The taxonomy of Italian psych verbs and the causative/anticausative alternation

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In this paper I present a taxonomy of Italian psych verbs based on a lexical resource of 321 verbs in 6 classes and 5 subclasses. Psych verbs are analysed according to the syntactic position of their arguments, the distribution of the prepositions they govern, and the causative/anticausative alternation. The data show that the causative/anticausative alternation and its encoding types is a widespread phenomenon within psych verbs. Numerous Object Experiencer verbs alternate between a causative and an anticausative construction in exactly the same way as non-psych verbs like *rompere* 'break'. By taking analytical causatives into consideration, I show that the causative/anticausative alternation may also concern Subject Experiencer non-transitive verbs. The taxonomy highlights the prominence of the Accusative Object Experiencer psych verb pattern in the lexicon, while also pointing out the paucity of non-transitive psych verbs and their heterogeneous behaviour.

KEYWORDS: taxonomy, psych verbs, causative/anticausative alternation, syntactic causatives, lexical causatives.

1. Introduction

Psych predicates refer to emotions, but Scarantino & de Sousa (2018) state that emotions differ in several respects: *surprise* has a prototypical facial expression while *regret* does not; *fear* is present across species while *schadenfreude* is exclusively human. The authors also distinguish dispositions from occurrences: emotions may refer to transient and short-lived states, like *panic* and *astonishment*, or to long-term states, like *love* and *grief*.

In the same way, *fear* tendentially refers to a long-lasting emotion while *frighten* refers to a short-term one, i.e. *frighten* tends to express a sudden fear. Moreover, words can express different degrees of an emotion: *terrify* and *terrorize* express a higher degree of fear than *scare* and *frighten* (see also Ruwet 1995, Fellbaum & Mathieu 2017).

However, the distinction between dispositions and occurrences is not always clear-cut. *Frighten* can refer to a long-lasting sentiment/disposition, as in *Large barking dogs frighten John* or to a short-term reaction to an event, as in *That large barking dog frightened John*. The first example may also be a 'mental imagery' which is not directly triggered by an

external stimulus. In this respect, Arad (1989: 4, example (4d)) argues that in a sentence like *Blood sausages disgust Nina* "the stative reading only asserts that the Experiencer is at a specific mental state as long as she perceives the stimulus (or has it on her mind)".

Psych verbs are also referred to as Experiencer verbs since they describe the experiencing of some emotion: the entity that undergoes the effect of such emotion is prototypically [+human] (more similar to a Patient than an Agent) and can surface as a Subject Experiencer (SE) or an Object Experiencer (OE).

Psych predicates display special properties (Rozwadowska & Willim 2015, Bondaruk & Rozwadowska 2020) since their syntactic, semantic, and aspectual behaviour is not always regular, as in the case of the relation between psych verbs and nominalizations. For example, Grimshaw (1990) shows that verbs like *amuse* and *entertain* can take a [±human] subject, while the corresponding nominalization allows only a [+human] subject:

(1)   *The clown/the movie amused/entertained the children.*
(2)   *The clown's/*the movie's amusement/entertainment of the children.*

Building on Lakoff (1970), Pesetsky (1995) points out that psych verbs like *annoy*, an Object Experiencer verb, display the Subject Experiencer nominalization, but not the Causer nominalization, therefore Object Experiencer nominalizations lack the causative reading:

(3)   *The book annoyed Bill.*
(4)   *Bill's annoyance at the book.*
(5)   **The book's annoyance of Bill.*

In their seminal article, Belletti & Rizzi (1988) identify three classes of Italian psych verbs. The first class is represented by the verb *temere* 'fear' where the subject is the Experiencer; the second is represented by *preoccupare* 'worry' where the surface direct object is the Experiencer; the third, whose representative is *piacere* 'appeal', shows a Dative Experiencer. Belletti & Rizzi (1988) predict the existence of a fourth class whose representative is *gioire* 'rejoice', a Subject Experiencer unergative verb, and a further class of impersonal verbs like *importare* 'matter'.

As Giusti & Iovino (2019: 33) point out, most literature concentrates on the *fear/worry* dichotomy, disregarding all the other verb types, so the authors "want to fill this gap, treating all possible classes in a comparative approach". The authors elaborate a classification of Italian psych verbs, partly based on Belletti & Rizzi (1988), and a classification of Latin psych verbs. Giusti and Iovino's Italian classification comprises six classes which include transitive, inverted transitive and

unergative verbs that select the auxiliary *avere* 'have' as well as inverted unaccusative and impersonal verbs that select the auxiliary *essere* 'be'.[1] The Latin classification comprises seven classes and is very similar to the Italian one, exhibiting a correspondence within "the verbal system of the considered languages except for the class of inverted unergatives, which is found in Latin but not in Italian" (Giusti & Iovino 2019: 39).

In this paper I set up a taxonomy of about 321 psych verbs distributed over 6 classes and 5 subclasses. Transitive, unaccusative and unergative verbs are analysed according to the syntactic position of their arguments, the causative/anticausative alternation, the distribution of the prepositions governed by the verbs, and the distribution of the phrases expressing the Cause or the Object of Emotion. The taxonomy accounts for the syntactic patterns of Italian psych verbs and sheds light on the argument alternation which is more pervasive than expected. The taxonomy also shows that Subject Experiencer non-transitive verbs constitute a heterogeneous set of classes, given their syntactic properties.

The collected data are drawn from monolingual dictionaries (Devoto-Oli; De Mauro; Zingarelli; Treccani online), from some of the Lexicon-grammar classes elaborated by Elia (1984) and from the Italian Web Corpus 2020 accessible through the application Sketch Engine, <www.sketchengine.eu>.

The paper is structured as follows. Section 2 is an overview of the special properties of psych verbs discussed in the literature, especially the linking problem between thematic roles and syntactic positions. The section also presents the aspectual properties of Object Experiencer verbs like *spaventare* 'frighten' and the impact they have on the syntactic behaviour of this verb type. Section 3 analyses the causative/anticausative alternation in which Object Experiencer verbs participate, comparing causative psych and non-psych verbs. Section 4 takes into account the *fare* 'make'-constructions and shows the encoding variants of the causative and the anticausative constructions. Section 5 examines the causative/anticausative alternation in non-transitive Experiencer verbs, while Section 6 presents the classification. Section 7 draws some conclusions.

2. Theta-roles and syntactic structures, the aspectual properties of frighten-type verbs

Psych verbs have long been debated in terms of their syntactic configuration and aspectual behaviour since they pose a problem for the alignment of θ-roles and the syntactic positions. Within Generative Grammar, Baker (1988, 1997) establishes the Uniformity Theta

Assignment Hypothesis (UTAH), a descendant of the Universal Alignment Hypothesis (UAH), conceived by Perlmutter & Postal (1984) within Relational Grammar. According to U(T)AH, there is a one-to-one mapping between θ-roles and syntactic positions. Belletti & Rizzi (1988) show that Italian psych verbs have the same θ-grid (*Theme* and *Experiencer*) mapped onto various syntactic configurations: Subject Experiencer psych verbs as in (6), and Object Experiencer ones as in (7-8). This would violate the U(T)AH, which is part of the Universal Grammar:

(6)   *Gianni* $_{Experiencer}$ *teme*   *quel conflitto* $_{Theme}$.
      Gianni   fear.PRS.3SG   that conflict
      'Gianni fears that conflict'
(7)   *Quel conflitto* $_{Theme}$ *preoccupa*   *Gianni* $_{Experiencer}$.
      that conflict   worry.PRS.3SG   Gianni
      'That conflict worries Gianni'
(8)   *A Gianni* $_{Experiencer}$ *piace*   *quel conflitto* $_{Theme}$.
      to Gianni   appeal.PRS.3SG   that conflict
      'Gianni likes that conflict'

     Belletti & Rizzi (1988) claim that the Subject Experiencer verbs in (6) are transitive, as in the D-structure (9), while the Object Experiencer verbs in (7) and (8) have an unaccusative structure. The D-structure in (9a) shows that both OE verbs have two internal arguments, and that the S-structures (7-8) are derived through NP movement to the subject position (see Belletti & Rizzi 1988: 293, figures (5) and (6)):

