

# The *Auto*analysis:

The Italian Verbal Prefix “*auto-*”

Marta Castella

3099881

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Supervisor: Eric J. Reuland

Second Reader: Marijana Marelj



## Abstract

This thesis is the result of a study on the Italian reflexive morpheme *auto-*, especially in verbal environments. The restrictions on the prefixation of *auto-* raise a number of questions related to the interferences between the structures of the verbs and the Reflexivization operation. When observed through the lens of the Reinhart (2000, 2002)'s Theta System, the (im)possibility of the prefixation of *auto-* “unveils” the structure of a verb. For the reasons that will be discussed and because of its properties of lexical operation, the *auto-*-prefixation can be used as a probe to observe Grooming verbs and Reciprocals.

In section (1) I introduce informally verbs and Reflexivity; in section (2) I outline the notions of Anaphora and Binding, focusing on the distinction between Coreference and Binding. I explain Reinhart (2006)'s definition of logical syntax binding and subsequently the distinction between pronominal and anaphors, and the locality conditions on binding. Then I focus on the notion of Reflexivity as the case of co-argument binding. The problem posed by IDI is introduced as well as the solutions to it that languages have. In section (3) I present in detail Reinhart (2000, 2002)'s Theta System, the analysis of the verbs' argument structure and the operation that can apply to verbal entries. Reflexivity is one of these operations. The contrast between syntax and lexicon languages is introduced and the idea that reflexive morphemes are, in some cases, elements that take care of the residual case remained after Reflexivization applied. In the first part of section (4), the *Intermezzo*, I outline the traditional analysis of *auto-*; in the second part I discuss Italian reflexive nouns, which happen to be deverbal nominal *auto-*-prefixed. The data is in support of the thesis presented in Hron (2009). Section (5) is dedicated to the distribution of *auto-*, first some observations on the productivity and, later on, on the restrictions. Following the Theta System analysis of the verbs, *auto-*-verbs must have a  $[+c + m]$  argument in their structure. Since not all  $[+c + m]$  accept *auto-*-prefixation, the exceptions are discussed. In the last section, (6), I discuss the concept of proxies as crucial to understand the semantics and pragmatics of *auto-*. The *auto-*-prefixation, as a lexical operation, does not allow proxy-readings. But the concept of proxy may vary, as author/work proxies are allowed by *auto-*, as in the case of *Translate*-type verbs. In fact, when (non-stative) proxies are involved, some  $[+c]$  verbs also allow *auto-*.

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# 1 Introduction

Traditionally, grammars distinguish between transitive and intransitive verbs. Informally one may say that a transitive verb such as *Amare*, “Love”, requires two arguments, i.e. *the lover* and *the loved one*. If one argument is omitted the sentence will be ill-formed as in (1)<sup>1</sup>:

- (1) \**amava Gianni*  
loved Gianni

On the other hand, an intransitive verb such as *Arrivare*, “Arrive”, requires only one argument, i.e. *the individual that is arriving*. However, there are processes like *Passivization*, that may reduce the number of the arguments a verb requires: in (2), the verb complex *era amato*, “was loved”, needs one argument, just like an intransitive verb. And something similar can be obtained if a verb form has identical subject and object, as in (3):

- (2) *Gianni era amato*  
Gianni was loved  
"Gianni was loved"

- (3) *Gianni si lava*  
Gianni SE washes  
"Gianni washes himself"

If we have forms of *Lavarsi*, “Washing oneself”, washer and washed are necessarily the same. That is, the verb *Lavarsi* denotes a **reflexive** washing-relation. The clitic *-si* indicates that the verb reflexive, and in some sense, reflexive verbs are like intransitives since they too only require one argument.

This thesis presents a study of reflexivization in Italian, focusing on the role of the morpheme *auto-*. Often overlooked, the morpheme *auto-* can be prefixed to verbs, nouns and adjectives and contributes a reflexive interpretation.

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<sup>1</sup>Here, the ungrammaticality depends on the fact that we are referring to the sentence without *pro*. Clearly, “*pro<sub>i</sub> amava Gianni<sub>j</sub>*” would be grammatical.

**Why is this prefix so interesting?** According to the traditional literature (Iacobini (2003) and Mutz (2009), among others) it has been said that *auto-* is simply an intensifier, a way of stressing the reflexivity: such claims are based on the fact that *auto-* appears in syntactic configurations where there is always the reflexive clitic SE, hence the sentence without *auto-* is already reflexive. The suspicion that there must be more to the story of *auto-* is first suggested by the observations on the productivity: if *auto-* were simply a way of stressing a reflexive relation, why would it be constrained at all? So, what makes this prefix so special and interesting?

A second reason is provided by its effect on interpretation, as it can be seen from the alternating judgments in (4 a)<sup>2</sup> and (4 b)<sup>3</sup>:

- (4) (a) ?*Quel politico si è eletto*  
 that politician SE is elected  
 "That politician elected himself"
- (b) *Quel politico si è autoeletto*  
 that politician SE is AUTOelected  
 "That politician elected himself"

So, this prefix appears to have an effect on the semantic interpretation of the sentence containing it (or even simply of the verb bearing it), that is, *auto-* has some semantic (or pragmatic) content on its own: in a rather uncontroversial way, the intuitions of the native speakers strongly converge in saying that a verb prefixed with *auto-* (*auto-verb* henceforth) means something different from the corresponding simple reflexive verb (i.e. without the *auto-* prefix). The way the interpretation differs cannot be captured by saying that, for instance in (4 b), the reflexive relation is “just” stressed.

The goal of this thesis is to explain these properties of *auto-* and to put them in the perspective of what we know about reflexives in natural language in general. Since reflexivity is a limiting case of the more general phenomenon of binding, first an outline of the basic features of the theory of binding will be provided.

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<sup>2</sup>The judgement for English is taken from Reinhart (2000).

<sup>3</sup>And in this case, the Italian example is grammatical, whereas the English remains ruled out as there is no effective way to translate the verbal prefix. The prefix *self-* cannot be attached to verbs.

## 2 Anaphora and Binding

### 2.1 The notion of ‘anaphora’

As I stated in the previous section, this thesis deals with reflexivity. In many of its instantiations Reflexivity is the reflection of a more general phenomenon in natural language, namely ‘anaphora’. Anaphora, as Safir (2004) formulates it, is “subsequent reference to an entity already introduced in discourse”.

### 2.2 Coreference and Binding

Although the definition provided above speaks of “subsequent reference”, there are two different ways in which an anaphoric dependency can be represented, namely coreference (exemplified in (5 a)) and binding (in (5 b))<sup>4</sup>.

- (5) (a) This soldier has a gun. Will he shoot?
- (b) Every soldier who has a gun says he will shoot.

Coreference and Binding can be briefly characterized as in (6) and (7), respectively (See Reinhart (1983)).

- (6) Coreference involves directly assigning to two (or more) expressions the same discourse entity from the interpretation domain ( $I_D$ ) as a value.
- (7) Binding involves interpreting one of the expressions in terms of the other by grammatical means.

Coreference is not subject to specific conditions, but Binding is, as will be illustrated in the next section. The conditions on Binding do not follow from logic alone and that is why it becomes important to understand how natural languages encode different relations between linguistic expressions that may be linked interpretationally, and how those different expressions deal with different linguistic “tasks”.

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<sup>4</sup>Examples from Heim (1982).

**Pronominals and anaphors (and locality conditions on binding)** In every language we can find lexical elements whose interpretation may or must depend on the interpretation of another element (in English it is the case with *him*, *himself*, etc.): those elements are anaphors or pronominals.

The crucial difference that distinguishes the class of pronominals from anaphors (and R-expressions) is their properties in terms of binding. As stated in Chomsky (1981), pronominals are subject to Condition B. They are either free or bound but they cannot be locally bound, they can be used deictically. Anaphors, on the other hand, are elements whose their interpretation depends on the interpretation of another element. They are subject to condition A which states that Anaphors are necessarily (A-)bound in a local domain.

The properties (features) of Anaphors, Pronominals an R-expressions and the conditions regulating them are stated in (8) and (9).

(8)

a	[+ <i>anaphor</i> , − <i>pronominal</i> ]	anaphor
b	[+ <i>anaphor</i> , + <i>pronominal</i> ]	PRO
c	[− <i>anaphor</i> , − <i>pronominal</i> ]	R-expression
d	[− <i>anaphor</i> , + <i>pronominal</i> ]	pronominal

(9) (A) An anaphor is bound in its local domain (=governing category)

(B) A pronominal is free in its local domain (=governing category)

(C) An R-expression is free

I) b is a governing category for a if and only if b is the minimal category containing a, a governor of a, and a SUBJECT (accessible to a)

II) a c-commands b iff a is a sister to  $\gamma$  containing b Schematically: [a [ $\gamma$  . . . . b. . . . ]]

III) a binds b iff a and b are coindexed and a c-commands b

**$\lambda$ -terms and  $\lambda$ -abstraction and the logical syntax definition of binding** Reinhart (2000, 2006) argues that the linguistic notion of binding introduced in (9) can be subsumed under the general logical notion of binding, a relation between operators and variables.



What I am going to present below is a brief sketch of how logical binding can capture some linguistic dependencies.

Understanding the notation and the concept of  $\lambda$ s, means looking at  $\lambda$ -abstraction as a way of decomposing first-order formulæ: essentially they are used to “break up” a logical formula into parts that correspond to phrases as NPs, VPs, or other constituents found in the syntactic analyses. In this sense, the term  $\lambda x (Red(x))$  means “being red” and it can be translated into English as “is red”; in a parallel way  $\lambda x (Walk(x))$  means “the property of walking”, and can be translated into English as “walks”.

So, at some level, binding can be seen as a relation holding between a  $\lambda$ -operator and a variable.

In Reinhart (2000), the concept of *logical syntax binding* is formalized and presented as in (10):

(10) *Logical syntax binding*

A-binding  $\alpha$  A-binds  $\beta$  iff  $\alpha$  is the sister of a  $\lambda$ -predicate whose operator binds  $\beta$ .

This notion of logical syntax binding captures the different interpretations of (11 a) in terms of the representations of (11 b) and (11 c), as depending on the properties ascribed to “Lucy” and to the other contextually relevant individuals.

(11) (a) Only Lucy respects her husband

(b) Only Lucy ( $\lambda x. x$  respects  $y$ 's husband) ( $y$  could be any female individual)

(c) Only Lucy ( $\lambda x. x$  respects  $x$ 's husband)

**The notion of reflexivity.** As discussed by Reuland and Reinhart (1993), Reflexivity is a case of co-argument binding, so reflexivity of a predicate is defined as (12):

(12) A predicate is reflexive iff two of its arguments are co-indexed (e.g. subject and object)

Reflexivity, according to R&R (1993) must be licensed<sup>5</sup> but why is there a need for something like a Condition B? As argued in Reuland (2008) this depends on a property

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<sup>5</sup>Condition B: A reflexive (semantic) predicate is reflexive-marked (either lexically, or by a SELF-anaphor).

of the CS, referred to as IDI (Inability to Distinguish the Indistinguishables). The basic idea is that if a two-place predicate has to assign two (different) theta-roles, these have to be assignable to two different linguistic objects. Reflexivization turns a binary predicate into a property. This causes an indeterminacy in theta-role assignment. Languages accommodate the theta-role assignment by either keeping the two arguments distinct, or by an operation of reduction. This operation applies to the verbal entry and bundles the two roles into a complex one that gets later assigned to one argument.

