract entities/locations. In the rest of this section, we focus on the meaning of *esserci* and the contextual variation brought to light by the empirical analysis, and we propose an account of the observed variation based on the principle of semantic co-composition introduced in §4.

Recall that in §1 we claimed that, in our study, we propose that *esserci* is an autonomous verb derived from incorporation by *essere* of its locative argument *ci*. We elaborate here on our proposal from both a syntactic and a semantic point of view, in the light of our empirical investigation of the uses of *esserci* in the corpus. First, let us focus on the syntactic representation. As stated above, following our proposal, the lexicalization of the new entry *esserci*²⁶ is the result of a process of argument incorporation, according to which the locative argument *ci* merges with its predicate *essere*, leading to a syntactic reanalysis (Mithun & Corbett 1999) that delivers the new lexical entry *esserci*. The incorporation of *ci* allows for the expression of a new locative argument that would be redundant should *ci* still hold its locative meaning, which is instead incorporated in the meaning of *essere*, as we will clarify below. The syntactic representation resulting from the argument incorporation and the syntactic reanalysis described above is summarized in (37), where the verb *esserci* is accompanied by its arguments:

(37) (P_{Part}) *essercipred* NParg (P_{Part})²⁷

Observe that in (37), the PP is between brackets. This indicates that it is an optional argument. For our current purposes, we define an optional argument as an argument that may remain unexpressed in the syntax under certain conditions, while still being present and requiring saturation at the semantic level.²⁸

From a semantic point of view, the incorporation of *ci* with *essere* triggers a process of semantic co-composition. According to this semantic process (see §4), the meaning of the argument *ci* co-composes with the meaning of its predicate (*essere*) in its locative uses.²⁹ The resulting

predicate *esserci* denotes the introduction of an entity (realized as NP, playing the semantic role of Theme, and pragmatically analysed as new and salient) in the situational context, in relation to a location (realized as PP, and playing the Locative role, corresponding to the place with respect to which the Theme is localized). We define the meaning of *esserci* as ‘bring into presence’, and define the meaning of the structure in (37) as follows:

(38) A THEME is brought into presence by an implicit observer in relation to a particular LOCATION.

Note that the meaning of *esserci* resulting from the application of the semantic principle of co-composition to the process of incorporation of *ci* by *essere* is distinct from the meaning of *essere* in simple locative structures (cf. §3). Unlike *essere*, *esserci* introduces a dynamic predication; specifically, it introduces a new referent in the context of discourse, and localizes it in relation to a place. In semantic/pragmatic terms, the localized entity (the Theme) is announced to the common ground as ‘entering the scene’. By contrast, the locative uses of *essere* are stative predications (cf. (8) and (18a)) and lack the presentational value of sentences with *esserci*.³⁰ The representations in (37) and (38) describe the syntax and the semantics of the sequences that we analysed, specifically in the contexts where the Theme denotes a concrete object and the Location is physical, as in (39) and (40). Recall from §6.1 that these are the most frequent examples in which *esserci* is found.

- (39) a. *C' era un violinista sul palco.*
 There be.PST.3SG a violinist on.the stage
 ‘There was a violinist on the stage’
 b. *C' era nebbia sulle strade.*
 There be.PST.3SG fog on.the streets
 ‘There was fog in the streets’
- (40) a. *Nella capitale c' era il padre.*
 In.the capital there be.PST.3SG the father
 ‘In the capital city there was his father’
 b. *Nella roccia c' era la statua della Vergine.*
 In.the rock there be.PST.3SG the statue.of.the Virgin
 ‘In the rock there was the statue of the Virgin’

Note that when the concrete Theme denotes an object used for specific purposes, such as *water* for drinking in (41) below,³¹ the literal reading of *esserci* shown in the examples above may become specialized to ‘be available for a certain use or purpose’.³² We regard this specialization as the result of the application of the principle of co-composition (Pustejovsky 2012): the semantics of the noun enriches the meaning of the verb with

the ‘availability’ feature (water available for drinking, in our case), and contributes functionally to the interpretation of the overall expression.