(9)
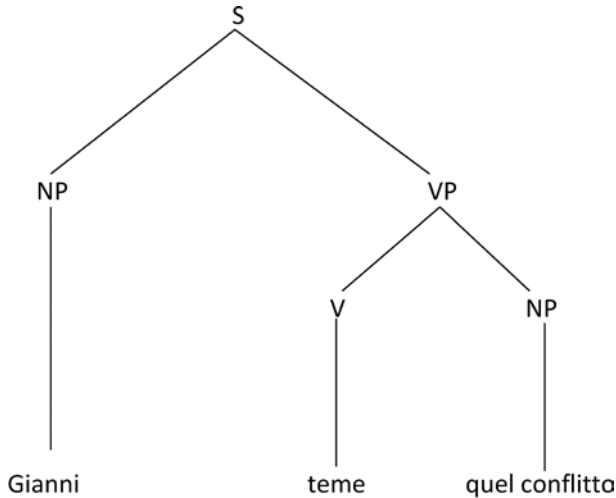
(9a)
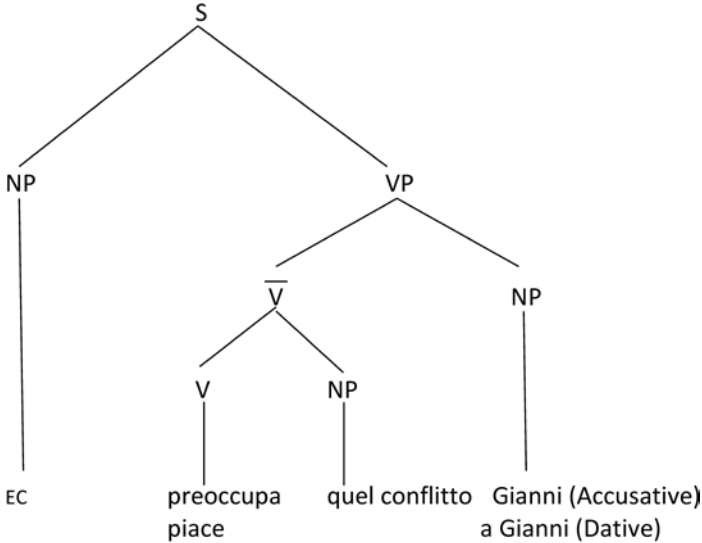
In this way, the three verb types (*temere* 'fear', *preoccupare* 'worry', *piacere* 'appeal') have the same D-structure and θ-grid, while they differ only in the case-grid (*Gianni* = Accusative vs *a Gianni* = Dative). Belletti and Rizzi's hypothesis does not violate the U(T)AH.

According to Belletti & Rizzi (1988), the empirical evidence of the unaccusative structure of *preoccupare* 'worry'-type verbs and the transitive structure of *temere* 'fear'-type verbs shows the following:

- reflexive forms are not available with *preoccupare* 'worry'-type verbs, unlike *temere* 'fear'-type verbs (Belletti & Rizzi 1988: examples (10a-b)):

(10) *Gianni   si teme.*
     Gianni   *si* fear.PRS.3SG
     'Gianni fears himself'
(11) **Gianni   si preoccupa.*
     Gianni   *si* worry.PRS.3SG
     'Gianni worries himself'

- the passive is not accepted with *preoccupare* 'worry'-type verbs, unlike *temere* 'fear'-type verbs. *Preoccupare* 'worry'-type verbs cannot form verbal passives in (13) since they lack an external argument; therefore, (14-15) are examples of adjectival passives (Belletti & Rizzi 1988: examples (47a-b)). The use of *venire* 'come'

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in the passive forms (12) and (13) ensures that the past participle is not an adjectival passive (see Section 3 for further discussion on this point):

(12) *Quel conflitto* *viene* *temuto* *da Gianni.*
that conflict come.PRS.3SG fear.PTCP by Gianni
'That conflict is feared by Gianni'

(13) **Gianni* *viene* *preoccupato* *da quel conflitto.*
Gianni come.PRS.3SG worry.PTCP by that conflict
'Gianni is worried by that conflict'

(14) *Gianni è* *disgustato* *dalla corruzione* *di questo paese.*
Gianni be.PRS.3SG disgust.PTCP by the corruption of this country
'Gianni is disgusted by the corruption of this country'

(15) *Gianni è* *affascinato* *da questa prospettiva.*
Gianni be.PRS.3SG fascinate.PTCP by this perspective
'Gianni is fascinated by this perspective'

In English, the *fear/frighten* pair, like the Italian pair *temere* 'fear'/ *preoccupare* 'worry', involves the same arguments which have different syntactic positions. Belletti and Rizzi posit an unaccusative structure for Object Experiencer verbs. However, other researchers (Grimshaw 1990, Dowty 1991, Zaenen 1993, Croft 1993, Pesetsky 1987, 1995, Arad 1998, Reinhart 2001, among others) questioned whether the two verb types have arguments sharing the same semantic roles.

Grimshaw (1990) criticizes Belletti and Rizzi's analysis[2] and favours the aspectual difference between *fear*-type verbs and *frighten*-type verbs: the latter have a causative meaning that the former lack. However, she agrees with Belletti and Rizzi's unaccusative analysis of *frighten*-type verbs and the unacceptability of passives in OE verbs.

Based on Dowty (1991), Zaenen (1993) claims causation is among the proto-agent properties resulting from the meaning of *frighten*; the subject of *frighten*-type verbs is no less a "causer than the subject of regular transitive causative verbs such as *break* or *melt*" (Levin & Grafmiller 2013: 22).

Pesetsky (1995) proposes a fine-grained semantic solution to problems arising from the violation of UTAH. According to Pesetsky, the subject of *frighten*-type (OE) verbs has a distinct θ-role from the object of *fear*-type (SE) verbs. The subject of OE verbs has the role of *Causer*, as in (17) and (19), while the object of SE verbs has the role of *Target of Emotion* in (16) or *Subject Matter of Emotion*, as in (18). Both of these are "generally lumped together by philosophers under the cover term *Object of Emotion*" (Pesetsky 1995: 55, examples (30a-b), (36a-b)):

(16) *Bill was very angry at the article in the Times.* [Target]
(17) *The article in the Times angered/enraged Bill.* [Causer]

(18) *John worried <u>about the television set</u>.*   [Subject Matter]
(19) *<u>The television set</u> worried John.*   [Causer]

Pesetsky (1987, 1995) suggests that *frighten*-type verbs should be interpreted as transitive causative verbs with a syntactic structure similar to *fear*-type verbs (see also Iwata 1995, Arad 1998). Moreover, Pesetsky (1995: 58-59) affirms that the linking of arguments to grammatical relations is predictable because it is based on the hierarchy in (20):

> the highest argument is mapped onto the highest D-Structure position in its clause […] A verb like *anger*, with Causer and Experiencer arguments, will link Causer with some high position in the clause (e.g. subject of VP) and will link Experiencer with a lower position (e.g. direct object) [...]. A verb like *love*, with an Experiencer and a Target, will link Experiencer with the higher position and Target with the lower position. Likewise for the Experiencer and Subject Matter arguments of one use of *worry*

(20) *Causer > Experiencer > Target/Subject Matter*

As regards the *venire* 'come' passive forms, Pesetsky (1995: 27, examples (66a-b)) claims that they "become progressively more acceptable as the predicate becomes more and more eventive", as in (21) and (22). For a detailed argumentation I refer the reader to Pesetsky (1995):

(21) (?) *Il pubblico venne   affascinato   dalla conclusione   di quel concerto.*
the audience come.PST.3SG fascinate.PTCP by_the conclusion of that concert
'The audience was fascinated by the conclusion of that concert'

(22) *Gianni   venne   spaventato   da questa prospettiva   alle cinque.*
Gianni   come.PST.3SG frighten.PTCP by this perspective   at_the five
'Gianni was frightened by this perspective at 5 o'clock'

Levin & Grafmiller (2013: 23, 31) point out that although the verbs *fear* and *frighten* are often cited together "they are not representative of a general pattern in the language. Most experiencer-subject verbs lack experiencer-object counterparts referring to the same emotions and vice versa". Such doublets are not found across the inventory of psych verbs because these two types of verbs convey different events: in *fear*-type verbs "the experiencer's mental state should be conceptualized as a disposition directed toward something" while in *frighten*-type verbs the Experiencer's mental state should be conceptualized as "a direct reaction to an immediate stimulus".

The *frighten*-type verbs display the Experiencer in the direct object position (accusative), whereas the Cause of Emotion surfaces in subject position. It can be expressed by a [+animate] noun, as in (23), or by a natural force or an event as in (24), i.e. it is an underspecified subject (Levin & Rappaport Hovav 1995):

(23) *Maria ha*   *spaventato*   *Luca.*
      Maria have.PRS.3SG   frighten.PTCP   Luca
      'Maria frightened Luca'

(24) *L'*   (*uragano + esplosione*)   *ha*   *spaventato*   *Luca.*
      the   (hurricane + explosion)   have.PRS.3SG   frighten.PTCP   Luca
      'The (hurricane + explosion) frightened Luca'

As regards the aspectual properties of *frighten*-type verbs, Arad (1998: 3) points out that Accusative Experiencer verbs like *spaventare* 'frighten' can be ambiguous. In (25) and (26) the verb receives an eventive reading, however it may be [+agentive], as in (25), or [-agentive] in (26):

(25) *Maria ha*   *deliberatamente spaventato*   *Luca.*
      Maria have.PRS.3SG   intentionally   frighten.PTCP   Luca
      'Maria intentionally frightened Luca'

(26) *Maria ha*   *inavvertitamente spaventato*   *Luca.*
      Maria have.PRS.3SG   unintentionally frighten.PTCP   Luca
      'Maria unintentionally frightened Luca'