In the next section I will outline the remainder of the background literature we will be referring to, viz. The Theta System as designed by Reinhart (2000, 2002); there I will provide further explanations of the operations on a verbal entry and specific details on the bundling of the thematic roles.

## 3 Understanding the Theta System

### 3.0.1 From Reflexivity to Theta

As we have seen, the notion of Reflexivity is connected to one of the issues that is object of the study on the argument structure of verbs. As argued in Reinhart (2002) and Reinhart & Siloni (2005), it is desirable to derive such differences in the thematic realization of a thematic concept via universal operations. To do so, three things are needed: first, a precise understanding of the argument structure of the verbs and a formal way of encoding them; second, a *taxonomy* of the operations that can be performed on such structures; third, a list of parameters that can derive all the alternations.

In the following part we will provide an overview of the first two points, namely, I will present the way Reinhart (2000, 2002) analyzed the argument structure of verbs, and the way their theta grid can be operated onto; specifically we will pay attention to the operations related to Reflexivity. Later on, a short section is dedicated to the main parameter involved in deriving cross-linguistic alternations (i.e. The Lexicon-Syntax Parameter).

### 3.0.2 The Theta System

The main background literature consists of two papers by Reinhart published in 2000 and 2002, where the Theta System is presented. Reinhart (2000, 2002) discusses alternations of the following types:

- (13) (a) Max opened the window (in order to enter).  
(b) The key opened the window (\*in order to be used).  
(c) The storm opened the window (\*in order to destroy us).
- (14) (a) The painter / the brush / autumn reddened the leaves.  
(b) Max / the storm / the hammer broke the window.  
(c) Max / the heat / the candle melted the ice.  
(d) Max / exercises / bicycles developed his muscles.  
(e) Max / the storm / the hammer enlarged the hole in the roof.

- (15) (a) The father / \*the spoon / \*hunger fed the baby.  
 (b) Max / \*the leash / \*hunger walked the dog to his plate.  
 (c) The baby / \*the spoon / \*hunger ate the soup  
 (d) Lucie / ??The razor / \*the heat shaved Max.  
 (e) Lucie / \*the snow / \*the desire to feel warm dressed Max

These examples show how verbs cannot always be employed with any type of arguments: for instance not always tools and natural forces can realize as subjects, as in (15 a) - (15 e).

Similar patterns can be found also cross-linguistically. The idea was essentially to find a simple way of accounting for the intuition that these verbs, even when appearing in different syntactic configurations, have related lexical entries; any theory capturing such relations has to be restricted: for example, simply deriving an unaccusative from a transitive would overgenerate, as illustrated in (16 a)-(16 b).

- (16) (a) Max ate the soup.  
 (b) \*The soup ate.

In order to prevent this, without losing explanatory power, it is crucial to find a way of “looking inside” the thematic roles. For this purpose, thematic roles must be analyzed as built out of a combination of features.

When we try to understand the meaning of the features involved in the creation of the thematic roles and the underlying reasons of their choice, it is important to consider what their contribution must be. To understand the perspective from which Reinhart (2000, 2002) looks at the feature clusters, let us consider the role causality plays. Causality is not a logical relation<sup>6</sup>, so, Reinhart uses the perception of a causal relation to express how the features interact with the Inference system: in a sentence like “x interrogates y”, for instance, we easily make a number of inferences (Dowty 1991):

- (17) *x interrogates y*  
 x does a volitional act

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<sup>6</sup>A causal relation is not logical in the sense that it depends on the specific content of the arguments of the relation, i.e. how the world we are looking at *is*. In other words, a logical relation is regulated by truth values whereas a causal relation is regulated by *other* things (natural laws, etc.).

x intends this to be the kind of act named by the verb

x causes some event to take place involving y

x moves or changes externally, not just mentally

Reinhart's (2000, 2002) system of features intends to capture these intuitions. Indeed, one of the powerful aspects of the theory is that all of the following implications can be rendered by just two features, their presence and their valence changing. Let us see more in detail what it is the semantic material that needs to be captured.

### 3.0.3 Discovering the features

All the theta roles can be built up from the combination of two binary features  $/c$  and  $/m$  that can have value  $+$  or  $-$  (or absent<sup>7</sup>).

	agent	instrument (cause)	theme patient	experiencer	sentient	subject matter locative source	cause	goal benefactive
$/c$	$+$	$+$	$-$	$-$	$\emptyset$	$\emptyset$	$+$	$-$
$/m$	$+$	$-$	$-$	$+$	$+$	$-$	$\emptyset$	$\emptyset$
$\theta$ -clusters	$[+c + m]$	$[+c - m]$	$[-c - m]$	$[-c + m]$	$[+m]$	$[-m]$	$[+c]$	$[-c]$

The role of the clusters of features is twofold: on one hand the Computational System has to be able to read them (in order to be able to realize them syntactically); on the other hand, such clusters have to *mean* those causal relation just mentioned - in this sense, they communicate with both the syntactic and the semantic component.

The two features that Reinhart identified are  $/c$ <sup>8</sup> for Cause change and  $/m$  for mental state. Very informally, the first captures the ability to effectively change the state of the affairs. That is the cause of the change that the verb refers to. In the case of *Interrogate*, the cause will be 'the actor of the interrogation' and it will be linked to a

<sup>7</sup>Under this perspective, it would be more precise to say that they are not strictly binary in the sense of a privative opposition (as the possibility of the absence of a feature in the theta role adds, as a matter of fact, a "third" value to the feature) but rather a binary opposition plus zero value.

<sup>8</sup>*Notation* (as stated in Reinhart, 2002):

$[\alpha]$  = Feature cluster  $\alpha$ .

$/\alpha$  = Feature (and value)  $\alpha$ .

$[/\alpha]$  = A cluster one of whose features is  $/\alpha$ .

$[+]$  = A cluster ALL of whose features have the value  $+$ .

[/ + c] , whereas 'the interrogated' will be linked to [/ - c], as he has no power in the sense of Cause change.

The second feature captures the involvement (or not) of the participants' mental involvement: again, looking at *Interrogate*, the mental state is relevant for both the actor of the interrogation and the interrogated one. Hence, the argument structure of a verb like *Interrogate* will be as in (18):

$$(18) \quad V ([+c + m] [-c + m])$$

It is crucial that if /+m entails animacy, the opposite does not hold: /-m does not imply inanimate. What the above means is simply that the mental state is not relevant in the relation.

### 3.0.4 Marking and Linking

The thematic roles are stored unordered hence there must be a way to regulate the linking of semantic categories to syntactic positions. There must also be a way to predict that unaccusatives' arguments merge internally whereas unergatives' merge externally.

According to Grimshaw (1979, 1981), Pesetsky (1982, 1995) and Chomsky (1986), linking should be deducible from a general rule, rather than being specified for each verb in the lexicon. So, simple marking rules of the feature clusters provide the Computational System with the necessary machinery to ensure the correct Merging procedure. The rules are stated in (19) - (21) (Reinhart 2000):

#### (19) *Marking Procedures*

Given an n-place verb-entry,  $n > 1$

1. Mark a [-] cluster with index 2
2. Mark a [+]cluster with index 1
3. If the entry includes both a [+] cluster and a fully specified [/α, / - c], mark the verb with the ACC feature.

#### (20) *Cluster Classes*

Plus-clusters are [+c + m], [+c] , [+m], minus-clusters are [-c - m], [-c], [-m].

A cluster can also have a mixed value. Mixed-clusters are Experiencers  $[-c + m]$  and Instruments  $[+c - m]$ .

(21) *CS Merging Instructions*

When nothing rules this out, merge externally. An argument realizing a cluster marked 2 merges internally; an argument with a cluster marked 1 merges externally.

In this way, the linking does not need to be specified each time in the lexicon, but it can be inferred from the argument structure of each verb.

One of the effects of the marking is for instance, the consistency with which a  $[+c + m]$  cluster always merges externally (or more in general a  $[+]$  cluster, i.e. a cluster where all the features have a  $+$  value) and a  $[-c - m]$  always internally (or, in general, any  $[-]$  cluster). In this way, the alternations in the examples (22 a)-(22 b) and (23 a)-(23 b) can be successfully accounted for:

- (22) (a) The police officer $_{[+c+m]}$  interrogated a suspect $_{[-c-m]}$ .  
(b) \*A suspect $_{[-c-m]}$  interrogated.

- (23) (a) John $_{[+c]}$  wakes Mary $_{[-c+m]}$  up.  
(b) John $_{[-c+m]}$  wakes up.

There are several ways of accounting the data in (23 a)-(23 b). One way is to assume two different entries in the lexicon, but of course the intuition that tells us that the two “*Wake up*” are related to one another would be lost. A second option is to say that the two entries are **both in** the lexicon, and one is derived from the other (Chierchia (1989) Reinhart (1991), Levin and Rappaport (1995) and Pesetsky (1995)). The drawback of this account is an overgeneration of derived forms (for more details refer to the bibliography). A third solution is proposed by Reinhart (2000, 2002) and it is to say that **only one basic entry** is in the lexicon, and the related entry is derived by operations on the argument structure of this entry (some operations are disallowed by the very nature of the structure of the verb). In this way the similarity of (23 a) to (23 b) is saved (one is directly derived from the other) and the overgeneration is prevented.

It is then a lexical operation that derives (23 a) from (23 b), and in a similar manner unaccusatives, middles, passives, experiencing and reflexives can be derived. The underlying and leading idea is the Lexicon Uniformity Principle<sup>9</sup>, stated in (24), according to which:

- (24) Each verb-concept corresponds to one lexical entry with one thematic structure.  
→ The various thematic forms of a given verb are derived by lexicon-operations from one thematic structure.

Reinhart (2000, 2002) divides verbs into classes, according to the structure of their arguments. Given a lexical entry (with one argument structure) its alternates can be derived by operations on that argument structure.

The operations Reinhart (2000, 2002) proposes are the operations of *Reduction*, *Saturation* and *Entry Changing*. Reflexivity results from a reduction operation, therefore we will pay special attention to this type of operations.

### 3.0.5 Operations on the Argument Structure

There are three different types of operations that can apply to a lexical entry's argument structure: *Saturation*, *Entry-changing*, *Reduction*. Let us see, one by one, how these operations take place.

**Saturation** Saturation is the operation that applies when, even if the arguments are not syntactically filled, they are so in the semantics. This is the case of passives, for instance: in (25) the interpretation is as in (26) (refer to the bibliography for further details on the interpretation).

(25) Max was washed

(26)  $\exists x [Wash(x, Max)]$

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<sup>9</sup>Notice that (24) does not theoretically block distinct entries, encoding distinct concepts, that can be related for other reasons and hence impossible to derive from one another.



**Entry-changing** Lexical Causativization - Agentivization.

Lexical causativization or Agentivization are operations that expand the thematic grid of a verb by adding one argument. Crucially, the inserted argument (refer to Reinhart 2002 for details) is always a [+c+m]: see (27) and (28).

(27) The dog walked

(28) Max / \*the leash / \*hunger walked the dog.

*Entry-changing* operations can derive transitive alternates from one-place unergative basic entries<sup>10</sup>.

**Reduction** In short, the operations of reduction are arity operations that reduce the number of arguments of an entry. These are *Reflexivization* and *Decausativization/Expletivization*.

- **Decausativization/Expletivization** It is the operation that eliminates the [+c] role from both the syntax and the semantics. This is the reason why (30) is ungrammatical: what the bracketed part is forcing is the syntactic realization of something (the external role) that is no longer present in the semantics:

(29) Max broke the window (with a hammer)

(30) The window broke (\*with a hammer)

This is the operation that derives (one-place) unaccusatives from a transitive basic entry.

