

Auxiliary Selection in Italian

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Auxiliary selection is a well-known phenomenon in perfect tense formation that relates to the ability of some languages to choose between ‘have’ or ‘be’. It has been a central theme in academic literature since Perlmutter’s (1978) unaccusative hypothesis and has piqued the interest of many linguists in the domain of Romance languages, particularly Italian, both in its standard form (Van Valin 1990, Sorace 2000, Bentley and Eythórsson 2004) and in Central and Southern Italo-Romance varieties (D’Alessandro 2017, Ledgeway 2019, Amato 2022). A particularly influential theory is the Auxiliary Selection Hierarchy (ASH) proposed by Sorace (2000) according to which verbs that in almost every case select ‘be’ and ‘have’ are located at the two extremes of this hierarchy while the so-called *peripheral verbs*, the ones that are most influenced by auxiliary selection variation, are found in the middle of the hierarchy. A case in point is the verb *pesare*¹ ‘to matter’ ‘to weigh’, allowing both the auxiliaries ‘be’ and ‘have’:

1. L’assenza di questa autorità ha pesato
the absence of this authority have.AUX.3SG matter.PTCP.SG
‘The absence of this authority has mattered’
2. La sua assenza accanto a noi è pesata
The his/her absence next to us be.AUX.3SG matter.PTCP-F.SG
‘His/Her absence next to us has mattered’

(Examples taken from ItTenTen (16) corpus)

Despite the advances made in the state of the art by ASH (Bentley and Eythórsson 2004), several aspects of auxiliary selection remain to be elucidated. In particular, the parameters that license either ‘be’ or ‘have’ auxiliation with peripheral verbs are still unclear. Furthermore, pronominal verbs or verb constructions, selecting exclusively ‘be’, are frequently left out from the reflection. This paper will focus on the so-called peripheral verbs in Italian, with the goal of providing a new reading of the factors influencing auxiliary selection. **METHODS** To address these challenges, we decided to combine quantitative and qualitative corpora analysis by using ItTenTen (16) via Sketch Engine (Jakubiček et al., 2013) as the primary corpus. In terms of qualitative analysis, we identified verbs allowing a double auxiliation by means of the Corpus Query Language (CQL) tool. These verbs were then analyzed by the means of a battery of tests, taking into account both semantic and syntactic parameters. The semantic parameters under consideration are four: subject’s human trait, animacy, agentivity and intrinsic force. Among the different syntactic contexts considered, we looked at prepositional phrases (PP) followed by an infinitive (transitive or intransitive), aspectual and temporal prepositional phrases. We made a similar distinction for adverbs (ADV). Then, given that many intransitive verbs are used in transitive contexts, we identified when a direct object complement (COD) could be assumed as implied in order to understand the subtle line separating the two interpretations. From the perspective of quantitative analysis, we analyzed the data with CHAID (Kass 1980). This nonparametric test provides a way to observe how the different attributes contribute to the selection of the auxiliary by creating a decision-tree diagram in which every segment contains similar sentences according to the attributes. Spreadsheet and decision tree are not in the abstract because of their dimensions: they are available upon request. **RESULTS** One of the first outcomes was the

1 *Pesare* is an ambiguous verb in Italian, it has a literal meaning “to weigh”, and a figurative meaning “to matter”. In both examples given in the abstract *pesare* has a figurative meaning.

introduction of a new concept, the intrinsic force [+FC] of a subject, distinct from the agentivity parameter [+AG] usually considered in studies on auxiliary selection. Many subjects have a causative behavior without being properly agentive. The verbs studied demonstrated how this distinction, in conjunction with verb semantics and subject's animacy and human trait, can explain auxiliary selection. Our hypothesis is that verbs are more likely to show double auxiliatation when they are characterized by [-AG] [+FC] subjects. Other parameters are at work simultaneously, namely [+Anim] and [+Hum] traits may influence in a biased way the selection of 'have'. These hypotheses have been partially confirmed by CHAID (see Table 1) thanks to which we can observe that the first splitting variable is [+M]. Then the node is subsequently splitted according to [+Anim] or [- Anim]. In node 5, [+Anim], [-AG] subjects select "be" 10.6%, whereas in node 6 [+Anim] [+AG] subjects select be 0.8%. By analyzing cases with the subject [-Anim], it is possible to categorize verbs based upon percentages of 'have' and 'be', then determining at what degree this variation occurs for these verb classes and which of the two auxiliaries is most likely to be chosen. Next step is to change the number of attributes to see whether there could be improvements in the segmentation of nodes.

Node	Obs		Have		Total		Predicted Category	Parent Node	Split Variable	Primary Independent Variable		
	N	(Percent)	N	(Percent)	N	(Percent)				Sig. **	Chi-Square	df
0			533	43.8%	838	54.4%	1173	100.0% Have				
1	305	10.0%	0	0.0%	305	28.0% Be		0 Sds [+HM]	0.000	491.524	1	Yes
2	230	28.5%	838	73.2%	868	74.0% Have		0 Sds [+HM]	0.000	491.524	1	Yes
3	13	3.8%	333	58.4%	346	31.2% Have		2 Sds [+Anim]	0.000	171.078	1	Yes
4	217	43.2%	285	58.2%	502	42.8% Have		2 Sds [+Anim]	0.000	171.078	1	Yes
5	11	1.0%	53	89.4%	64	8.5% Have		3 Sds [+AGE]	0.000	210.259	1	Yes
6	2	0.2%	280	59.2%	282	22.3% Be		3 Sds [+AGE]	0.000	210.259	1	Yes
7	198	8.0%	103	39.2%	281	22.3% Be		4 V/S/ES	0.000	710.860	2	Case/Anim.
8	37	2.0%	141	79.2%	178	15.2% Have		4 V/S/ES	0.000	710.860	2	Case/Anim.
9	22	3.4%	41	85.1%	63	5.4% Have		4 V/S/ES	0.000	710.860	2	Case/Anim.

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