The same verb can also have a stative reading in (27). In the latter there is no change of mental state and the parameter [±agentive] depends on the linguistic context, for example the definite subject and the mood/tense contribute to the stative reading. Arad also claims that only in the eventive and agentive reading is there a change of the mental state in the Experiencer, while the stative interpretation involves neither an agent nor a mental change. She also points out that all OE verbs are normal transitive verbs if they receive an agentive/eventive reading:

(27) (*Gli uragani + Le persone violente*)   *spaventano*   *Maria.*
      (the hurricanes + the people violent) frighten.PRS.3PL Maria
      '(Hurricanes + Violent people) frighten Maria'

Although in the literature psych verbs such as *fascinate*, *depress* and *worry* are considered inherently non-agentive, the ambiguity of Accusative Experiencer verbs remains an object of debate (Ruwet 1995: 29-30, Verhoeven 2010: 216, Hartshorne *et al.* 2016: 273, Alexiadou 2018: 9, among others). In particular, Grafmiller (2013: 215-216) uses the corpus data to argue that the picture is much more complex than that based on linguists' intuitions on the acceptability of some OE verbs

in agentive contexts. He claims that "the use and/or acceptability of a psych verb in an agentive context is dependent on how easily a person can imagine a scenario in which an agent might purposely act to evoke the emotion in question". Grafmiller (2013: 221-222) refuses the idea that:

> there exists an easily distinguishable subclass of 'non-agentive' English Obj-Exp verbs. What the corpus data suggests is that intuitions about agency are highly flexible and heavily influenced by a combination of factors related to discourse context, world knowledge, and their interaction with the meaning of the verb and its arguments (both subject and object).

The same holds for Italian. A Google Books search (performed on May 25, 2022) returns sentences where *preoccupare* 'worry' and *affascinare* 'fascinate' have an agentive reading in (28-30).[3] The search was based on the following diagnostics: embedding under control verbs as in (28-29), compatibility with intentional adverbs in (30) (Verhoeven 2010):

(28) *Aveva* deciso di affascinare *Jack e ci è riuscita.*
 'She/He decided to charm Jack and succeeded'
(29) *Progetta di non tenere il suo corso al Collège de France, ma non* vuole preoccupare *il suo entourage.*
 'He plans not to run his course at the Collège de France, but he doesn't want to worry his entourage'
(30) *Prima di allora non avevo mai cercato di* affascinare Bella di proposito*, ma quello sembrò un buon momento per provarci.*
 'I had never tried to charm Bella on purpose before, but now it seemed like a good time to try'

Similarly, Verhoeven (2017: 7, 15) claims that the experimental findings justify "the assumption of an agentivity scale", and that the gradience in the speakers' judgments reflects the possibility to imagine a context in which a stative verb is used as agentive (see also Rothmayr 2009). Verhoeven (2010) also shows that speakers of languages like Chinese, Yucatec Maya, and Turkish do not distinguish between agentive and non-agentive OE psych verbs; therefore the agentivity and stativity parameters are not universal.

3. Object Experiencer verbs and the causative/anticausative alternations

As already pointed out in Belletti & Rizzi (1988: 296-297 and footnote 2) some Accusative Experiencer verbs have a pronominal form, as

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in (31), which has no reflexive interpretation, although (32), where the non-clitic reflexive is present, is judged to be deviant also in English (see Jackendoff 1972: 145-150, and the role of repair particles such as *even*, *only* and emphatic reflexives in Postal 1993 and Potts 2001). Sentence (31) receives an inchoative interpretation but, as already claimed in Ruwet (1993), Belletti and Rizzi failed to develop this property any further:

(31) *Gianni   si preoccupa.*[4]
      Gianni   *si* worry.PRS.3SG
      'Gianni worries'
(32) ?**Gianni   preoccupa*   (*persino*)   *se stesso.*
      Gianni   worry.PRS.3SG   (even)   himself
      'Gianni worries (even) himself'

The collected Italian data show that a large subset of Accusative Experiencer verbs regularly alternate between the transitive structure (33) and the unaccusative pronominal structure in (34). The Accusative Experiencer in (33) surfaces as the Subject Experiencer in (34), while the Causal Subject of (33) surfaces as the PP in (34):

(33) *I   botti   hanno   spaventato   Gianni.*
      the firecrackers have.PRS.3PL frighten.PTCP Gianni
      'The firecrackers frightened Gianni'
(34) *Gianni   si è   spaventato   (dei + per i)   botti.*
      Gianni   *si* be.PRS.3SG frighten.PTCP (of_the + for the) firecrackers
      'Gianni was frightened by the firecrackers'

Psych verbs such as *spaventare* 'frighten' syntactically behave as lexical causative verbs like *rompere* 'break': the Causal Subject of the transitive structure (35) surfaces as the PP in the unaccusative pronominal sentence (36), while the direct object/Theme in (35) is the surface subject in (36). The unaccusative sentence (36), which denotes the change of state of an entity, alternates with the transitive sentence (35), which denotes that an entity caused the change of state:

(35) *L'   (esplosione + uragano)   ha   rotto   la vetrata.*
      the   (explosion + hurricane) have.PRS.3SG break.PTCP   the window
      'The (explosion + hurricane) broke the window'
(36) *La vetrata   si è   rotta   (con + per) l' (esplosione + uragano).*
      the window   *si* be.PRS.3SG   break.PTCP   (with + for) the (explosion + hurricane)
      'The window broke with the explosion/the hurricane'

Moreover, sentences (37) and (38) indicate the resultative state of *rompere* 'break' (Rappaport Hovav & Levin 2001), and of *spaventare* 'frighten', respectively:

(37) *La vetrata   è   rotta.*
the window be.PRS.3SG break.PTCP
'The window is broken'

(38) *Gianni   è   spaventato.*[5]
Gianni   be.PRS.3SG frighten.PTCP
'Gianni is frightened'

The so-called alternation between a causative transitive sentence and an anticausative intransitive sentence regards lexical causative verbs and is a widespread crosslinguistic phenomenon (Nedyalkov & Silnitsky 1973, Rothemberg 1974, Zribi-Hertz 1987, Haspelmath 1993, Levin & Rappaport Hovav 1995, Folli 2001, Chierchia 2004, Legendre & Smolensky 2009, Alexiadou *et al.* 2006, 2015, Rott *et al.* 2020, Martin *forthcoming*). I will adopt the Schäfer (2008: 1) definition of anticausative: "all types of intransitive change-of-state verbs that have a causative counterpart, irrespectively of whether such an intransitive verb comes with or without special morphological marking". The causative/anticausative alternation (CAA) is also known as the causative/inchoative alternation or the ergative alternation.

The taxonomy of the Italian lexical causative verbs participating in the CAA includes various classes and subclasses (Cennamo & Jezek 2011, Cennamo 2012, Vietri 2017). In the case of a verb like *rompere* 'break' the anticausative alternant is morphologically marked in (36). However, the causative transitive verb *inaridire* 'dry up' can alternate either with the unaccusative anticausative marked variant *inaridirsi* 'dry up, lit. dry.*si*' or the unmarked variant *inaridire* 'dry up', while the verb *aumentare* 'raise' is unmarked in both alternants. The transitive verb *bruciare* 'burn' may alternate with the anticausative marked variant *bruciarsi* 'burn, lit. burn.*si*' or the unmarked variant *bruciare* 'burn'. The latter can be an unaccusative verb (auxiliary *essere* 'be') with a telic reading, or an unergative verb (auxiliary *avere* 'have') with an atelic reading.[6] I refer the reader to the above-mentioned references for a more detailed description and analysis of the CAA in Italian, including the issue regarding the direction of the derivation in the CAA, that is the detransitivization model (transitive → intransitive) or the transitivization model (intransitive → transitive).

Accusative Object Experiencer (AOE) verbs, which participate in the alternation, show an anticausative alternant that can be (a) morphologically marked as in (34); (b) morphologically marked or unmarked as in (40); (c) unmarked as in (42). Most AOE verbs that show CAA display only the morphologically marked anticausative alternant (only 35 verbs out of 197 also have the unmarked anticausative variant, the 18%):

(39) *Quella terribile notizia   sbalordì   Paolo.*
      that terrible news   astonish.PST.3SG   Paolo
      'That terrible news astonished Paolo'

(40) *Paolo   (si) sbalordì   a quella terribile notizia.*
      Paolo   (si) astonish.PST.3SG   at that terrible news
      'Paolo was astonished at that terrible news'

(41) *Il tuo improvviso arrivo   allibì   Paolo.*
      the your sudden arrival   appall.PST.3SG   Paolo
      'Your sudden arrival appalled Paolo'

(42) *Paolo   allibì   (al + per il)   tuo   improvviso arrivo.*
      Paolo   appall.PST.3SG   (at_the + for the) your   sudden arrival
      'Paolo was appalled at your sudden arrival'