- **Reflexivization (or Bundling)** *Reflexivization* (or *Bundling*) reduces the internal argument in the sense that it is not syntactically projected; it **does not disappear** from the semantics; in short, by *Bundling* a complex theta-role is formed from both the internal and the external role, that gets assigned to the external argument when the latter is merged:

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<sup>10</sup>This is similar, but in an opposite way, to what happens for *Reduction* operations. See next paragraph.

(31) John <sub>$\theta_1$</sub>  washed Mary <sub>$\theta_2$</sub> .

(32) John<sub>( $\theta_1, \theta_2$ )</sub> washed.

*Bundling* is a parameterizable operation, in two respects: first, languages display variation as to whether the arity reduction eliminates the accusative case too (as it happens in English, for instance), or whether it leaves the residual Case that still needs to be checked (as it is for Dutch); second, languages vary also with respect to the place where the operation of *Bundling* applies: for some languages this place is the syntax, for some others it is the lexicon. This second parameter is the so-called Lexicon-Syntax Parameter: as briefly mentioned in the introduction to this section, the Lexicon-Syntax Parameter is of crucial importance to understand the cross-linguistic variation in the area of Reflexives. The parameter, as presented in Reinhart and Siloni (2005) is stated in (33):

(33) *LEX-SYN Parameter*

UG allows thematic arity operations to apply in the lexicon or in the syntax.

Languages that can Reflexivise in the lexicon (i.e. the parameter is set to LEX(icon)) are, for instance, English, Dutch, Hebrew (and others), whereas languages for which the parameter is set to SYN(tax) are Italian, Czech, Serbo-Croatian (and others). This difference can be observed in a number of configurations, where languages in one group behave homogeneously with one another and differently to the ones in the other group. The parameter will be discussed more in detail in section (4.2); examples for languages' behavior is provided as well.

As it will become clear in the coming sections, the Theta System provides a categorization of verbs that will enable us to solve many of the puzzling data about *auto*-prefixation.

## 4 Intermezzo

### 4.1 Pre-existing literature on *auto-*

The literature about the formation of the *auto-* prefixation is not particularly extensive; it contains only a few articles describing some surface phenomena related to the etymology of the suffix or its presence in some sociologically analyzed environment, rather than addressing its nature and linguistic behavior. In the following part we will briefly present the analyses proposed in four articles about the *auto-* prefixation in Italian. Because the pre-existing literature on the Italian prefix *auto-* approaches the issue from a constructivist perspective, the goals of these articles are, broadly, to provide a good descriptive analysis based on lexicology and etymology. Questions as to what are the underlying mechanisms that prevent *auto-* from being, for instance, associated with the self-anaphor “se stesso” (himself), or as to what is its very inner structure are not addressed. Rather the focus is on why and how *auto-* became productive in Italian and what are the configurations in which it occurs.

Even if focusing on slightly different details, all these four articles are essentially centered on one central issue: the acknowledgment of the presence in the lexicon of three different *auto-* prefixes. Let us look at the analyses more in detail.

About the historical origins of *auto-*, Iacobini (2003) states that *auto-* comes from Ancient Greek *autòs*, reflexive pronoun (where in Latin, its counterpart was the pronoun *ipse*, *-a*, *-um*). Its use, though, is a synonymic calque from the English prefix *self-* and, the author claims the productivity of *auto-* is essentially an instantiation of the influence that English started having on Italian from the beginning of the twentieth century. According to Iacobini (2003, 2004), finally *auto-* filled a gap, i.e. the proper morphological expression of a morpho-syntactic relation: *auto-* corresponds (in its thematic structure) to the un-prefixed reflexive verb in the same manner in which a deverbal noun corresponds to the transitive verb it is derived from. One interesting point made by Iacobini (2003) is the individualization of a prefix (*inter-*) that seems to be the analogous to *auto-* with respect to reciprocal relations. The difference in productivity between the two prefixes, though, lies in the impossibility of prefixing verbs with *inter-*.

Mutz (2003, 2009<sup>11</sup>), assuming (like in Iacobini (2003, 2004) that the thematic structure of an *auto-*verb corresponds to the one of a reflexive verb, compares then the use of

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<sup>11</sup>The publishing year does not correspond with the period in which the article was actually available.

*auto-* and the “reflexive” verbs. After having distinguished the possible different uses of the clitic “*si*” (reciprocals, unaccusatives, etc.), Mutz (2003, 2009) draws the conclusions that “*auto-* can occur only with a “real” reflexive verb”<sup>12</sup>.

Mutz (2009) is the first to claim that there have to be three different *auto-* in the lexicon, because the three different prefixes modify the verb they attach to in a different way. What she claims is, in a nutshell, that *auto*<sub>1</sub> is the one with a reflexive use (*uso riflessivo*), *auto*<sub>2</sub> has a anticausative use (*uso anticausativo*), and *auto*<sub>3</sub> a focalizing/excluding (*uso focalizzante, escludente*). Each of three uses has its own set of nouns, adjectives and verbs. The role these *auto-* prefixes play in the lexicon is summarized below:

1. *Auto*<sub>1</sub>, the reflexive one, indicates coreference between two semantic roles<sup>13</sup>.
2. *Auto*<sub>2</sub>, the anticausative one, indicates an action that takes place without the presence of an agent.
3. *Auto*<sub>3</sub>, the focalizing/excluding one, does not modify the verb it is attached to in its argument structure, but it acts only on the referential level: it indicates that the participants of the action the verb refers to are not the “prototypical” ones, but some less expected.

Along the lines of the study, it is also noticed the impossibility of the combination of *auto-* with “grooming verbs”: “formations of the type of \**autorasatura* (self-shaving) and \**autopettinata* (self-brushing) are pragmatically restricted”.

The overall conclusions include two crucial points: 1. that the productivity of *auto-* verbs is restricted due to the existence of the reflexive construction with *sé/se stesso* (himself). 2. that, when used, the reflexivity is marked in a redundant way.

We do not intend to base our analysis concerning *auto-* on the claims or conclusions found in those articles; nonetheless, it is important to acknowledge the only existing literature on *auto-*. To us, the interesting challenge is to define *auto-* syntactically and semantically in such a way that the three different lexical entries captured by the observation of the configurations by Mutz (2003, 2009) and Iacobini (2003, 2004) can be unified and dependent of verbal properties.

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<sup>12</sup>The author uses “reflexive verb” to refer to all those verbs that in Italian appear with a *-si* clitic (unaccusatives, subject experiencer, reciprocals, etc). “Real reflexive verbs” are reflexive verbs.

<sup>13</sup>From *our* perspective, that is to say that “two arguments are indicated as coreferential”, rather than two semantic roles.

## 4.2 On the derivation of reflexive nouns: the case of Italian prefix *auto-*

It is widely assumed that the argument structure of deverbal nouns is directly inherited from the argument structure of the verb they have been derived from (Marantz (1984), Pesetsky (1995), among others.); nevertheless, some Czech data, presented in Hron (2009), challenge this assumption; the claim is articulated in two points: 1) the widely assumed derivational strategy cannot be the only possible strategy for deriving nouns; 2) there must be an alternative path, that is parallel to those processes of derivation that apply to verbs. For a better understanding of the data, and before the comparison with the Italian data we want to carry out, let us first have a look at the theoretical background as a lens to look through.

## 4.3 The Lexicon - Syntax parameter:

Following Reinhart and Siloni (2005), the properties of reflexive verbs across languages make a division of the languages into two groups possible: those languages where the operation of reflexivization takes place in the lexicon and those where it takes place in the syntax. Now, the most striking prediction for deciding whether a language belongs to one group or the other, is the possibility of reflexivization in **ECM** constructions: since the two roles that have to be bundled originate in two different theta grids, reflexivization is an available operation only to languages that do it syntactically. Other than the ECM test, there are two more other properties that typically distinguish the parameter setting of a language on syntax or on lexicon.

On the basis on the following three sets of examples, one must conclude that both Czech and Italian belong to the group of syntactic languages. They both can reflexivise into an ECM construction:

(Czech)

- (34) *Marie se viděla tančit (v zrcadle).*  
Mary SE saw dance-Inf (in mirror).  
"Mary saw herself dance (in a mirror)."

(Italian)

- (35) *Maria si vide danzare (nello specchio)*  
 Mary SE saw dance-Inf (in-the mirror).  
 "Mary saw herself dance (in the mirror)."

They both can have reflexive datives:

(Czech)

- (36) *napsal si dopis, umyl si ruce*  
 wrote SE letter, washed SE hands  
 "he wrote a letter to himself, he washed his hands"

(Italian)

- (37) *si è scritto una lettera, si è lavato le mani*  
 SE is written a letter, SE is washed the hands  
 "he wrote a letter to himself, he washed his hands"

And finally, practically any verb can be reflexivised by an operation on argument structure (reduction and bundling), even subject-experiencer verbs, whereas in lexicon languages, lexical reflexives are limited to verbs whose external argument is [+c+m]:

(Czech)

- (38) *přesvědčil se, oklamal se*  
 convinced SE, deluded SE  
 "he convinced himself, he deluded himself"

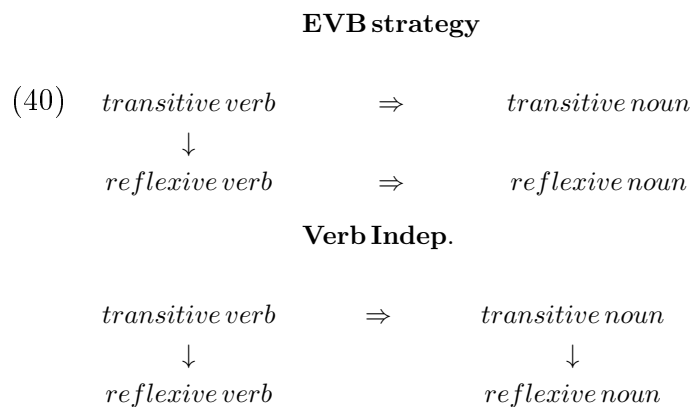
(Italian)

- (39) *si è ingannato, si è confortato*  
 SE is deluded, SE is comforted  
 "he deluded himself, he comforted himself"

#### 4.4 EVB in detail:

Hron (2009) focuses on «complex events» nominals, and specifically on **reflexive nouns**. In the perspective of Czech being a syntactic language in fact, the very presence of reflexive nouns is problematic, as the lexicon-syntax parameter would predict their presence

only in lexicon languages. This presence, though, challenges the assumption about the derivational process of reflexive nouns only, namely the assumption according to which reflexive nouns are derived from the corresponding reflexive verb which, in turn, was derived by the corresponding transitive verb, as in Siloni (2002) and Reinhart and Siloni (2005). Hron (2009), conversely, argues that the process of nominalization in Czech happens in a rather different way, as illustrated in the scheme in (40): The thick arrows indicate the process of nominalization whereas the thin vertical lines indicate the process of reflexivization.



What Hron (2009) calls Exclusively Verb Based (EVB) strategy is the standard manner of forming nouns. What is new is the right part of the scheme: the Verb Independent Strategy.

This different strategy of nominalization is needed in cases like the case of Czech, where, as we said, the presence of reflexive nouns cannot be otherwise accounted for. This difficulty arises because if the EVB strategy is assumed, in a syntactic language the creation of reflexive verbs happens post-lexically, making at this point the derivation of a noun impossible (Marantz (1984), Pesetsky (1995), Chierchia (2004)). Interestingly enough, Italian has reflexive nouns as well: those are the nouns generated by the prefixation of *auto-*. We will soon come to see why the account of nominalization presented in Hron (2009) can be useful for the Italian data too. Hron (2009) claims that there are four combinations possible given the scheme in (40). A language can, therefore, use two strategies for making reflexive nominals. Italian, for instance, has a syntactic way of deriving reflexive nouns from verbs<sup>14</sup>, and a verb-independent lexical one, that we will discuss later.