- (41) *Non c’ era acqua nei rubinetti.* (‘to be available’)
Not there be.PST.3SG water in.the taps
‘There was no water in the taps’

It is interesting to note that the relation of the Theme with the Location can be ‘stage-level’ (in Carlson (1977) and Bentley *et al.* (2015)), as in (41) above, where the association of the Theme with the Location is temporary, or permanent (‘individual-level’),³³ as in (42), where the Theme denotes a place (the lake Ascanio) whose relation to the Location is stable in time:

- (42) *C’ era un sito sul lago Ascanio chiamato Otre.* (‘to be located’)
There be.PST.3SG a place on.the lake Ascanio called Otre
‘There was a place on lake Ascanio called Otre’

In this example, the focus of the interpretation is on the localization of the Theme (‘be located’, ‘be sited’, ‘be situated’). This is again a specialization of the basic presentational meaning (‘bring into presence’), attained through semantic co-composition: a location is brought into presence with respect to another location, and thereby it is localized. The meaning of *esserci* in such cases is still literal.

In other examples the Theme is abstract³⁴ and the Location is physical, as in (43); we claim that these are cases in which there is a departure from the literal presentational spatial meaning of *esserci* towards a temporal one:

- (43) *C’ era allegria in Israele.* (‘to hold’)
There be.PST.3SG cheerfulness in Israel
‘There was cheerfulness in Israel’

In (43) the Theme denotes a state or condition (cheerfulness) that holds in a particular location. In this case, we contend that the meaning of *esserci* is different from (39-42), inasmuch as a state cannot literally be located in a place in the same way as a concrete object can be; a state can rather be true and continue to last in a certain location for a certain timespan. The meaning of *esserci* in this case is better defined as ‘to hold (in a certain location)’. We analyse the variation in meaning of *esserci* in examples such as (43) as the effect of the application of the principle of co-composition of the abstract meaning of the Theme with the meaning of the verb.³⁵

In our data we also found cases in which an abstract Theme does not denote a state but rather an event, that is, a situation that unlike a

state denotes a dynamic occurrence, such as *party*, *carnevale* and *pendolarismo* in the examples below:

- (44) a. *C' era un party all'ambasciata.* ('to take place')
 There be.PST.3SG a party at.the Embassy
 'There was a party at the Embassy'
 b. *C' è il carnevale sul Canal Grande.*
 There be.3SG the Carnival on.the Canal Grande'
 'There is the Carnival on the Canal Grande'
 c. *C' era pendolarismo su Milano e Lodi.*
 There be.PST.3SG commuting on Milano and Lodi
 'There was commuting between Milano and Lodi'

In (44a-c) the meaning of *esserci* is again different ('to occur', 'to take place'). As a result of the application of the principle of co-composition, the event semantics of the Theme shifts the meaning of *esserci* towards a temporal dynamic interpretation (as opposed to the static one in (43)).

In §6.1 we noted that in our data there are also cases in which both the Theme and the Location are abstract.

- (45) a. *C' è una condizione sul contratto.*
 There be.3SG a condition on.the contract
 'There is a condition in the contract'
 b. *Non c' era disponibilità nel mercato internazionale.*
 Not there be.PST.3SG availability in.the market international
 'There was no availability in the international market'

The examples in (45) no longer evoke a physical localization; they relate or anchor a condition or state to something that can be considered its field of application. In co-composition with a Theme and a Location that are both abstract, the meaning of *esserci* does not denote a concrete localization. We argue that its meaning is no longer literal and due to co-composition, it shifts towards a figurative or metaphorical interpretation.

What is very infrequent or almost absent in the data is the case in which a physical object is located in an abstract space. When present, these structures are slightly more frequent with prenominal PPs:

- (46) *Nel film c' è un sacco di gente.*
 In.the movie there be.3SG a lot of people
 'In the movie there are a lot of people'

In (46), *film* is abstract, as it stands for the story that is recorded by a camera and shown in a cinema or on television, and not for the concrete strip of plastic. We regard the meaning of *esserci* in this context as

figurative, although the combination of concrete Themes and abstract Locations in *there*-sentences deserves further investigation.

To sum up, an important finding of our corpus-based analysis is that starting from the same basic presentational meaning ('bring into presence'), there appears to be variation in the interpretations of *esserci* depending on whether its arguments, i.e. the Theme and the Location, denote a concrete or an abstract object. This finding supports the hypothesis that *esserci* is not devoid of meaning, as a copula would be. The meaning variation of *esserci* can be accounted for by the principle of co-composition, according to which the concrete vs abstract meaning of the arguments influence how the verb is interpreted in the context of use.

7. Concluding observations

In this paper we reported the results of a corpus-based study of Italian locative *there*-sentences, analysed as bivalent predicate-argument structures in which *esserci* is a predicate derived from the incorporation of *ci* 'there' with *essere* 'to be' (in its locative uses), and the arguments bear the roles of Theme and of Location. The Location may remain syntactically unexpressed but it always requires saturation at the level of the semantic interpretation. After reviewing the current syntactic and semantic accounts of *esserci* with particular attention to its locative uses, we have conducted a corpus analysis of the '*esserci* + locative' structure, which includes an investigation of the different semantic values that *esserci* acquires in co-composition with different subjects and locative constituents.