The comparison between lexical causatives and Accusative Object Experiencer verbs shows that in both cases the subject can be a [+animate] Agent which can deliberately or unintentionally cause the change of state in the Theme as in (43) or in the Experiencer as in (45). Such an Agent cannot occur as a PP in the anticausative sentence of non-psych verbs as in (44) or of psych verbs as in (46), unless such a PP is introduced by an overt causal preposition (*per opera/colpa di* 'because of, lit. for action/fault of', *a causa di* 'because of, lit. at cause of'). As regards psych verbs, in some cases the PP may be introduced by the preposition *di* 'of', as in (46) (for more details see Section 6):

(43) *Maria   ha   rotto   la vetrata.*
      Maria   have.PRS.3SG   break.PTCP   the window
      'Maria broke the window'

(44) *La vetrata   si è   rotta   (*con + ?*per + per colpa di) Maria.*
      the window   si be.PRS.3SG   break.PTCP   (with + for + for fault of) Maria
      'The window broke because of Maria'

(45) *Maria   ha   spaventato   Luca.*
      Maria   have.PRS.3SG   frighten.PTCP   Luca
      'Maria frightened Luca'

(46) *Luca si è   spaventato   (*con + ?*per + per colpa di + di) Maria.*
      Luca si be.PRS.3SG   frighten.PTCP   (with + for + for fault of + of) Maria
      'Luca was frightened by Maria'

However, in Italian (as in other languages) not all causative non-psych verbs participate in the CAA, just as not all Accusative Object Experiencer psych verbs do. The causative verbs *abbattere* 'shoot down' in (47) and *uccidere* 'kill' in (49) do not display the alternation. The pronominal verb in (50) is accepted only as a reflexive form:[7]

(47) *Il missile   ha   abbattuto   l'   aereo.*
      the missile   have.PRS.3SG   shoot_down.PTCP   the   airplane
      'The missile shot down the airplane'

(48) **L'   aereo   si è   abbattuto   (con + per) il missile.*
      the   airplane   si be.PRS.3SG   shoot_down.PTCP   (with + for) the missile
      '*The airplane shot itself down with the missile'

(49) *L' esplosione ha ucciso Paolo.*
the explosion have.PRS.3SG kill.PTCP Paolo
'The explosion killed Paolo'

(50) **Paolo si è ucciso.*
Paolo *si* be.PRS.3SG kill.PTCP
(intended reading 'Paolo got killed')

In the same way, the psych verbs in (51) and (53) are causative, but they do not participate in the CAA in (52) and (54):

(51) *Quella notizia ha colpito Paolo.*
that news have.PRS.3SG astonish.PTCP Paolo
'That news astonished Paolo'

(52) **Paolo si è colpito (di + per) quella notizia.*[8]
Paolo *si* be.PRS.3SG astonish.PST.3SG (of + for) that news
'*Paolo astonished himself at that terrible news'

(53) *Maria ha sedotto Paolo.*
Maria have.PRS.3SG seduce.PTCP Paolo
'Maria seduced Paolo'

(54) **Paolo si è sedotto.*
Paolo *si* be.PRS.3SG seduce.PTCP
'*Paolo seduced himself'[9]

The difference between these two types of Accusative Object Experiencer verbs (alternating and non-alternating) is also shown when embedding the infinitival VP under the *fare*-construction: only when embedding the CAA psych verbs is the result an acceptable *fare*-construction (see also Belletti & Rizzi 1988: 305, examples (35-36)):

(55) *Questo ha fatto entusiasmare il presidente.*
this have.PST.3SG make.PTCP thrill.INF the president
'This thrilled the president'

(56) **Questo ha fatto colpire il presidente.*
this have.PST.3SG make.PTCP strike.INF the president
'This struck the president'

On the basis of the empirical evidence, the Accusative Object Experiencer psych verbs fall into one of two classes: those that show the causative/anticausative alternation and those that do not alternate. The AOE verbs which participate in the causative/anticausative alternation can be considered change-of-state verbs and therefore have a transitive structure (see also Landau 2010, Anagnostopoulou & Iatridou 2007).

Alexiadou & Iordăchioia (2014) argue that OE psych verbs do alternate with a Subject Experiencer sentence in Greek and Romanian, Biały (2005) and Jurth (2016) show the alternation in Polish and Hungarian, respectively, Verhoeven (2015) for German. Rozwandowska & Bondaruk

(2019) claim against the causative/anticausative alternation in Polish. Alexiadou (2016) discusses the diachronic reasons why English lacks such alternation, given that only a relatively small number of psych verbs show the causative/anticausative alternation (see examples (36) and (38-39) in Pesetsky 1995: 18).

If Object Experiencer verbs have a transitive structure, then they should accept the *venire* 'come'-passive. Tendentially they do, as in (57-59), except for some verbs like *preoccupare* 'worry' and *deprimere* 'depress', as in (60), which tend to resist the passive; however, they accept the *si*-causative passive (see Manetti & Belletti 2015, Belletti 2017)[10] in (61) and (62). Except for (60), all sentences are the result of Google searches. I shortened sentence (58) for reasons of space. The verb *deprimere* 'depress', when meaning 'lower', accepts the canonical passive forms, especially when used in medicine and economics special languages. There is some variability in grammaticality judgments among speakers. One of the anonymous reviewers points out that example (60) "is not too bad", while I considered it almost unacceptable. Another reviewer points out that examples (57-59) and (61) are unacceptable for native speakers of Italian. It is important to keep in mind that the data analysed in this paper do not stem from a strictly defined variety of Italian (say, Standard Italian, whatever that means), but conflate various linguistic behaviours within the diasystem that comprises all varieties to which Italian speakers are exposed:

(57) *Lo spettatore* viene divertito *dalla presenza scenica del protagonista.*
      the viewer come.PRS.3SG amuse.PTCP by_the presence scenic of_the protagonist
      'The viewer is amused by the protagonist's stage presence'

(58) *La gente sopravissuta a quei lager* viene disgustata *da quelle persone incivili.*
      the people survive.PST.3SG to those gulags comes disgust.PTCP by those persons uncivilized
      'The survivors of those gulags were disgusted by those uncivilized people'

(59) *Amleto* viene annoiato *da Orazio e* seccato *da Ofelia.*
      Hamlet come.PRS.3SG bore.PTCP by Horatio and annoy.PTCP by Ophelia
      'Hamlet is bored by Horatio and annoyed by Ophelia'

(60) ?**Luca* viene (preoccupato + depresso) *da quel triste spettacolo.*[11]
      Luca come.PRS.3SG (worry.PTCP + depress.PTCP) by that sad sight
      'Luca is worried/depressed by that sad sight'

(61) *Per fortuna non era tipo da* farsi preoccupare *dagli incubi.*
      luckily not was type to make.INF.*si* worry.INF by_the nightmares
      'Luckily he wasn't the type to be worried by nightmares'

(62) *Era stanca di* farsi deprimere *dal comportamento di Carl.*
      was tired of make.INF.*si* depress.INF by_the behaviour of Carl
      'She was tired of getting depressed over Carl's behaviour'

However, the distinction between alternating and non-alternating Accusative Experiencer verbs has no impact on the acceptability of the

passive form. Non-alternating Accusative Experiencer psych verbs also accept the passive, as in (63) and (64) (but see Belletti & Rizzi 1988: example (54b)):[12]

(63) *Fu allora – o prima – che il cardinale* venne affascinato *da Francesco*?
was then or before that the cardinal come.PST.3SG fascinate.PTCP by Francesco?
'Was it then – or before – that the cardinal was fascinated by Francesco?'

(64) Venne attratto *da uno zatterone ormeggiato lungo il fiume*.
come.PST.3SG attract.PTCP by a raft moor.PTCP along the river
'He was attracted by a raft moored along the river'

In the literature, Passivization has often been associated to the eventive/agentive reading of psych verbs: stative verbs do not accept the passive while eventives do. Pesetsky (1995: 27) argues that *venire* 'come' does not diagnose adjectival passives but stativity and eventivity: "*venire*-passives with ObjExp predicates become progressively more acceptable as the predicate becomes more and more eventive". However, the examples in (57-59), (63-64), which include stative and eventive/agentive psych verbs, all accept the passive.[13]

Alexiadou (2018) claims that in English only those OE psych verbs that accept the passive can also form the -*able* adjectives, while Greek OE psych verbs form neither passives nor -*able* adjectives.

Italian behaves like neither English nor Greek: the verbs *divertire* 'amuse', *disgustare* 'disgust' and *attrarre* 'attract' accept the passive in (57-58) and (64), but they do not form the adjectives in -*bile* '-able' **divertibile*, **disgustabile*, **attraibile,* while *sedurre* 'seduce' accepts both passive and the -*able* adjective *seducibile* 'seducible' (Ricca 2013). However, the verb *deprimere* 'depress' accepts the passive only in special languages but the adjective *deprimibile* 'depressible' is related both to a psych predicate and also to special languages, according to the main dictionaries.

My taxonomy includes 224 Accusative Experiencer verbs, most of which (about 197) participate in the causative/anticausative alternation, i.e. the Object Experiencer construction alternates with the Subject Experiencer construction.

4. Analytical causatives and the encoding of the causative/anticausative alternation

The *fare*-construction mentioned in Section 3 will here be further analysed. Sentence (65) describes the event of Gianni demolishing the wall, which is embedded under the causative verb *fare* 'make' in (66).