<sup>14</sup>The syntactic way generates (unproblematically) the so-called “nominal infinitives”. Two examples are (41) and the reflexive (42):

(43) **Four possible derivations for reflexive nouns**

- i. Lexical Nominalization - EVB Derivation
- ii. Syntactic Nominalization - EVB Derivation
- iii. Syntactic Nominalization - Verb Independent Derivation
- iv. Lexical Nominalization - Verb Independent Derivation

We will discuss only those cases where Czech data and Italian data are similar, we are allowed to do so because already these data are enough to challenge the other options for nominalization (from (i) to (iii)) and to support the (iv) type of nominalization.

In the literature mentioned by Hron (2009) (e.g. Hazout 1995 and by Fu, Roeper and Borer 2001), the first of the options is advanced, following the idea of nominalization as V to N incorporation. Hron (2009) claims that it must not be correct as such option makes wrong predictions. If the nominalization depends on a V to N incorporation, the presence of a V-head would allow adverbial modifiers, but, as it happens for Czech (see (44 a)-(46 c) and (46 a)-(46 c) for the corresponding reflexive examples), Italian allows only adjectival modification and modification with a PP (see (45 a)-(45 c) and (47 a)-(47 c) for the corresponding reflexive examples).

(Czech)

- (44) (a) *Matka převléká dítě pomalu*  
mother changes clothes child<sub>acc</sub> slowly  
"The mother slowly changes her child clothes"
- (b) \**Matčino převlékání dítěte pomalu*  
mother's changing clothes child<sub>gen</sub> slowly  
"Mother's changing her child clothes slowly"
- (c) *Matčino pomalé převlékání dítěte*  
mother's slow changing clothes child<sub>gen</sub>  
"Mother's slow changing her clothes"

(Italian)

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(41) L' ingannare il venditore da parte del ladro

(42) L' autoingannarsi del venditore



- (45) (a) *Il ladro inganna il venditore facilmente*  
 the thief deceives the seller easily  
 "The thief easily deceives the seller"
- (b) *\*L' inganno facilmente del venditore da parte del ladro*  
 the deception easily of the seller from part of the thief  
 "Thief's deception of the seller easily"
- (c) *Il facile inganno del venditore da parte del ladro*  
 the easy deception of the seller from part of the thief  
 "Thief's easy deception of the seller"

(Czech)

- (46) (a) *Matka se převléká pomalu*  
 mother SE changing clothes slowly  
 "The mother slowly changes her clothes"
- (b) *\*Matčino převlékání se pomalu*  
 mother's changing clothes SE slowly  
 "Mother's changing her clothes slowly"
- (c) *Matčino pomalé převlékání se*  
 mother's slow changing clothes SE  
 "Mother's changing her clothes slowly"

(Italian)

- (47) (a) *Il venditore si autoinganna*  
 the seller SE AUTOdeceives  
 "The seller deceives himself"
- (b) *\*L' autoinganno facilmente del venditore*  
 the AUTOdeception easily of the seller  
 "The seller's deception of himself easily"
- (c) *Il facile autoinganno del venditore*  
 the easy AUTOdeception of the seller  
 "The seller's easy deception of himself"

Hron concludes that, from the examples in (44 a)-(47 c), a syntactic approach to nominalization cannot be the only one for Czech.

#### 4.4.1 EVB strategy for Czech

The fundamental argument<sup>15</sup> against the EVB strategy for Czech is based on the differences between the Czech system as it is, and what the predictions of the EVB seem to suggest. To understand it better, we first have to introduce a phenomenon that is allowed in Dutch (among other languages). Essentially, to keep this tight to the scope of this section, given specific verbs (such as *wassen*, to wash), in Dutch it is possible for event nominalizations to be interpreted as reflexive without any further marking, as in (48):

- (48) *Wassen is gezond*  
washing is healthy  
"Washing oneself is healthy"

According to the EVB, in Czech, reflexivization should apply to the stem *my-* with no further marking; then the nominal should be created, according to Czech morphological rules. (49 a) should then allow a reflexive interpretation but it does not. In Italian, the same happens: from *lavare* (to wash, stem *lav-*) the deverbal *lavaggio*, or via syntax *il lavare* can be derived: a reflexive reading is not available in none of them.

- (49) (a) *mytí*  
wash<sub>passive-noun</sub>  
"Washing"
- (b) *lavaggio* / *il lavare*  
washing<sub>-aggio</sub> / the washing<sub>inf</sub>  
"Washing / The washing"

According to the EVB though, the transitive verb should be reduced to intransitive and at that point nominalized: the reflexive interpretation should so be allowed, and the result should be more similar to the Dutch pattern where (48) is allowed.

The remainder of the argumentation presented in Hron (2009) is articulated as follows: first, the position of the clitic *se* is observed. In verbal contexts, this clitic that must surface obligatorily as second syntactic element (see (50)) whereas in nominal contexts it necessarily follows the noun, see (51).

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<sup>15</sup>A commentary about some of the motivations given in Hron (2009) against the EVB strategy for Czech is provided in the appendix.

- (50) *Petr se každý den myje studenou vodou*  
 Peter SE every day washes cold<sub>inst</sub> water<sub>inst</sub>  
 "Every day Peter washes himself with cold water."

Každý den **se** Petr myje studenou vodou.

Myje **se** Petr studenou vodou každý den?

Studenou vodou **se** Petr myje každý den.

\*Petr každý den myje **se** studenou vodou.

- (51) *Petrovo každodenní mytí se studenou vodou*  
 Peter's everyday<sub>adj</sub> washing SE cold<sub>inst</sub> water<sub>inst</sub>  
 "Peter's daily washing of himself with cold water."

Každodenní mytí **se** Petra studenou vodou.

\*Petrovo **se** každodenní mytí studenou vodou.

Second, the analysis focuses on the impossibility for event nouns to have pronominal clitics as complements (see (52 b)):

- (52) (a) *Petr ho kupuje.*  
 Peter him/it<sub>gen</sub> buys  
 "Peter buys it"
- (b) *\*Petrovo koupení ho.*  
 Peter's buying him/it<sub>gen</sub>

In support of these pieces of data, Hron (2009) also mentions another interesting fact: these pronominal clitics are allowed (although their acceptability may vary among speakers) when a reflexive clitic is present (see (53)). The problem for the EVB account is that it cannot account, at the same time, for three things: the SE/SI behavior (illustrated in (50) and (51)), for the fact that nominal heads distinguish between pronominal clitics and SE/SI (52 b) and, consequently, for the reason why if reflexive clitics are present, nominal ones are allowed (see (53)).

- (53) *Koupení si ho.*  
 buying SI him/it<sub>acc</sub>

## 4.5 Verb Independent Strategy: a needed expansion for Italian

### 4.5.1 Some notes about nominalization in Italian

The mechanism that generates **deverbal nominals** is more elaborated; there the interaction between morphology and semantics is more evident as mostly it involves the use of suffixes that select specific meanings: for instance, as shown in Gaeta (2000), suffixes like *-ata* (among others) generally select restrictions or modify the actional value of the verb; (*nuotare*, to swim).

- (54) (a) verb  $\rightarrow$  verb stem  $\rightarrow$  + suffix *-ata*  $\rightarrow$  event noun<sub>ata</sub>  
(b) *nuotare*  $\rightarrow$  *nuot-*  $\rightarrow$  + *-ata*  $\rightarrow$  *nuotata*

An *-ata* noun, such as *nuotata*, means a single instantiation of the activity expressed by the verb; as noticed by Gaeta (2000), it is impossible to use it in order to refer to the process as such: for this reason they cannot be preceded by the definite article in the generic meaning:

- (55) \**La nuotata* / \**il nuoto* / *il nuotare* *in*  
\*the swimming<sub>-ata</sub> / the swimming / the swimming<sub>inf</sub> in  
*piscina* *rilassa* *i* *muscoli*.  
swimming pool relaxes the muscles  
"Swimming in the pool relaxes muscles"

As a side note, in (55) the nominal “il nuoto” belongs to that class of other deverbal nouns, which are however less productive, in which the meaning is more idiosyncratic and hard to predict from simply basing upon the verb stem.

Apart from this first group, there are several ways by which a deverbal nominal can be derived from the corresponding verb; as we said, most derivations depend on suffixations on the verbal root that variate depending on the verb<sup>16</sup> (V+*-ata*, V+*mento*, V+*aggio*, ...).

Below, the table roughly schematizes the suffixes with some examples and the corresponding nominal infinitives:

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<sup>16</sup>The verb-class: I, II, III or irregular.

Suffixes	Verb	Deverbal Noun	Nominal Infinitive
(56) <i>-aggio</i> <i>-eggio</i> <i>-ata</i> <i>-ita</i> <i>-uta</i>	→ <i>lavare</i> (to wash) → <i>cadere</i> (to fall)	<i>lavaggio</i> (wash) <i>caduta</i> (fall)	<i>il lavare</i> (the washing) <i>il cadere</i> (the falling)
<i>-mento</i> <i>-tura</i> <i>-zione</i>	→ <i>giurare</i> (to promise, to swear) → <i>friggere</i> (to fry) → <i>sedurre</i> (to seduce)	<i>giuramento</i> (oath) <i>frittura</i> (fry) <i>seduzione</i> (seduction)	<i>il giurare</i> (the swearing) <i>il friggere</i> (the frying) <i>il sedurre</i> (the seducing)

#### 4.5.2 EVB, Verb Independent strategy and *auto*-nouns

Although, in the previous section, we reported some asymmetries between Czech and Italian that interrupt the parallel between the two languages, for Italian there is still one piece of evidence that, requires necessarily a Verb Independent strategy for the formation of nominals. This piece of evidence can be explained as follows: assumed that there is a link between the verbs and event nouns, hence that nouns are generated from verbs by the application of morphological rules (see appendix (109)), if reflexive nouns must be generated, according to EVB, from the corresponding reflexive verb, we find ourselves in the very complicated position of having to explain the lack of some (reflexive *auto*-) verbs and yet the presence of the “corresponding” noun. The puzzle is schematized in (57); (*soffocare*, to suffocate)

<b>EVB</b>			
<i>strategy</i>			
(57)	<i>transitive verb</i>	⇒	<i>transitive noun</i>
	↓		
	<i>reflexive verb</i>	⇒	<i>reflexive noun</i>

<i>soffocare</i>	⇒	<i>soffocamento</i>
↓		
	⇒	<i>autosoffocamento</i>

From what emerges from the data presented in (4.4) gives an evidence that Italian behaves similarly to Czech with respect to two focused properties: the first is that both languages are syntactic languages; the second is that both languages fail displaying those properties predicted by the EVB strategy in the formation of event nouns, which leads to the conclusions that the EVB strategy cannot be (in the case of Czech) or cannot be the only one (in the case of Italian).