The meaning we propose for the bivalent predicate-structure of *esserci* is 'bring into presence', which captures both the semantic content and the pragmatic function of introducing new and/or salient entities to the common ground in relation to a location.

An exploration of the specific semantic components of the two arguments in terms of their +/- Concrete, +/- Abstract features, has allowed us to identify and classify the variation in meaning of *esserci* that each combination of features determines in its specific uses.

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Notes

¹ In Payne (1997), Dryer (2007), Creissels (2014, 2019), Mereu (2011, 2015), and Bentley *et al.* (2013, 2015) the different forms used cross-linguistically with nominal predicates are discussed, including various non-verbal markers or the total absence of any marker.

² In Mereu (2015) it is shown that the so-called existential sentences can co-occur with other types of adpositional phrases or also without any kind of oblique. More will be said about the variability shown by these structures below.

³ This is also the term used in Bentley *et al.* (2015). However, their analysis is different from the one we propose, as we will clarify below.

⁴ The literature about nominal predicates and the copula is vast and does not concern only linguistic studies; see the Appendix to Moro (1997) and Moro (2010) for a rich presentation of studies on the copula that date back to classical Greek philosophy. See also Graffi (2001).

⁵ In formal syntax, before Moro, Burzio (1986) deals with nominal predicates. La Fauci & Loporcaro (1997) deal with these structures in Relational Grammar. As our work does not aim at presenting a survey but rather at advocating the advantages of a corpus-based approach for the semantic and syntactic analysis of locative *there*-sentences, we refer to the literature in footnote 1 and to the references included in the quoted literature for further references.

⁶ Without going into the details of the formal analysis of (2), let us say that (2a) is canonical as it represents the basic positions of the two noun phrases in the SC, that is, the sequence [some picture of the wall + the cause of the riot]. (2b) instead is an inverted equative clause because it is the final noun phrase which raises to the main sentence.

⁷ Moro (1997) discusses existential meaning and makes a distinction between existential clauses and *there-be* sentences with locative meaning. We will say more about the distinction when dealing with the other approaches we present in this section.

⁸ Moro's analysis is formally complex; through the incorporation process, *esserci* is said to become a predicate which behaves as an intransitive verb such as *arrivare*, the only difference being that "while the process of incorporation is morphologically transparent with *esserci* it is not so similarly transparent with *arrivare*" (Moro 1997: 233). See also Hale & Keyser (2002). A recent formal analysis can be found in Kayne (2020).

⁹ In English the subject NP can be definite in contextualized existentials (or the list reading), as in:

(i) A: *Is there anything to eat?*

B: *Well, there's the leftover chicken from last night* (Leonetti 2008, ex. (24))

(ii) A: *What are the features of this property that you really do not like?*

B: *There is the (statue of the) cat in the garden* (reviewer's personal communication)

¹⁰ The relation between the two kinds of structures has already been noticed in Stassen (1997); however, Stassen considers *there*-sentences as the counterpart of locative sentences as he supports the hypothesis that these constructions are different only as far as the definiteness/indefiniteness distinction is concerned.

¹¹ It has to be said that the literature on the definiteness effect is very rich. In addition to Moro (1997, 2010), many linguists (from Milsark (1974, 1977) to Freeze (1992), Beaver *et al.* (2006), and also Bentley (2004, 2013) and Bentley *et al.* (2015)) deal with this phenomenon in the languages of the world. As already said, Italian does not present the definiteness effect, therefore we just limit ourselves to signaling the relevant literature. See also Mereu (2011, 2015) for data on Italian.

¹² In Bentley *et al.* (2013) the proform is defined as "a putatively adverbial form,

which can be etymologically locative". The fact that the *ci*-form has a locative meaning is shown in the following examples:

- (i) a. *Paolo dorme in giardino.*
 Paolo is sleeping in the garden
 b. *Paolo ci dorme.*
 Paolo there is sleeping
 'Paolo is sleeping there'

¹³ Bentley *et al.* (2015) and Ciconte (2011) also show the diachronic change of *there*-sentences from Latin to Romance. As a diachronic treatment of our data is not among the aims of our paper, we will not deal with this topic here.