The latter expresses that the event of Gianni demolishing the wall was caused by *Maria*: *Maria* is named the *Causer* of the event while *Gianni* is the *Causee*. The *Causer* is also defined as the Initiator of an event while the *Causee* refers to the agent of that event. When embedding a transitive verb (such as *demolire* 'demolish') under a *fare*-construction the subject of the infinitive verb appears after the direct object and is introduced by the preposition *a* 'to' in (66) or the preposition *da* 'by' in (67). Kayne (1975) calls these *faire-infinitive* (FI) and *faire-par* (FP) constructions, respectively, with the latter being similar to a passive:

(65) *Gianni   demolì   la parete.*
     Gianni   demolish.PST.3SG   the wall
     'Gianni demolished the wall'
(66) *Maria   fece   demolire   la parete   a Gianni.*   (FI)
     Maria   make.PST.3SG   demolish.INF   the wall   to Gianni
     'Maria had Gianni demolish the wall'
(67) *Maria   fece   demolire   la parete   da Gianni.*   (FP)
     Maria   make.PST.3SG   demolish.INF   the wall   by Gianni
     'Maria had Gianni demolish the wall'

The *fare*-constructions are also called analytical causatives since they are formed of two verbs: the causative verb *fare* 'make' and the complement verb. In Romance languages, analytical causatives are considered single complex verbs because of their syntactic properties (Ruwet 1972, Kayne 1975, Zubizarreta 1982, Burzio 1986, Alsina 1992, Folli & Hurley 2007, Guasti 1993, 2006, Simone & Cerbasi 2001, La Fauci & Mirto 2003, Salvi & Vanelli 2004, Soares da Silva 2012, among others), which include the distribution of the subject of the infinitive and the clitic placement (for a detailed presentation see Guasti 2006). Unlike in English, in Italian the subject of the infinitive has to appear after the complex verb (see the translation of (66)).

As for clitics, *fare*-constructions are characterized by the clitic climbing (Kayne 1991), since the clitic has to be placed before the verb *fare* 'make'. For example, when embedding a transitive verb, the direct object of the infinitive behaves like the direct object of *fare* 'make' in (68), since sentence (69) is not accepted. In the same way, the clitic that expresses the subject of the infinitive (*a Gianni* 'to Gianni') has to be placed before *fare* 'make' in (70):

(68) *Maria   la fece   demolire   a Gianni.*
     Maria   it make.PST.3SG   demolish.INF   to Gianni
     'Maria made Gianni demolish it'
(69) **Maria fece   demolirla   a Gianni.*
     Maria   make.PST.3SG   demolish.INF.it to Gianni
     'Maria made Gianni demolish it'

(70)   *Maria   gli   fece   demolire   la parete.*
       Maria   him make.PST.3SG   demolish.INF   the wall
       'Maria had him demolish the wall'

When embedding a CAA verb like *rompere* 'break' in (71) under the *fare*-construction (72), *Maria* is the Causer/Initiator while *Gianni* is the Causee/Agent expressed by a PP:

(71)   *Maria   ruppe   il vetro.*
       Maria   break.PST.3SG   the glass
       'Maria broke the glass'
(72)   *Maria   fece   rompere   il vetro   (da + a)   Gianni.*
       Maria   make.PST.3SG   break.INF   the glass   (by + to)   Gianni
       'Maria made Gianni break the glass'

However, the causative sentence (71) can be in a periphrastic relation with (73) where the causative verb *fare* 'make' selects a bare VP; in this case *Maria* is interpreted as the [+human] Agent (intentional or non-intentional) of the glass breaking. If the Subject of *rompere* 'break' is a natural force or an event as in (74), the *fare*-construction is necessarily in a periphrastic relation with (75):

(73)   *Maria   fece   rompere   il vetro.*
       Maria   make.PST.3SG break.INF   the glass
       'Maria broke the glass'
(74)   *L' (uragano + esplosione)   ruppe   il vetro.*
       the (hurricane + explosion)   break.PST.3SG   the glass
       'The (hurricane + explosion) broke the glass'
(75)   *L' (uragano + esplosione)   fece   rompere   il vetro.*
       the (hurricane + explosion)   make.PST.3SG   break.INF   the glass
       'The (hurricane + explosion) caused the glass to break'

However, the causative verb *demolire* 'demolish' in (76) does not participate in the causative/anticausative alternation in (77), and is not in a periphrastic relation with the *fare*-construction in (78); thus, *Maria* can only be the Causer/Initiator:

(76)   *Maria   demolì   la parete.*
       Maria   demolish.PST.3SG   the wall
       'Maria demolished the wall'
(77)   **La parete   si demolì.*
       the wall   *si* demolish.PST.3SG
       'The wall demolished itself'
(78)   *#Maria   fece   demolire   la parete.*
       Maria   make.PST.3SG   demolish.INF   the wall
       'Maria had the wall demolished'

The Accusative Object Experiencer verbs which participate in the CAA behave like the lexical causative *rompere* 'break'. When embedding (79)

under the *fare*-construction (80), *Maria* is the Causer/Initiator while *Paolo* is the Causee/Agent expressed by a PP. As in the case of *rompere* 'break', sentence (79) can be in a periphrastic relation with (81). As in (74-75), if the subject of *spaventare* 'frighten' is a natural force or an event as in (82), the *fare*-construction is necessarily in a periphrastic relation with (83).[14]

(79) *Maria   spaventò   Gianni.*
Maria   frighten.PST.3SG   Gianni
'Maria frightened Gianni'

(80) *Maria   fece   spaventare   Gianni   (*a + da) Paolo.*
Maria   make.PST.3SG   frighten.INF   Gianni   (*to + by) Paolo
'Maria got Paolo to frighten Gianni'

(81) *Maria   fece   spaventare   Gianni.*
Maria   make.PST.3SG   frighten.INF   Gianni
'Maria frightened Gianni'

(82) *L'   (uragano + esplosione)   spaventò   Gianni.*
the   (hurricane + explosion)   frighten.PST.3SG   Gianni
'The (hurricane + explosion) frightened Gianni'

(83) *L'   (uragano + esplosione)   fece   spaventare   Gianni.*
the   (hurricane + explosion)   make.PST.3SG   frighten.INF   Gianni
'The (hurricane + explosion) frightened Gianni'

Sentences (79) and (81) show two different types of causatives: *spaventare* 'frighten' in (79) is a lexical causative, while *fare spaventare* 'make frighten' in (81) is an analytical or syntactic causative (see Heidinger 2015, footnote 3), just like *rompere* 'break' in (71) and (73). Accusative Object Experiencer verbs which participate in the CAA allow both the lexical and the analytical/syntactic causative.

Sedurre 'seduce' in (84) is an AOE verb which does not participate in the causative/anticausative alternation, since (85) is unacceptable (even as a reflexive form). As expected, (84) and (86) are not in a periphrastic relation. In sentence (86) *Maria* can only be the Causer/Initiator of an event which has to be performed by someone else, i.e. the Causee/Agent overtly expressed by the PP *da Paola* 'by Paola' in (87):

(84) *Maria   sedusse   Gianni.*
Maria   seduce.PST.3SG   Gianni
'Maria seduced Gianni'

(85) **Gianni   si sedusse.*
Gianni   *si* seduce.PST.3SG
'Gianni seduced himself'

(86) *#Maria   fece   sedurre   Gianni.*
Maria   make.PST.3SG   seduce.INF   Gianni
'Maria seduced Gianni'

(87) *Maria   fece   sedurre   Gianni da Paola.*
Maria   make.PST.3SG   seduce.INF   Gianni by Paola
'Maria made Paola seduce Gianni'

Haspelmath (1993) distinguishes five types of causative/anticausative alternations cross-linguistically (the interested reader is referred to the article for details): only the causative alternant is marked (as in Georgian);[15] only the anticausative variant is marked (as in Russian); no formal change occurs (as in English); both the causative and the anticausative variant are marked (as in Japanese); the causative and the anticausative alternant are expressed by verbs which are formally not related (as in Russian).

Heidinger (2015), based on Haspelmath (1993) and Haspelmath *et al.* (2014), analyses the correlation between causalness and the encoding of the causative/anticausative alternation in French and Spanish.

Heidinger (2015: 564) states that the causative/anticausative alternation may involve variation within languages, as in the case of French and Spanish: "in both languages, the causative and the anticausative alternant come in two variants: a formally marked and a formally unmarked variant". In the case of the causative alternant, the French verb *grandir* 'make/become big' is the unmarked variant while the marked variant is *faire grandir* 'make/become big'. In the case of the anticausative alternant, *grandir* 'become big' is the unmarked variant while *se grandir* 'become big, lit. *se* become big' is the marked variant. Heidinger (2015) considers the causative alternation of French and Spanish (non-psych) lexical causatives as *diminuer-disminuir* 'decrease', *ouvrir-abrir* 'open'.