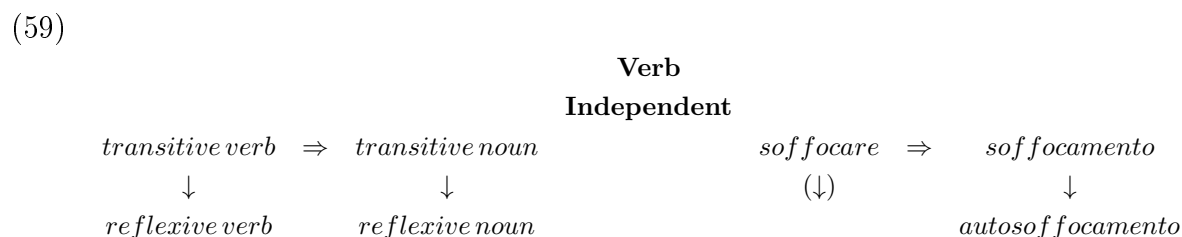
At this point, the account given in Hron (2009) for an alternative derivational path seems intriguing, as it would have the double merit of accounting for all of the Czech data, and also for the very presence and the formation of Italian *auto*-nouns: indeed,

*auto*-nouns are reflexive nouns, hence, already their presence would be problematic for the EVB. That is because, according to Reinhart and Siloni (1997), the process of nominalization occurs universally in the Lexicon, and reflexive nouns are derived directly from the corresponding reflexive verb. The combination of these two assumptions accounts for the absence of reflexive nouns in most syntactic languages, but Czech and Italian pose a problem that remains as to how to explain the derivation of a reflexive noun. According to the EVB account, and assumed that syntax languages form the reflexive verbs in the syntax, hence post-lexically, what is the input for the formation of a reflexive noun, that should again take place in the lexicon?

On top of that, there is a further clue pointing at the possibility of a different strategy, namely the the generation of some *auto*-nouns that do not have a grammatical verbal counterpart. It is the case of, for instance (58 a)-(58 b):

- (58) (a) \**Gianni si è autosoffocato*  
 Gianni SE is AUTOsuffocated  
 "Gianni suffocated himself"
- (b) *Gianni è morto per autosoffocamento*  
 Gianni is dead for AUTOsuffocation  
 "Gianni died because of (self?) suffocation"

With the Verb Independent strategy, those nouns can be accounted for, very straightforwardly:



So far, what is important to focus is that the Verb Independent strategy supplies a linear and simple way of accounting for, on top of the Czech data, also many aspects of Italian, unpredictable or wrongly predicted otherwise, including the absence of *auto*-reflexive verbs as (missing) input for the generation of (existing) nominals.

In conclusion, more there is left to say on where the nominalization process is located in the derivation, but the global idea that emerges from the data in Hron (2009) - and

that we intended to test and eventually support - is that, assuming: 1) the derivational link between transitive verbs and reflexive verbs can be captured in terms of operation on the argument structure; 2) reflexivization as an operation that applies in the lexicon or in the syntax (the lexicon-syntax parameter); it is possible to extend the way by which the operation applies to verbs to nouns also.

## 5 The distribution of *auto-*

### 5.1 Puzzle

The leading idea of this section is to investigate the possibilities and the use of the *auto-* (verbal) reflexive prefix and to try to capture the fundamental properties to account for the restrictions on its productivity.

We will discuss some cases that show in which way the prefixation of *auto-* is indeed restricted, in the attempt of discovering which rules block the *auto-* prefixation and how *auto-* interacts with the verb it attaches to. We will also discuss the patterns of (in)grammaticality trying to identify the conditions regulating them and the range of verbs that allow the prefixation. The number of arguments of these verbs we will observe is always  $\geq 2$ . This is the first restriction on *auto-* and it is exemplified in (60):

- (60) *Gianni (\*auto)ironizza un po'*  
Gianni (\*AUTO)ironizes a bit  
"Gianni ironizes a bit"

This example shows how, independently from the fact that the noun *Autoironia*, "self-mocking", exists, the *auto-* prefixation of a one-place verb is impossible. For a verb, to be at least two-place is a necessary condition for *auto-* prefixation to apply.

Native speakers of Italian have very clear intuitions about the grammaticality of (61 b), which is even preferable to (61 a). English (62) is judged ungrammatical (according to Reinhart (2000)) and the Italian example without *auto-* (61 a) is grammatical but feels somehow strange because the semantics of a collective verb like *Elect* needs a plural subject whereas "That politician" or "John" forces a distributive reading, hence the odd/ungrammatical judgment. On the other hand, the examples with *auto-* are perfectly grammatical.

- (61) (a) *?Quel politico si è eletto*  
that politician SE is elected  
"That politician elected himself"
- (b) *Quel politico si è autoeletto*  
that politician SE is AUTOelected  
"That politician elected himself"



(62) \*John elected himself

This pattern recurs with all those verbs where the action is performed by a group; the interpretation of a collective *auto*-verb goes smoothly when the action does not need to be *physically* performed by the group, as in (63) - (64 b).

(63) \*That politician ostracized himself

(64) (a) ?*Quel politico si è ostracizzato*  
that politician SE is ostracized  
"That politician ostracized himself"

(b) *Quel politico si è auto-ostracizzato*  
that politician SE is AUTOostracized  
"That politician ostracized himself"

*Accerchiare*, "Surround", is a collective verb but, in some sense the performance of the action requires the physical presence: in this it differs from verbs like *Elect* or *Ostracize*. However, the effect of *auto*-prefixation is so strong that even in cases like (65 a) - (65 b) the *auto*-prefixed verb is acceptable whereas the non-prefixed is not.

(65) (a) \**Il capitano si è accerchiato*  
the captain SE is surrounded

(b) ?*Il capitano si è autoaccerchiato*  
the captain SE is AUTOSurrounded  
"The captain surrounded himself"

What does the lexical operation of *auto*-prefixation do to a verb? Independently from the nature and the properties of the verb (e.g. collective or not), it performs one task: it modifies the verb in such a way that the focus is no longer on the object (patient, goal, experiencer) but it is shifted onto the subject (agent / agentive reading of the cause).

This *object to subject shift* is the main pragma-semantic effect on the interpretation that takes place with human external arguments<sup>17</sup>.

Let us observe the triplet (66 a)-(66 b)-(66 c):

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<sup>17</sup>Cases of non-human subjects (when the arguments involved in the action are, for instance, computers or space ships) the effects of *auto*- can be captured in a different manner.

- (66) (a) NP **si** <verb>  
 (b) NP <verb> **se stesso**  
 (c) NP **si** **Auto-**<verb>

The main semantic difference between (66 a) and (66 b) is that if the first one is pragmatically neuter, the second one bears instructions “focus on the object” (object=*se stesso*). So, the first one has no particular focus indications, whereas the second one does. Similarly (66 c) differs from (66 a) because *auto-* instructs the pragmatics to read the focus as shifted onto the subject. This means that *auto-* prefixed verbs, by incorporating the instructions of “focus on the subject”, are perceived by native speakers as encoding the information that the action is *actually* (so, in some sense *unexpectedly*) performed by the subject. Example (67 b) is quite illustrative:

- (67) (a) *L' imputato si è accusato del crimine*  
 the defendant SE is accused of the crime  
 "The defendat accused himself of the crime" (no focus)
- (b) *L' imputato si è autoaccusato del crimine*  
 the defendant SE is AUTOaccused of the crime  
 "The defendant accused himself of the crime" (focus on the subject)

The leading idea that we will pursue is that *auto-* is a lexical element that acts as a filter. Given the proper material (a verb with all the required properties, such as, having at least two arguments, and so forth), it selects one range of meanings, among the available ones, and gives, at the same time, instructions to the pragmatics. The range of meanings it selects is the one compatible with something that can be described roughly as “full agentivity”, a result of the focus on the subject.

## 5.2 *Auto-* and *se stesso*

Another noticeable feature of this prefix is that *auto-* never appears whenever a SELF-anaphor *se stesso* is present. Sentences like (68 a) and (68 b) are thus ungrammatical:

- (68) (a) \**Gianni ha autoincoronato se stesso*  
 Gianni has AUTOCrowned SE same

- (b) \**Gianni ha autoinviato una lettera a se stesso*  
 Gianni has AUTOsent a letter to SE same

As already informally mentioned in section (2), to avoid IDI, languages have two remedies: the first one is the Bundling of the two thematic roles, in order to form a new complex one, that can straightforwardly be assigned to this one argument; the other solution is keeping the arguments distinct: the two logical arguments are the variable  $x$  (in this case, bound by “John”) and a function of  $x$  (for instance, the property of “hating oneself” is exemplified in (69)).

- (69) John  $\lambda x$ . hate ( $x$ ,  $f(x)$ )

Returning to the Italian case, (70 a) is grammatical since the *stesso* is the full argument a theta role can be assigned to.

- (70) (a) *Gianni incorona se stesso*  
 Gianni crowns SE self  
 "Gianni crowns himself"

But, at this point, the question resolves into understanding which  $f(x)$  is needed to express a reflexive relation. We will return to this in section (6)

### 5.3 *Auto-* prefixed verbs

Seeing *auto-* is a lexical item, its prefixation would turn the transitive verb into a reflexive one but it would leave a case residue which, according to the idea presented in Reinhart & Sioni (2005) and implemented by Reuland and Marelj (forthcoming), needs to be mopped up by the clitic *si*<sup>18</sup>.

One question at this point could be: if there is a residual case to be absorbed, why cannot it be handled by *se stesso*?

The ungrammaticality depends on the fact that the result of *auto-* prefixation is a reflexive verb (a property) and no longer a two-place verb, so *se stesso* is not expected: a full argument would mop up the residual case, but also, inevitably, lead to an ungrammatical construction, through the violation of the Theta Criterion.

<sup>18</sup>*Si* is no longer seen as an instrument of the bundling.

The instructions given to the Pragmatics would also be incoherent: assuming that the sentence would be syntactically acceptable (so the residual case be absorbed by *se stesso*): a clash would take place somewhere else. Let us see why. Semantically *auto-* filters the interpretation (it intersects a non-reflexive relation with a reflexive one) and gives the instruction to the Pragmatics “focus on the agent”. At the same time *se stesso* provides the opposite instruction: “focus on the object”. The two contrasting focus instructions clash: the intuitions about the sentence would be somewhat confusing and the result would be a strongly “uneasy” feeling.

## 5.4 Restriction on Grooming verbs

One class of verbs which disallows the *auto-*prefixation is the class of grooming verbs, (the verbs of bodily care, such as *Shave* or *Dress*). Let us now look at some specific examples with *auto-*:

(71) *Gianni si lava* / *\*autolava*  
 Gianni SE washes / *\*AUTOWashes*  
 "Gianni washes himself"

*Gianni si rade* / *sbarba* / *\*autorade* / *\*autosbarba*  
 Gianni SE shaves / shaves / *\*AUTOshaves* / *\*AUTOshaves*  
 "Gianni shaves himself"

*Gianni si (s)veste* / *(dis)abbiglia* / *\*auto(s)veste* /  
 Gianni SE (un)dress / (un)dress / *\*AUTO(un)dress* /  
*\*auto(dis)abbiglia*  
*\*AUTO(un)dress*  
 "Gianni (un)dresses"

*Gianni si pulisce* / *\*autopulisce*  
 Gianni SE cleans / *\*AUTOcleans*  
 "Gianni cleans himself"

*Gianni si pettina* / *\*autopettina*  
 Gianni SE brushes / *\*AUTObrushes*  
 "Gianni brushes himself"

These verbs are claimed to be somehow inherently reflexive<sup>19</sup>, and many (lexicon) languages distinguish grooming verbs them: English sets them apart, since they allow a null-object. Dutch sets them apart also for the interpretation of nominalizations. As mentioned in the section dedicated to reflexive nouns, according to Reinhart & Siloni (2004a), Italian is classified among the syntactic languages, hence, reflexivization should not take place in the lexicon. So, does this “natural” class, or set of verbs, exist in Italian as well? Is there any (independent) syntactic property that is sensitive to the property of “being grooming”? If so, where and how is it encoded? And how can *auto-* be sensitive to this property? And, especially, how to encode this property, since Italian is a syntactic language?