¹⁴ The predicative meanings attributed to *essere* are plenty, and include belonging, possession, and temporal meaning. For our current purposes, we restrict our discussion to the ones mentioned above.

¹⁵ Frege (1892a) and (1892b).

¹⁶ Russell (1905) and (1919).

¹⁷ Interestingly, Russi (2011) claims that this type of verbal formations originates from a restricted number of individual collocations involving specific direct object nominal constituents.

¹⁸ *Sentirsela* can be morphologically analysed as the combination of the infinitive form of *sentire* 'to feel' + 3rd person singular form of the reflexive clitic *si* (with phonological adjustment) + clitic of object accusative feminine *la*.

¹⁹ They also note that the verb *esserci* is positive for the *ne*-test of unaccusativity (according to which unaccusative subjects can be replaced by the partitive pronoun *ne*, while unergative subjects cannot), as in *Ci sono due ragazze in cortile* / *Ce ne sono due* ('There are two girls in the courtyard' / 'There are two of them').

²⁰ The query we used is the following:

Word: 1	Word: 2	{0,3}	Word: 3
Form: c'	Lemma: essere		POS: Prep (E)

²¹ A reviewer has brought to our attention that the structure in (27b) may be considered as a case of 'clitic left dislocation' (CLLD) in Cinque's (1990) terms. This is also what Cruschina (2012) proposes. According to these accounts, the initial PP is not in the main sentence but in the left periphery, as the resumptive pronoun *ci* shows. In other words, the clitic *ci* behaves as in the following sentence:

(i) *A Parigi, ci, sono andato* / To Paris, there_be.1SG gone / 'To Paris, I went'.

in which the PP is dislocated outside the sentence and the clitic, as a pronoun, is co-referent with the PP. In our account, instead, *ci* is incorporated into the verb *essere* and this means that the clitic is no longer treated as an argument. *Essere* + *ci* becomes a unitary concept "without formal articulation of the specific roles of the elements to each other" (Mithun & Corbett 1999: 64).

²² A reviewer pointed out that the notions of Abstract and Concrete might be relevant for the notion of definiteness, in the sense of specificity, used in previous synchronic and diachronic studies of Italo-Romance *there*-sentences (see, among others, Ciconte 2011) to determine whether the construction is locative. Although abstract entities, for example an *idea*, can be countable and individuated as concrete ones, many of them denote non-individuated objects such as properties (*courage*, *beauty* etc.); on this basis, we think that there might be intersections with the notion of specificity worth investigating in further studies.

²³ Absolute frequency is the frequency of the individual patterns over the totality of the occurrences, whereas relative frequency is the frequency of the individual patterns over the totality of the four.

²⁴ In (34) the meaning of *mercato* is abstract because of its context, in particular because of its modifier *internazionale*. An international market as intended in (34) is an abstract place, not a concrete location.

²⁵ As indicated in Table 2, in our corpus we found only two examples of occurrences with a concrete NP and an abstract PP with postnominal locative PPs.

²⁶ For an overview of the various types of lexicalization that create new entries in the lexicon, see Jezek (2016: 5-13).

²⁷ The locative PP may occur both in initial and final position, as shown in Table 1 and 2 and in the sentences exemplifying the two positions after the Tables (see examples (28) and (29) above).

²⁸ The literature on optional arguments is vast, dates back at least to Fillmore's (1969) systematic study of the surface realization of arguments in the 1960's, and is spread over different theoretical traditions. For an overview, we refer the reader to the synthesis offered in Jezek (2018).

²⁹ For an account of the locative uses of *essere*, see §3.

³⁰ See §3 for previous accounts of the presentational value of sentences with *esserci*.

³¹ (41) lacks a determiner. This is possibly related to the fact that *water* is a mass noun.

³² The components of 'presence' and 'availability' are also mentioned in Bentley *et al.* 2015.

³³ A reviewer notes that cross-linguistically locative expressions describing the permanent location of a relatively unmovable entity often exhibit the same copulas as expressions of contingent location. See the case of Spanish and, among other languages, some Southern Italo-Romance dialects (Bentley & Ciconte 2016 and Bentley 2017).

³⁴ Recall from §5 that we define Abstract as a property of intangible entities.

³⁵ A reviewer has brought to our attention that (43) is tantalizingly close to existential sentences in which an implicit context (Francez 2007) is enriched by a location. The relation between existential and locatives in our approach is certainly interesting and deserves further investigation. For our current purposes we limit ourselves to the observation that when *esserci* is combined with a stative NP as in (43), it cannot be straightforwardly interpreted as a predicate of localization.

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