In Italian, the plain verb *rompere* 'break' in (88) and *fare rompere* 'make break' in (89) are the unmarked variant and the marked variant, respectively, of the causative alternant. In the case of the anticausative, only the marked variant *rompersi* 'break, lit. break.*si*' is available in (90):

(88) *L'*   (*uragano* + *esplosione*)   *ruppe*   *il vetro.*
     the (hurricane + explosion) break.PST.3SG the glass
     'The (hurricane + explosion) broke the glass'

(89) *L'*   (*uragano* + *esplosione*)   *fece*   *rompere*   *il vetro.*
     the (hurricane + explosion) make.PST.3SG   break.INF   the glass
     'The (hurricane + explosion) broke the glass'

(90) *Il vetro*   *si ruppe.*
     the glass   *si* break.PST.3SG
     'The glass broke'

The unaccusative verb *sbocciare* 'blossom' in (91) is only a change-of-state verb which does not alternate with any causative construction in (92); however, the Cause can be expressed when embedding *sbocciare* 'blossom' under the *fare*-construction as in (93):

(91) *Le rose*   *sbocciarono.*
     the roses   blossom.PST.3SG
     'The roses blossomed'

(92) *La primavera   sbocciò   le rose.*
      the spring   blossom.PST.3SG   the roses
      '*The spring blossomed the roses'
(93) *La primavera   fece   sbocciare   le rose.*
      the spring   make.PST.3SG   blossom.INF   the roses
      'The spring made the roses blossom'

Levin & Rappaport Hovav (1995) consider English verbs like *blossom* "internally caused" change-of-state verbs (see Rappaport Hovav 2014 for a revised analysis), while Haspelmath (1993) and Haspelmath *et al.* (2014) set up a "spontaneity scale", where verbs like *blossom* would be analysed as highly spontaneous verbs.

Similarly, in Italian the unaccusative verb *ammuffire* 'turn moldy' and the pronominal variant *ammuffirsi* 'turn moldy, lit. turn_moldy.*si*' in (94) are change-of-state verbs that do not have a transitive causative alternant, since (95) is not accepted. However, the Cause can be expressed when embedding the non-pronominal infinitive *ammuffire* 'turn moldy' under the *fare*-construction in (96):

(94) *Il pane   (si) ammuffì   per   l'   umidità.*
      the bread   (si) turn_moldy.PST.3SG   because_of   the   humidity
      'The bread turned moldy because of the humidity'
(95) ?*L'   umidità   ammuffì   il pane.*[16]
      the   humidity   turn_moldy.PST.3SG   the bread
      'The humidity turned the bread moldy'
(96) *L'   umidità   fece   ammuffire   il pane.*
      the   humidity   make.PST.3SG   turn_moldy.PST.3SG   the bread
      'The humidity turned the bread moldy'

Therefore, the verbs *ammuffire* 'turn moldy' and *ammuffirsi* 'get moldy, lit. get_moldy.*si*' are the anticausative morphologically unmarked and marked variant, respectively, while the causative alternant is the syntactically marked complex predicate *fare ammuffire* 'make turn moldy'. *Sbocciare* 'blossom' has only an unmarked anticausative variant, while *fare sbocciare* 'make blossom' is the causative marked variant, as in Table 1:

MORPHOLOGICALLY UNMARKED ANTICAUSATIVE	MORPHOLOGICALLY MARKED ANTICAUSATIVE	MARKED SYNTACTIC CAUSATIVE
ammuffire 'turn moldy'	*ammuffirsi* 'turn moldy, lit. turn_moldy.*si*'	*fare ammuffire* 'make turn moldy'
sbocciare 'blossom'	—	*fare sbocciare* 'make blossom'

Table 1. Encoding of non-transitive change-of-state verbs.

Similarly, in Italian some Subject Experiencer verbs like *incollerire* 'make angry' and the pronominal variant *incollerirsi* 'get angry, lit. get_ angry.*si*' are change-of-state verbs in (97) with no unmarked causative alternant in (98). However, the causative alternant can be expressed by an analytical or syntactic causative, as in (99):

(97)   *Gianni   (si) incollerì   per   quella offesa.*
       Gianni   *si* get_angry.PST.3SG   for   that insult
       'Gianni got angry for that insult'
(98)   **Quella   offesa   incollerì   Gianni.*
       that   insult   anger.PST.3SG   Gianni
       'That insult angered Gianni'
(99)   *Quella   offesa   fece   incollerire   Gianni.*
       that   insult   make.PST.3SG   anger.INF   Gianni
       'That insult made Gianni angry'

The next section will show that some intransitive or unaccusative psych verbs alternate with a marked syntactic causative construction or analytical causatives.

5. The causative/anticausative alternation in non-transitive experiencer verbs

A Subject Experiencer predicate like *vergognarsi* 'be ashamed, lit. shame.*si*' (or *arrabbiarsi* 'anger, lit. anger.*si*') in (100) is an inherently pronominal (unaccusative) verb which does not alternate with the Object Experiencer non-pronominal transitive verb *vergognare* 'shame' (and *arrabbiare* 'anger'), given the unacceptability of (101).

However, the non-pronominal infinitive verb *vergognare* 'shame' (and *arrabbiare* 'anger') occurs when embedded under the *fare*-construction in (102). The arguments alternate in the constructions (100) and (102): the Subject Experiencer in (100) occurs as the Object Experiencer in (102), while the surface subject in (102), i.e. the Cause of the Emotion, appears as the surface object in (100). Sentence (100) is the marked anticausative construction, while (102) is the marked syntactic causative construction:

(100) *Gianni   si vergognò   (di + per)   tutto   ciò.*   SE
       Gianni   *si* shame.PTCP   (of + for)   all   this
       'Gianni was ashamed of all this'
(101) **Tutto   ciò   vergognò   Gianni.*[17]
       all   this   shame.PST.3SG   Gianni
       'All this shamed Gianni'
(102) *Tutto   ciò   fece   vergognare   Gianni.*   OE
       all   this   make.PST.3SG   shame.INF   Gianni
       'All this made Gianni feel ashamed'

Similarly, the Subject Experiencer unergative verb *gioire* 'rejoice' in (103) is not related to any Object Experiencer transitive verb, and (104) is not a grammatical sentence. However (105), a *fare*-construction, is in a relation with (103). Also in this case the Experiencer alternates in the constructions (103) and (105): it occurs as a surface subject in (103) and as a surface object in (105). The Cause of the Emotion is expressed by the indirect object in (103), while it appears as the surface subject in (105): the unmarked anticausative construction (103) alternates with the marked syntactic causative construction (105).

(103) *Gianni   ha   gioito   (di + per) quella notizia.*   SE
      Gianni   have.PRS.3SG   rejoice.PTCP (of + for) that news
      'Gianni rejoiced at that news'

(104) **Quella notizia   ha   gioito   Gianni.*
      that news   have.PRS.3SG   rejoice.PTCP   Gianni
      '*That news rejoiced Gianni'

(105) *Quella   notizia ha   fatto   gioire   Gianni.*   OE
      that   news   have.PRS.3SG   make.PTCP   rejoice.INF   Gianni
      'That news made Gianni rejoice'

As regards the distribution of the PP, verbs like *vergognarsi* 'be ashamed, lit. shame.*si*' and *gioire* 'rejoice' may take a PP headed by the prepositions *di/per* 'of/for', as in (100) and (103), or a bare *that*-clause in (106), while the prepositions *di/per* 'of/for' must introduce the infinitive clause in (107):

(106) *Gianni (si è   vergognato   + ha   gioito)   che lei avesse   detto   ciò.*
      Gianni (*si* be.PRS.3SG shame.PTCP + have.PRS.3SG rejoice.PTCP) that she have.SUBJ.3SG say.PTCP this
      'Gianni (was ashamed + rejoiced) that she had said that'

(107) *Gianni (si è   vergognato   + ha   gioito)   (di + per) aver   detto   ciò.*
      Gianni (*si* be.PRS.3SG shame.PTCP + have.PRS.3SG rejoice.PTCP) (of + for) have.INF say.PTCP that
      'Gianni (was ashamed + rejoiced) for having said that'

Similarly, the unaccusative verb *trasecolare* 'boggle' and *accigliarsi* 'frown, lit. frown.*si*' in (108), an unmarked and marked anticausative construction, respectively, alternate only with the marked syntactic causative construction (109), since (110) is not accepted. However, these verbs take a PP which can be headed only by the preposition *di* 'of', while the bare *that*-clause is not accepted:

(108) *Maria (trasecolò   + si accigliò)   (per + *di) quella notizia.*
      Maria (boggle.PST.3SG   + *si* frown.PST.3SG) (for + *of) that news
      'Maria (boggled + frowned) at that news'

(109) *Quella notizia fece   (trasecolare + accigliare)   Maria.*
      that news   make.PST.3SG   (boggle.INF + frown.INF)   Maria
      'That news made Maria (boggle + frown)'

(110) **Quella notizia   (trasecolò   + accigliò)   Maria.*
that news   (boggle.PST.3SG + frown.PST.3SG) Maria
'That news (?boggled + *frowned) Maria'