#### 5.4.1 Setting the groomings apart

At this point, it becomes necessary to find an independent characterization (other than the sensitivity of *auto-*) setting grooming verbs apart from the so-called non-inherently reflexive verbs. As said above, in Italian, the behavior of grooming verbs is normally not different from the other transitive verbs. They would seem not to create a natural class in Italian (unlike English, Russian, etc.), but if we look at causative constructions<sup>20</sup>, grooming verbs pair with various types of *-si* verbs, such as unaccusatives and *frozen entries* (but, interestingly not psych-verbs, see (74c) which can only mean “You scare Gianni”).

The behavior of Italian with causative constructions is interesting also because it differs from the other Romance languages: see for instance (72b) as opposed to French (72a).

- (72) (a) *Fait se laver Jean*  
 make SE wash Jean  
 “Make Jean wash (himself)”
- (b) *Fai lavare Gianni*  
 make wash Gianni  
 “Make Gianni wash (himself)”
- (c) \**Fai si lavare Gianni*  
 make SE wash Gianni

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<sup>19</sup>Non-inherent reflexives can be formed by any transitive verb (as long as the semantic allows it), inherent reflexives can be formed only by a limited set.

<sup>20</sup>See Reuland and Marelj (forthcoming) for more details on *si* and the clitic/non clitic parameter.

- (d) *\*Fai lavarsi Gianni*  
 make washSE Gianni

Other examples of causative constructions, notice the asymmetry between (73 a) - (73 c) and (74 a) - (74 c):

- (73) (a) *Fai rasare Gianni*  
 make shave Gianni  
 “Make Gianni shave (himself)”

- (b) *Fai sedere Gianni*  
 make sit Gianni  
 “Make Gianni sit down”

- (c) *Fai alzare Gianni*  
 make stand up Gianni  
 “Make Gianni stand up”

- (74) (a) *\*Fai difendere Gianni*  
 make defend Gianni

- (b) *\*Fai odiare Gianni*  
 make hate Gianni

- (c) *\*Fai spaventare Gianni*  
 make scare Gianni

These last two sentences are grammatical under the passive reading: “Make someone defend Gianni”, “Make someone hate Gianni”. For completeness sake, it is important to notice that *Hate*-type or *Defend*-type verbs need a causative construction of the shape of:

- (75) (a) *Fai sì che Gianni si odi*  
 make in such a way that Gianni SE hates  
 “Make Gianni hate himself” or “Cause Gianni to...”

- (b) *Fai sì che Gianni si difenda*  
 make in such a way that Gianni SE defends  
 “Make Gianni defend himself” or “Cause Gianni to...”

### 5.4.2 Why do grooming verbs disallow *auto-* prefixation?

A preliminary answer is that, from the perspective in which grooming verbs form a natural class containing verbs that are somehow intrinsically reflexive, they are not expected to allow a double lexical reflexivization. Again, the line of argument in support of this view includes a similar different behavior of this class of verbs in other languages (e.g. English or Dutch); how does this intrinsic reflexivity might act on the verb can be clarified if we imagine that these verbs have one prepared entry. Essentially, the preparation handles - limiting it - the set over which the operation must take place. In our cases, it is strictly linked to *Bundling*: if there exist two connected *Wash*, a *Wash(x,y)* a transitive and a *Wash(x)* where the two roles are bundled, it is as if the “default” stem is this second one and that is the one *auto-* should apply to. *Auto-*prefixation would then be impossible as it would mean *double* marking<sup>21</sup>.

If a stem offers, for instance, two possible interpretations, a sentence containing such stem must have a default/preferred (“prepared”) interpretation; in (76 a) the grooming/distributive interpretation is the prepared one, whereas in (76 b) the reciprocal reading primes over the distributive one:

- (76) (a) *Gianni e Maria si lavano*  
Gianni and Maria SE wash  
"1) Gianni and Maria wash themselves" "2) Gianni and Maria wash eachother"
- (b) *Gianni e Maria si guardano*  
Gianni and Maria SE look  
"1) Gianni and Maria look at eachother" "2) Gianni and Maria look at themselves"

If this is the case, we would find similarities also with some other verb where the stems are “prepared” for a default interpretation: it is indeed the case of reciprocals.

## 5.5 Restriction on Reciprocals

So, another configuration in which *auto-* prefixation is disallowed is with verbs reciprocally-prepared. Clearly when discussing reciprocal verbs, we do not intend to mean that the

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<sup>21</sup>This raises questions on the fact that nominals do not allow the reflexive interpretation without further marking, and indeed this aspect requires further analyses.

prefixation of *auto-* should still yield a reciprocal: however it is imaginable that the prefixation of *auto-* could disambiguate a reciprocal, when the circumstance is ambiguous. It is the case of (77 a):

- (77) (a) *Gianni e Maria si baciano*  
 Gianni and Maria SE kiss  
 "Gianni and Maria kiss (eachother)" or "Gianni and Maria kiss themselves"
- (b) \**Gianni e Maria si autobaciano*  
 Gianni and Maria SE AUTOkiss
- (c) *Gianni e Maria si abbracciano*  
 Gianni and Maria SE hug  
 "Gianni and Maria hug eachother" or "Gianni and Maria hug themselves"
- (d) \**Gianni e Maria si autoabbracciano*  
 Gianni and Maria SE AUTOhug
- (e) *Gianni e Maria si guardano*  
 Gianni and Maria SE look  
 "Gianni and Maria look at eachother" or "Gianni and Maria look themselves"
- (f) \**Gianni e Maria si autoguardano*  
 Gianni and Maria SE AUTOlook

There are several observations that can be made: as for the grooming verbs, there is nothing in the argument structure that should prevent *auto-* to attach to these verbs: in *Baciare*, "Kiss" and *Abbracciare*, "Hug", we have the following argument structure:  $V([+c + m] [-c - m])$  whereas the structure of *Guardare*, "Look at", is  $V([+c + m] [-m])$ . From the perspective of the structure, there is no incompatibility with the *auto-*prefixation, as the verbs that allow the prefixation are not dissimilar from these ones. The question is then, why the insertion of *auto-* in (77 b) does not drive the interpretation from the reciprocal to the (distributive) reflexive?

Taking the same perspective used for the grooming verbs, we say that some verb has a prepared entry for the reciprocal interpretation. This means again, *Bundling* of the roles, but this time in the sense that there is no space for the distinction between subject and object. If *auto-* tries to apply to a stem reciprocally bundled, it would not be blocked for a double marking, but because this prefixation would mean the *undoing* of the lexical operation.



## 5.6 Restriction on [+c]: the give/send asymmetry

Another restriction on the *auto*-prefixation concerns the [+c] verbs. The following list of examples illustrates “minimal pairs” where the main difference is the realization of the external argument: there is a strict correlation between [+c] and the impossibility of *auto*-prefixation as well as [+c + m] and the allowance of *auto*-prefixation.

- (78) (a) *Gianni si è autoinviato una regalo*  
 Gianni SE is AUTOsent a letter  
 "Gianni sent a letter to himself"
- (b) \**Gianni si è autodato un regalo*  
 Gianni SE is AUTOgiven a gift  
 "Gianni gave a gift to himself"

Inviare (Send):  $V ([+c + m] [-c - m] [-c])$

Dare (Give):  $V ([+c] [-c - m] [-c])$

- (79) (a) *Gianni si è autoslegato*  
 Gianni SE is AUTOunfastened  
 "Gianni unfastened himself"
- (b) \**Gianni si è autoliberato*  
 Gianni SE is AUTO set free  
 "Gianni set himself free"

Slegare (Unfasten):  $V ([+c + m] [-c - m])$

Liberare (Set free):  $V ([+c] [-c - m])$

In fact, at this point the presence of [+c + m] appears to be a necessary condition for *auto*-prefixation by the semantics/meaning of the verb (just like a reflexive can be made out of virtually any transitive, but in practice we would judge odd the concept of “apococate oneself”). This can be further explained by showing how *auto*-prefixation works in the following minimal pairs:

- (80) (a) ?*Gianni si è autoinseguito*  
 Gianni SE is AUTOchased  
 "?Gianni chased himself"

- (b) \**Gianni si è autoseguito*  
 Gianni SE is AUTOfollowed  
 "Gianni followed himself"

Inseguire (Chase):  $V ([+c + m] [-c - m])$

Seguire (Follow):  $V ([+c] [-c - m])$

## 5.7 Other restrictions

For what remains, any verb that does not have a  $[+c + m]$  argument disallow *auto*-prefixation. Any verb similar to the couple *Amare/Odiare*, “Love”/“Hate” whose argument structure is for both<sup>22</sup> ( $V [+m] [-c - m]$ ), disallow the prefixation. In the same way two-place unaccusatives such as *Affascinare* or *Attrarre*, “Appeal”, whose structure is  $V [-c - m] [-c]$  display the same ungrammaticality:

- (81) \**Gianni si auto-odia / autoama*  
 Gianni SE AUTOhates / AUTOloves  
 "Gianni hates/loves himself"

- (82) \**Gianni si autoattrae / autoaffascina*  
 Gianni SE AUTOappeals  
 "Gianni appeals (to) himself"

In the next section we will discuss issues related to the interpretation of *auto*-verbs and observe closely the relation between *auto*- and proxies.

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<sup>22</sup>At least, in Italian.

## 6 Interpretation of *auto-*

### 6.1 The Proxy Issue

Since the introduction of the concept of proxies, to account a type of interpretation within the study of Reflexivity (Jackendoff (1992)), they have been useful to probe the various properties of anaphoric expressions. Standardly, the contexts where proxies are employed are the so-called Madame Tussaud's scenarios (the wax-statue museum); When a sentence is said grammatical under the Madame Tussaud's scenario it means that the type of anaphoric expression used can refer to the statue and not just to the "real" individual. This is the case of (83 a)<sup>23</sup>, (83 b) and (83 c):

- (83) (a) Ringo begon zichzelf te wassen (Dutch)  
(b) Ringo started to wash himself (English)  
(c) Ringo ha iniziato a lavare se stesso (Italian)

In the examples above the proxy reading is available, hence *zichzelf*, *himself* and *se stesso* allow both interpretations: either Ringo is performing the action on his own body, or on the wax effigy representing him. Ideally, a proxy of  $x$  is something can be named  $x$ , for between the two there is some relation of identity.

In Dutch, a contrast between *zich* and *zichzelf* can be identified, with respect to proxy readings. As we have seen in the example above, *zichzelf* allows this reading but *zich* does not. Compare (83 a) with (84):

- (84) *Ringo begon zich te wassen.*  
Ringo started SE to wash  
"Ringo started to wash" (no proxy reading available)

Why is it so? The reflexive-marking of a predicate can take place with a SELF-anaphor or in the lexicon. According to Reinhart (2002) and Reinhart & Siloni (2005), several operations can be performed on a verb's argument structure and one of these in indeed (as mentioned several times in the previous sections) the bundling of the thematic roles. In Dutch, after *Bundling* applies, an element needs to be inserted to check the residual case that survives this reduction operation<sup>24</sup>. Such element is *zich*. In this sense,

<sup>23</sup>Example (15b) of Reuland & Winter (2009).

<sup>24</sup>In English, that differs from Dutch for what concerns the Case system, this is not necessary, as it can be seen in (85):

*zich* is not interpreted as a separate argument, hence the impossibility of the proxy reading. In languages where *Bundling* takes place in the syntax, and it can be applied unrestrictedly<sup>25</sup> to any transitive verb, there is a stage (in the syntax) where two distinct arguments are available: it is because of this availability of the two positions that in Italian (one of these languages), proxy readings are available also with *si*, as it appears clear from the following example:

- (86) *Ringo si lava*  
 Ringo SE washes  
 "Ringo washes himself" (proxy reading available)

An approach that includes the availability (or not) of proxy-readings is presented in Reuland & Winter (2009), where these alternations follow directly from the type of semantics provided for *self*. The general idea is that the availability of these readings depends on the semantic environment as the semantic of *self* remains unchanged. One crucial pro of this approach is that bound and exempt anaphors can have a unified semantic analysis, formulated in term of an extension of Jacobson's (1999) variable-free semantics, among whose properties there is the possibility of mapping the individual (the subject) onto that set of entities that are representations or representative of it (proxies).

In section (5) we had this example, and the question was "which  $f(x)$  is needed to express a reflexive relation".

- (87) John  $\lambda x$ . hate ( $x$ ,  $f(x)$ )

**Does it stand proxy?** There are many  $f(x)$ :  $x$ 's mother,  $x$ 's dog,  $x$ 's education, one of  $x$ 's properties in general: all these are functions of  $x$ , but in all these cases there is no reflexive relation expressed. Very roughly, an  $f$  such that  $f(x)$  can stand proxy for  $x$  is the function that expresses a reflexive relation by mapping  $x$  to the set of  $x$ 's proxies. So, going back to the example in (87) what can stand proxy for John is John's *self*. *Self* is an intrinsically relational item because, unlike objects (tables, chairs) which do not need to belong to someone, *selves* are always somebody's *selves*.

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(85) Ringo started to wash

<sup>25</sup>Unlike those languages where it takes place in the lexicon, where only a subset of verbs can undergo this operation.

So, *self* intrinsically relate an individual to proxy. Under this perspective, it is clear why in many languages we find elements like “*self*” (or any other linguistic element that can stand proxy, like “head” or “body”, etc.). Whenever in a language there is a reflexive element, either it defines a proxy, or it is a reflex of a morphological operation bundling the thematic roles. When the latter is the case, i.e. we are dealing with an operation on the argument structure, if the starting point is a transitive verb, the syntactically marked transitivity is preserved.

## 6.2 Proxies and *auto-*

The importance of proxies for what concerns *auto-* is two-fold. On one hand, it is important to see whether *auto-* allows the standard “statue proxy” reading at all, on the other hand, it is important to see if all proxies can be treated in the same manner. If, as we believe, the *auto-* prefixation applies in the lexicon, the expectation would be that no proxy reading would be available with *auto-*. That is indeed the case, as it is shown by the following examples, given the Madame Tussaud’s scenario:

- (88) (a) *Ringo si è autoeletto il più bello*  
 Ringo SE is AUTOelected the most beautiful  
 "Ringo elected himself as the most beautiful" (no proxy reading available)
- (b) *Ringo si è autodistrutto*  
 Ringo SE is AUTOdestroyed  
 "Ringo destroyed himself" (no proxy reading available)
- (c) *Ringo si è autoincoronato*  
 Ringo SE is AUTOcrowned  
 "Ringo crowned himself" (no proxy reading available)

If we compare (88 c) with the following two examples, we can see that among the three sentences there is no difference in truth values (at the sentential level) but, since sentence (88 c) does not have the proxy reading, it seems that *auto-* forces strict identity<sup>26</sup>.

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<sup>26</sup>The same appears to be happening in Dutch, where (90) displays the same form of blocking of the proxy reading. Consider the following alternation (always under the Madam Tussaud’s scenario):

- (89) Jan <verb> zich**zelf**  
 (90) \*Jan **zelf** <verb> zich

Notice that the very same pragmatic content of an *auto-* prefixed verb can be rendered in Dutch by the different dislocation of *zelf*, as in (90).

Those a specifically those differences to be captured in terms of truth conditions, viz. the conditions given which each sentence is true. Although it is generally understood that the truth conditions are distinct from the meaning of a sentence<sup>27</sup>, still they are of crucial importance when designing the semantics (and the related information to the pragmatics) of an item and that is why these should be encoded in an approach from which these observations follow naturally<sup>28</sup>.

- (91) *Ringo si incorona*  
 Ringo SE crowns  
 "Ringo crowns himself" (proxy reading available)
- (92) *Ringo incorona se stesso*  
 Ringo crowns SE self  
 "Ringo crowns himself" (proxy reading available)

However, there are circumstances where some kind of proxy readings are indeed available. These are not the standard wax-statue proxies, but rather those proxies entailed by verbs such as *Tradurre*, “Translate”, *Citare*, “Cite, Quote” and *Distruggere*, “Destroy”, in particular environments.

### 6.2.1 *Translate-type proxies*

A verb like *Translate* when employed, for instance, with proper names (such as Tolstoj or Homer) does not refer to the actual person, but rather to a work by that author, that is, a proxy of the author<sup>29</sup>. One of the most standardly accepted used of *auto-* is indeed with the *Translate-type* verbs. A sentence like (107a) is perfectly grammatical:

- (93) *Tolstoj si è autotradotto in francese*  
 Tolstoj SE is AUTOtranslated in French  
 "Tolstoj translated himself into French"

This raises a number of questions, because as we have seen, it is never possible for *auto-* to get the “standard” proxy reading, the canonical wax effigy reading. But why is (93)

<sup>27</sup>In the sense of Wittgenstein (1921) §4.4.3.1

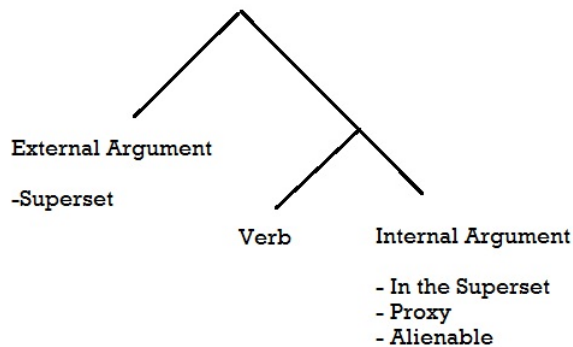
<sup>28</sup>As we have seen in the Intermezzo dedicated to the pre-existing literature on *auto-*, just like no formal work on the syntax of *auto-* has been done from a generative perspective, also the semantics of *auto-* has not yet been formulated, except from the perspective of lexicology

<sup>29</sup>This is what Safir (2004) refers to as the “author/work” proxy.

grammatical then? If we account for the impossibility for *auto-* to stand proxy, then (93) should be ruled out, in the sense that if *auto-* could not refer to a proxy of the “author”, then the sentence would be impossible to understand, hence ungrammatical. Nevertheless, this appears not to be the case.

So, it appears then that *auto-* can indeed stand proxy, but the proxies it can refer to are not all proxies, but a subset of them. If we understand the arguments of a verb as semantically made out of parts, in a bit of a *mereological* fashion, it becomes possible to read the relations encoded by the verbs in terms of relations between these parts. Proxies can be parts in the set of the interpretation of the individual, in this sense we use the term “superset” meaning the collection of the proxies of an individual and the individual himself. Furthermore, there are some entailments concerning (alienable or inalienable) possession that we will specify for more clearness. The output of this observation is a tree-like scheme, as (94). Let us start from Translate-type verbs:

(94) *Translate*-type verbs



Here the superset is that set including the external argument (Tolstoj, if considering the example (93)) and all of his proxies. The *Translate*-relation is with a proxy that sits as internal argument. This proxy is not inalienably part of the superset. If we compare this case with another type of proxy relation, namely the *Destroy*-type verbs with non-human subjects, we can see how the proxy-referent order varies.

### 6.2.2 *Destroy*-type proxies

Similar to what happens for the *Translate*-type verbs, happens with the *Destroy*-type verbs with a non-human subject (spaceships, computers and so forth). When discussing

the restrictions on the *auto*-prefixation, we shown how [+c] disallowed it. However, a combination of these causal verbs, selecting a [+c] as external argument, and non-human subjects shows a different behavior. Sentences like (95 a) and (95 b) are completely grammatical:

- (95) (a) *Il computer si è autoacceso*  
 the computer SE is AUTOturned on  
 "The computer turned on by itself"
- (b) *La nave spaziale si è autodistrutta*  
 the ship spatial SE is AUTOdestroyed  
 "The spaceship destroyed itself"

What is the different interpretation between (95 a) and (96 a) and between (95 b) and (96 b)?

- (96) (a) *Il computer si è acceso*  
 the computer SE is turned on  
 "The computer turned on"
- (b) *La nave spaziale si è distrutta*  
 The ship spatial SE is destroyed  
 "The spaceship destroyed itself"

Among all the verbs that can undergo *auto*-prefixation we can find the *Destroy*- or *Light*-type verbs (destroy, demolish, disintegrate, turn on /light, etc) when the external argument is non-human (a computer or a similar complex machine). Since the argument structure of these verbs is  $V ([+c] [-c - m])$  they should be able to undergo the reduction of the external [+c] and hence at a first look verbs in (95 b) and (96 b) appear to be unaccusatives. Similarly we may be lead to think that even the *auto*- prefixed versions are unaccusatives.

**Unaccusativity tests** To test this, we can take advantage of the tools for the unaccusativity diagnostics provided by Reinhart (2000, 2002). The main idea is that unaccusativity allow the so-called NE-cliticization (see (98 c)). Furthermore, if a transitive entry  $V ([+c] [-c - m])$  undergoes an operation of *Reduction*, this operation eliminates (from both the syntax and the semantics the [+c] role that cannot be expressed (hence the ungrammaticality of the part between the brackets). Unaccusatives allow also the reduced relative constructions (see (97 d)) and the participial subordinates (see (97 e)).



- (97) (a) *Gianni apre la porta*  
Gianni opens the door  
"Gianni opens the door"
- (b) *La porta si apre (\*per la chiave)*  
the door SE opens (\*for the key)  
"The door opens (\*because of the key)"
- (c) *Se ne sono aperte molte (di porte)*  
SE NE are opened many (of doors)  
"Many doors opened"
- (d) *Le porte aperte erano quelle verdi*  
the doors opened were those green  
"The opened doors were the green ones"
- (e) *Apertasi la porta, riuscimmo a vedere dentro la casa*  
openedSE the door, we managed to look inside the house  
"Once the door was open, we managed to look inside the house"

How do our *Destroy*-type verb behave under the same conditions? And what the *auto*-prefixed verbs do? The following set provides examples for the behavior of *Accendere*, "Turn on" or "Light".

- (98) (a) *Gianni accende il computer*  
Gianni turns on the computer  
"Gianni turns on the computer"
- (b) *Il computer si è acceso (con quel software che lo attiva)*  
the computer SE is turned on (with that software that it<sub>clitic</sub> activates)  
"The computer turned on (with that activating software)"
- (c) *Se ne sono accesi molti (di computer)*  
SE NE are turned on many (of computers)  
"Many computers turned on"
- (d) *I computer accesi erano quelli nuovi*  
the computers turned on were those new  
"The computers that were turned on, were the new ones"
- (e) *Accesosi il computer, apriamo la mail*  
turned on SE the computer, we opened the email  
"Once the computer was turned on, we opened the email"

In line with Reinhart and Siloni we assume that standard reflexives are not unaccusatives, as they do not allow NE-cliticization. As we can see, NE-cliticization is not always disallowed, but, as it appears in (98 b) also the specification of the cause is allowed. The following concerns the same test with *Destroy*.