In sentences (100), (103) and (108) the PP is headed by the prepositions *di* 'of' and/or *per* 'for' and expresses the Cause of the Emotion, exactly like in (34). Telve (2016) extensively explores the grammaticalization of the PP that expresses causes and instruments (see also Squartini 2018).[18]

The inherent pronominal Subject Experiencer verb *affezionarsi* 'grow fond, lit. grow_fond.*si*' in (111) takes a PP headed by the preposition *a* 'to'. The non-pronominal verb *affezionare* 'grow fond' is not accepted in (112), however it can be embedded under the *fare*-construction in (113). The marked anticausative construction (111) alternates with the marked syntactic causative construction (113):

(111) *Tutti   si affezionarono   a quel cucciolo.*
everybody *si* grow_fond.PST.3SG   to that puppy
'Everybody grew fond of that puppy'
(112) **Quel   cucciolo   affezionò   tutti.*
that   puppy   grow_fond.PST.3SG everybody
'*That puppy grew fond everybody'
(113) *Quel cucciolo fece   affezionare   tutti.*
that puppy   make.PST.3SG   grow_fond.INF   everybody
'That puppy made everybody grow fond of her'

In all the non-transitive Subject Experiencer verbs examined, the causative alternant is syntactically marked (*fare*-construction) while the anticausative alternant can be either morphologically marked such as *vergognarsi* 'be/feel ashamed, lit. shame.*si*', *arrabbiarsi* 'anger, lit. anger.*si*', *accigliarsi* 'frown, lit. frown.*si*' and *affezionarsi* 'grow fond, lit. grow_fond.*si*' or morphologically unmarked, such as *gioire* 'rejoice' and *trasecolare* 'boggle'.

There are a number of Subject Experiencer unergative verbs which are stative and do not show the same behaviour. For example, the verb *tenere* 'care' or *anelare* 'yearn' in (114) and (116) do not show any kind of alternation with an analytical causative construction, since (115) and (117) are not accepted:

(114) *Maria   tiene   molto   a Gianni.*
Maria   care.PRS.3SG a_lot   to Gianni
'Maria cares about Gianni'
(115) **Gianni fa   tenere   Maria.*
Gianni   make.PRS.3SG care.INF Maria
'*Gianni makes Maria care'

(116) *Maria   ha   sempre   anelato   a quell'incarico.*
      Maria   have.PRS.3SG always   yearn.PTCP   to that job
      'Maria has always yearned for that job'
(117) *Quell'   incarico   fa   anelare   Maria.*
      that   job   make.PRS.3SG yearn.INF   Maria
      '?That job makes Maria yearn'

Dative Experiencer unaccusative verbs like *piacere* 'appeal' in (118) receive a stative reading cross-linguistically (Belletti & Rizzi 1988, Marín & McNally 2011, Fábregas & Marín 2020). These verbs are characterized by the inverted structure, as in (119) (Giusti & Iovino 2019, Jiménez-Fernández & Rozwandowska 2017).[19] The verb *piacere* 'appeal' is not causative in its semantics; in fact when embedding it under the *fare*-construction in (120), the subject of *fare* 'make' has to be an additional argument which expresses the Causer or the Initiator of the event expressed in (118):

(118) *Quella   decisione   piace   a Gianni.*
      that   decision   appeal.PRS.3SG to Gianni
      'That decision appeals to Gianni'
(119) *A Gianni   piace   quella decisione.*
      to Gianni appeal.PRS.3SG that decision
      'Gianni likes that decision'
(120) *Maria   fece   piacere   quella decisione   a Gianni.*
      Maria   make.PST.3SG appeal.INF   that decision   to Gianni
      'Maria made Gianni like that decision'

However, the Dative Experiencer unaccusative verb *dispiacere* 'regret' shows a different syntactic behaviour. *Dispiacere* 'regret' in (121) alternates with the unaccusative pronominal verb *dispiacersi* 'be sorry, lit. regret.*si*' in (122) (see Cennamo 2011: 455, Salvi & Vanelli 2004, Bentley 2006). The Dative Experiencer in (121) surfaces as the Subject Experiencer in (122), while the surface subject in (121) occurs as the indirect object in (122), where the PP is headed by the prepositions *di* 'of' and *per* 'for'.

Moreover, the periphrastic causative construction (123) is equivalent to (121) and alternates with the anticausative (122). This verb also displays the impersonal use, as in (124):

(121) *Ciò   dispiace   a Maria.*
      this   regret.PRS.3SG to Maria
      'Maria is sorry about this'
(122) *Maria   si dispiace   (di + per) ciò.*
      Maria   *si* regret.PRS.3SG (of + for) ciò
      'Maria is sorry about this'
(123) *Ciò   fa   dispiacere   Maria.*
      this   make.PRS.3SG regret.INF   Maria
      'This causes Maria to feel sorry'

(124) *A Maria   dispiace   (della + per la tua)   partenza.*
      to Maria   regret.PRS.3SG (of_the + for the your)   departure
      'Maria is sorry about your departure'

Dative Experiencer verbs, of which I only provided two subsets in the taxonomy, show a variety of patterns which deserves further analysis.

6. The Classification

The taxonomy of Italian psych verbs is based on 321 verbs sub-divided into 6 classes and 5 subclasses. The data are drawn mainly from Italian dictionaries (Devoto-Oli; Sabatini-Coletti; De Mauro; Zingarelli; Treccani online), from the Italian Lexicon-grammar class-es that include verbs taking sentential arguments (Elia 1984) and from the Italian Web Corpus 2020 accessible through the applica-tion Sketch Engine, <www.sketchengine.eu>. The grammaticality judgments on sentences are mine and, in the event of any doubts, I searched the Web Corpus. Furthermore, the Italian dictionaries I consulted sometimes include examples of the alternations I analyse throughout the paper.

The taxonomy I present includes transitive, unaccusative and uner-gative psych verbs, analysed on the basis of (a) the syntactic positions of the Experiencer, the Cause of Emotion, and the Object of Emotion; (b) the causative/anticausative alternation; (c) the distribution of preposi-tions governed by the verbs; (d) the distribution of phrases expressing the Cause or the Object of Emotion.

Class A includes stative transitive verbs which have a Subject Experiencer and a direct Object of Emotion (see Ruwet 1993). Accusative Experiencer verbs are included in class B, which is divided into the subclasses B1 and B2. B1 consists of those verbs which show the causative/anticausative alternation, while the verbs in B2 do not alter-nate.

Class C includes non-transitive verbs which have a Subject Experiencer and an indirect object. Class C1 includes unaccusative pronominal verbs which alternate with a marked syntactic causa-tive construction. The unergative verbs in class C2 do not show any alternation. Both verb classes show a PP headed by the preposition *a* 'to'.

Class D includes Subject Experiencer verbs whose indirect object is headed by the prepositions *di/per* 'of/for', while the Subject Experiencer verbs of class E take an indirect object headed by the

preposition *per* 'for' and less frequently by the preposition *a* 'at'. The subclasses D1-E1 and D2-E2 include unaccusative pronominal verbs and unergative verbs, respectively, which alternate with a marked syntactic causative construction – with the only exception of *pentirsi* 'repent, lit. regret.*si*'.

The unaccusative verbs of class F can be non-causative and stative as in F1 or causative as in F2. The impersonal uses of verbs such as *importare* 'matter' and *dispiacere* 'regret' are included in class F1 and class F2, respectively. The classification of Dative Experiencer verbs is not complete. A verb like *compiacere* 'please', besides being included in the classes B2 and D1, is also an unergative Dative Experiencer verb, unlike the other ones included in this class. As already pointed out in the conclusions, Dative Experiencer verbs deserve further analysis.

The classification of Italian psych verbs is based on the principles of the Lexicon-grammar framework, as developed by Gross (1975, 1994). Each class corresponds to a Lexicon-grammar table where each row corresponds to a verb and each column to a property. Table 2 contains an excerpt of classes from A to F; they include those verbs that are representative of the respective classes and their main characterizing properties. The left column, headed by the class type and the definitional structure, includes the exemplified verbs, and a variable number of columns which indicate the syntactic and distributional properties of the verbs. In the case of classes from B to F, the first column is followed by the subclass column. If a verb accepts a property then a '+' sign is placed at the intersection of the corresponding row and column, otherwise the cell is left empty.