- (99) (a) *Il capitano distrugge la nave spaziale*  
 the captain destroys the ship spatial  
 "The captain destroys the spaceship"
- (b) *La nave spaziale si è distrutta (con quel dispositivo di sicurezza)*  
 the ship spatial SE is destroyed (with that security system)  
 "The spaceship destroyed itself (with that security system)"
- (c) *\*Se ne sono distrutte molte (di navi spaziali)*  
 SE NE are destroyed many (of ships spatial)
- (d) *Le navi spaziali distrutte erano quelle potenti*  
 the ship spatial destroyed were those powerful  
 "The destroyed spaceships were the powerful ones"
- (e) *Distrutta la nave spaziale, arrivò la sconfitta*  
 destroyed the ship spatial, arrived the defeat  
 "Once the spaceship was destroyed, the defeat arrived"

In order to see where something interesting falls, with respect to *auto-*, namely if there appears to be a systematic contrast, we need to see if the form with *auto-* allows NE-cliticization better than the form without. Compare the examples (and the judgments in) (100 a) and (100 c) with the ones in (100 b) and (100 d).

- (100) (a) *\*?Se ne sono accesi molti (di computer)*  
 SE NE are turned on many (of computers)
- (b) *\*Se ne sono distrutte molte (di navi spaziali)*  
 SE NE are destroyed many (of ships spatial)
- (c) *\*?Se ne sono autoaccesi molti (di computer)*  
 SE NE are AUTOturned on many (of computers)

- (d) \**Se ne sono autodistrutte molte (di navi spaziali)*  
 SE NE are AUTOdestroyed many (of ships spatial)

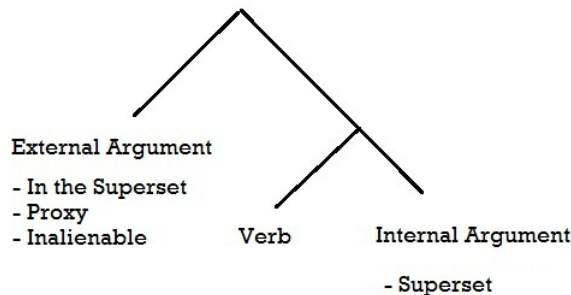
*Auto*-prefixation does not make the NE-cliticization allowed when in the non-prefixed version it is not. This indicates that by no means the [+c] verbs can if prefixed can be seen as unaccusatives. This leads us to think that they are indeed reflexive constructions; in case of non-human arguments the agentivity that normally *auto*- requires is embodied by a built-in mechanisms meant to perform that action.

Some verbs of this type can be *auto*-prefixed when a psychological reading of the verb is available. We will discuss these cases in the following paragraph.

### 6.3 The Proxy Issue (reprise)

A closer at the arguments of these type of verbs obtains the following scheme:

- (101) Destroy-type verbs + non-human subjects



In this case, the superset is the internal argument and the proxy (that is in the superset) is the external argument. On top of this, the proxy is now inalienably part of the superset. Why? Let us consider (102):

- (102) *Il computer si è autodistrutto*  
 the computer SE is AUTOdestroyed  
 "The computer destroyed itself"

It is a part of the computer that destroys it (some sort of built-in mechanism, such as a chip, or other) but that can yet be identified with the whole computer. This built-in mechanism is inalienably part of the computer, as *auto*- in (103) is ungrammatical:

(103) *Il computer si è (\*auto)distrutto per il computer accanto*  
 the computer SE is AUTODestroyed because of the computer

next

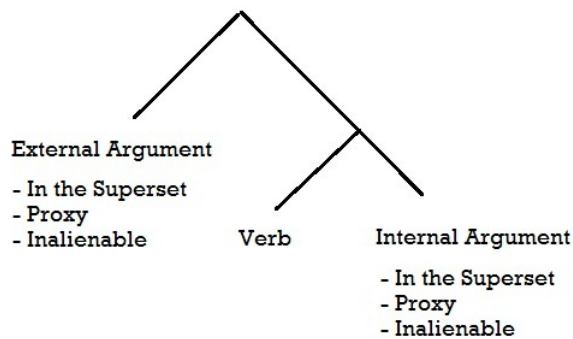
"The computer destroyed itself because of the computer next to it"

Now, these verbs can be employed grammatically with *auto-* and human subjects, but there are some restrictions. Let us consider (104):

(104) *Ringo si è autodistrutto*  
 Ringo SE is AUTODestroyed  
 "Ringo destroyed himself"

What does (104) mean? First of all, it can never mean that Ringo destroyed the statue of himself but rather it means that Ringo, that is going through some hard times, destroyed himself psychologically. Another fact that is understood from (104) is that it is a part of Ringo's mind that destroys another part of his mind (or maybe all). In any case the *Destroy*-relation holds between two inalienable parts of Ringo (two parts of his mind) that also happen to be both proxies of him. This can be captured in (105):

(105) Destroy-type verbs + human subjects



So, whenever a [+c] verb is found grammatical if *auto*-prefixed, it is always the case that the relation described holds between two proxies, under the psychological interpretation of the verb.

**Predictions** If this is correct, there would follow one prediction: any [+c] verb that can be forced into a psychological interpretation should be found not totally ungrammatical when *auto*-prefixed. This is indeed the case: let us consider a psychological reading of *Give* and *Do*, even if somehow “pushed”:

- (106) (a) ?*Gianni si è auto-fatto una cattiva sensazione*  
 Gianni SE is AUTO-done a bad feeling  
 "Gianni had a bad feeling of himself"
- (b) ?*Gianni si è auto-dato un' idea*  
 Gianni SE is AUTO-given an idea  
 "Gianni gave himself an idea"

The problem that needs further investigation here is the need for formalized tool to look deeper into proxies: it appears unequivocal that not all proxies behave the same way, and not all proxies have the same properties. In some sense, a proxy of strict identity (the statue or someone that resembles someone else very much) differs from proxies that capture a looser identity (a work by someone, a part or all somebody’s mind).

At the end of this short excursus on proxies, let us go back to the *Translate*-type situations, for one last consideration that re-conducts us to our main line. Observe the following alternation:

- (107) (a) *Tolstoj si è tradotto in francese*  
 Tolstoj SE is translated in French  
 "Tolstoj translated himself into French"
- (b) *Tolstoj si è autotradotto in francese*  
 Tolstoj SE is AUTOtranslated in French  
 "Tolstoj translated himself into French"

What are the differences between (107a) and (107b)? First of all, as said several times, (107b) bears the information that it is not standardly predictable that Tolstoj does himself the translation of his own work (*object to subject shift*). It is also easily noticeable that the *auto*-verb is stricter than the non-prefixed one. This can explain better such “strictness”:

- (108) (a) ??*Tolstoj si è tradotto ma non si è autotradotto*  
 Tolstoj SE is translated but not SE is AUTOtranslated  
 "Tolstoj translated himself but he did not translated himself"

- (b) *Tolstoj si è autotradotto ma non si è tradotto*  
Tolstoj SE is AUTOtranslated but not SE is translated  
"Tolstoj translated himself but he did not translated himself"

Surprisingly (108 b) is semantically congruous as it gets interpreted as “Tolstoj attempting to make a translation of his work but not succeeding properly”: he did indeed translated himself but he did not translate (faithfully) himself. There is nothing that should prevent also (108 a) to get the same interpretation unless *auto-* actually acted as a filter on the verb it gets attached to, selecting a subset of the possible interpretations of that verb, and as a consequence making it stricter.

## 7 Conclusions

Three topics have been addressed in this thesis: the first one an observation on Italian reflexive nouns, viz. deverbal nouns preceded by the prefix *auto-*. In Hron (2009), it is claimed that an expansion to the system generating complex event nouns is needed, i.e. another strategy that could account for the presence of reflexive nouns in Czech must be taken into account. The Italian data I presented represent further evidence that such idea should indeed be further investigated, as Czech is not the only exception to the previous approach.

The second topic I discussed concerns the prefix *auto-* with verbs. I used Reinhart (2000, 2002)'s Theta System to find consistencies in verb's behavior concerning *auto-*prefixation. It has been possible to single out many of the verbs that do not allow the prefixation. It emerged that a necessary condition for an *auto-*verb is to have a  $[+c + m]$  as one of the arguments, I accounted for the deviations from this norms. Not every  $[+c + m]$  verb can become an *auto-*verb though: exceptions are grooming verbs and reciprocals. An account for the behavior of these two classes is provided. One important by-product is that two independent ways to single out Grooming verbs from the remainder of the other two-place verbs emerged.

The third topic concerns the relation between *auto-*verbs and proxy-readings. As a lexical operation *auto-* does not allow "standard" proxy readings (the wax museum scenario), nevertheless some proxies are allowed, namely proxies of the type "author/work". Further analysis to these proxies is provided and finally, the conditions necessary for a the  $[+c]$  verbs that allow *auto-*prefixation are described. From these observations we concluded that further research should be carried on for what concerns proxies.

As said in the introduction, *auto-* is not only a verbal prefix: it can attach to nouns (as discussed in the section on reflexive nouns) and adjectives as well. Since it is a rather overlooked morpheme, whose behavior is restricted, I believe that more attention should be given to it, in the attempt to understand better its semantic shape and formulate a finer-grained analysis. Furthermore, it is present in other Romance languages (such as French and Spanish), hence connections between these morphemes and the language's specific reflexive system must be made.

## 8 Appendix

### 8.1 Commentary on the argumentations against EVB for Czech

Hron (2009) gives an account as to why the Exclusively Verb Based Derivation is to be rejected for Czech. A morphological argumentation is presented, although some doubts raise about its validity: in a nutshell, Czech morphological rule for the derivation of event nouns is as in (109) and exemplified in (110).

(109) VERB STEM  $\rightarrow$  PASSIVE FORM OF VERB + suffix - *í*  $\rightarrow$  EVENT NOUN

(110) *my-t-í*  
wash<sub>passive</sub> - noun

*hledá-n-í*  
look for<sub>passive</sub> - noun

*pozorová-n-í*  
observe<sub>passive</sub> - noun

Hence, - Hron (2009) says - according to the EVB strategy, the input to be passivized and then suffixed, should be a reflexive verb, as in (111) and exemplified in (112):

(111) \*VERB STEM SE  $\rightarrow$  VERB STEM SE<sub>passive</sub> + -*í*  $\rightarrow$  NOUN SE<sub>passive</sub>-*í*

(112) \**my-se-t-í*  
wash-SE -<sub>passive</sub> - noun

\**hledá-se-n-í*  
look for-SE -<sub>passive</sub> - noun

\**pozorová-se-n-í*  
observe-SE -<sub>passive</sub> - noun



But that is not what happens, because what Hron (2009) claims is that it is rather the transitive verb that gets passivized and prefixed, because it is the verb to be affected by the prefixation, and not the clitic.

(113) VERB STEM SE → VERB STEM<sub>passive</sub> + -í SE → NOUN<sub>passive-í</sub> SE

(114) *my-t-í*                      *se*  
 wash<sub>passive-noun</sub> SE  
 "washing oneself"

*hledá-n-í*                      *se*  
 look for<sub>passive-noun</sub> SE  
 "looking for oneself"

*pozorová-n-í*                      *se*  
 observe<sub>passive-noun</sub> SE  
 "observing oneself"

As we said, this point of view might be somehow problematic, since, if the clitic is seen as an epiphenomenon, essentially dependent on the verb, its position could be motivated by some more complex mechanisms. On top of that, clitics never incorporate into a verb, so a construction like *mysetí* might be ruled out for reasons other than the order of passivization and reflexivization.

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