Class A

Subject[Experiencer] - Verb - Direct Object	Dir. Obj. [Object of Emotion] = *that*-clause	Dir. Obj. [Object of Emotion] = V-Inf	Dir. Obj. [Object of Emotion] = *di* V-Inf	Dir. Obj. [Object of Emotion] = N
contemplare 'admire'				+
desiderare 'desire'	+	+	+	+
gradire 'like'	+	+		+
temere 'fear'	+		+	+

Class B

Subject - Verb - Direct Object[Experiencer]	Subclass	Subject[Cause of Emotion] = (N + *that*-clause)	Unmarked Anticausative — Subject[Experiencer] - Verb - Indirect Object[Cause of Emotion] Ind. Obj. = ((a + di + per) N + bare *that*-clause)	Marked Anticausative — Subject[Experiencer] - *si* Verb - Indirect Object[Cause of Emotion] Ind. Obj. = ((a + di + per) N + bare *that*-clause)
allibire 'appall'	B1	+	+	
sedurre 'seduce'	B2	+		
spaventare 'frighten'	B1	+		+
stupire 'amaze'	B1	+	+	+

Class C

Subject[Experiencer] - Verb - Indirect Object	Subclass	Unaccusative	Unergative	Ind. Obj.[Object of Emotion] = (a N + *that*-clause)	Ind. Obj.[Cause of Emotion] = a N	Marked Causative — Subject[Cause of Emotion] fare V-Inf Direct Object[Experiencer]
affezionarsi 'grow fond of'	C1	+			+	+
anelare 'yearn'	C2		+	+		
rassegnarsi 'resign'	C1	+		+		+
tenere 'be fond of'	C2		+	+		

Class D

Subject[Experiencer] - Verb - Indirect Object	Subclass	Unaccusative	Unergative	Ind. Obj.[Cause of Emotion] = ((di + per) N + bare *that*-clause)	Marked Causative — Subject[Cause of Emotion] fare V-Inf Direct Object[Experiencer]	Subject[Cause of Emotion] = (N + *that*-clause)
gioire 'rejoice'	D2		+	+	+	+
vergognarsi 'be ashamed'	D1	+		+	+	+
pentirsi 'repent'	D1	+		+		

Class E

Subject[Experiencer] - Verb - Indirect Object	Subclass	Unaccusative	Unergative	Ind. Obj.[Cause of Emotion] = (per + a) N	Marked Causative — Subject[Cause of Emotion] fare V-Inf Direct Object[Experiencer]	Subject[Cause of Emotion] = (N + *that*-clause)
accigliarsi 'lour'	E1	+		+	+	+
trasecolare 'dumbfound'	E1-E2	+	+	+	+	+

Class F

Subject - Verb - Ind. Obj.[Experiencer]	Subclass	Unaccusative	Subject[Object of Emotion] = (N + *that*-clause)	Subject[Cause of Emotion] = (N + *that*-clause)	Ind. Obj.[Experiencer] = a N (dative)	Marked Causative — Subject[Cause of Emotion] fare V-Inf Direct Object[Experiencer]	Impersonal — a Indirect Object[Experiencer] Verb Direct Object[Object of Emotion]
dispiacere 'displease'	F2	+		+	+	+	+
importare 'matter'	F1	+	+		+	+	+
piacere 'appeal'	F1	+	+		+	+	

Table 2. Taxonomy of pysch verbs.

Subclass B1 includes Accusative Object Experiencer verbs that display an idiosyncratic behaviour with respect to the preposition *di* 'of' that heads the PP in the anticausative alternant; the acceptability of this preposition depends both on the verb and on the eventive or animate noun that may co-occur with it, as (125-127) show. In sentence (125) the PP can be headed by the preposition *di* 'of' in the case of an animate or eventive noun; in (126) the PP can be headed by the preposition *di* 'of' only in the case of an eventive noun; in (127) this preposition is not accepted; the verb takes the preposition *per* 'for'.[20]

(125) *Luca   si spaventò   di (ciò + Maria).*
     Luca   *si* frighten.PST.3SG   of (this + Maria)
     'Luca was frightened of (this + Maria)'
(126) *Luca si urtò   di (ciò + *Maria).*
     Luca *si* disappoint.PST.3SG   of (this + Maria)
     'Luca was disappointed of (this + Maria)
(127) *Luca si agitò   (*di ciò + *di Maria + per Maria + per ciò).*
     Luca *si* upset.PST.3SG   (of this + of Maria + for Maria + for this)
     'Luca was upset of (this + Maria)'

Table 3 contains the number of verbs each class contains, for a total of 321 verbs.

A.	transitive: *temere* 'fear'	43
B1.	transitive: *spaventare* 'frighten'	197
	unaccusative: *spaventarsi* 'be frightened, lit. frighten.*si*'	
B2.	transitive: *sedurre* 'seduce'	27
C1.	unaccusative: *affezionarsi* 'grow fond, lit. grow_fond.*si*'	3
	↔ marked causative: *fare affezionare* 'make N grow fond'	
C2.	unergative: *tenere* 'care'*, anelare* 'yearn'	7
D1.	unaccusative: *vergognarsi* 'be ashamed, lit. shame.*si*'	12
	↔ marked causative: *fare vergognare* 'make N ashamed'	
	unaccusative: *pentirsi* 'repent, lit. repent.*si*'	1
D2.	unergative: *gioire* 'rejoice'	
	↔ marked causative: *fare gioire* 'make N rejoice'	5
E1.	unaccusative: *immusonirsi* 'get sulky, lit. get_sulky.*si*'	7
	↔ marked causative: *fare immusonire* 'make N get sulky'	
E2.	unergative: *trasecolare* 'boggle'	
	↔ marked causative: *fare trasecolare* 'make N boggle'	9
F1.	unaccusative: *piacere* 'appeal'	6
	- impersonal: *importare* 'matter'	
F2.	unaccusative: *dispiacere* 'regret'	4
	↔ unaccusative: *dispiacersi* 'be sorry, lit. regret.*si*'	
TOTAL		321

Table 3. Psych verbs per class.

Accusative Object Experiencer Verbs constitute the majority of the psych verbs (70% of the total cases). Of these, AOE verbs which participate in the CAA account for 88% of the total.

Subject Experiencer transitive verbs are far fewer, accounting for about 13% of the total. The Italian data confirm Levin & Grafmiller's claim about the paucity of doublets like *fear/frighten* in the psych verb inventory of English. Similarly to English, Italian doublets like *temere/ intimorire*[21] 'fear/frighten' are not in a periphrastic relation and they are not representative of a general pattern. The Subject of *frighten*-type verbs are causers of the emotion experienced, while the direct object of *fear*-type verbs represents entities at which a particular emotion can be directed (Levin & Grafmiller (2013: 31). Causation is entailed only in the meaning of Accusative Object Experiencer verbs while Subject Experiencer transitive verbs are not causative in their semantics.

The Appendix contains the complete list of verbs for each class. The taxonomy is extensive but not exhaustive and is regularly updated.

7. Conclusions

In this paper I present the taxonomy of Italian psych verbs based on 321 verbs subdivided into 6 classes and 5 subclasses. Psych verbs are analysed on the basis of their syntactic structure, the syntactic position of the Experiencer and of the Cause/Object of Emotion, the causative/ anticausative alternation and its encoding. Moreover, the distribution of PPs expressing the Cause/Object of emotions is taken into account: the data highlight the extensive use across classes of the prepositions *di* 'of', *per* 'for' heading PPs that express causes.

The taxonomy shows that Subject Experiencer non-transitive verbs constitute a heterogeneous set of classes; this is not only due to the unaccusative/unergative distinction but also to the type of prepositions headed by the verbs, and to the participation in the CAA alternation.

The overall quantitative data related to psych verbs (Table 3) show that Accusative Experiencer verbs (class B) account for 224 out of 321, i.e. 70%, whereas the Accusative Experiencer verbs that participate in the CAA (subclass B1) account for 197 out of 321, i.e. 61%. These data confirm the prominence of the Accusative Object Experience (AOE) psych verb pattern in the lexicon and the paucity of non-transitive psych verbs, which account for 54 out of 321, i.e. 17%:

AOE alternating verbs (197) > AOE non alternating verbs (27) > SE transitive verbs (43) > SE non-transitive verbs (44) > Dative Experiencer verbs (10)

I have also shown that the causative/anticausative alternation is a widespread phenomenon within psych verbs involving not only most of the Accusative Experiencer transitive verbs, but also Subject Experiencer non-transitive verbs. The causative and the anticausative alternant may come in two variants: a formally marked and a formally unmarked variant. The causative alternant can be unmarked or syntactically marked, while the anticausative variant can be unmarked or morphologically marked, as summarized in Table 4:

UNMARKED CAUSATIVE	MARKED SYNTACTIC CAUSATIVE	MORPHOLOGICALLY MARKED ANTICAUSATIVE	UNMARKED ANTICAUSATIVE
preoccupare 'worry'	*far preoccupare* 'make N worry'	*preoccuparsi* 'be worried, lit. worry.*si*'	—
sbalordire 'astonish'	*far sbalordire* 'make N astonish'	*sbalordirsi* 'be astonished, lit. astonish.*si*'	*sbalordire* 'astonish'
allibire 'appall'	*far allibire* 'make N appall'	—	*allibire* 'appall'
—	*far vergognare* 'make N ashamed'	*vergognarsi* 'be ashamed, lit. shame.*si*'	—
—	*far gioire* 'make N rejoice'	—	*gioire* 'rejoice'

Table 4. Encoding the causative/anticausative alternation.

This research has also highlighted the special properties that correlate lexical and analytical causatives: the hypothesis that *fare*-constructions are single complex verbs in Romance languages requires further investigation in the light of these findings.

This research was inspired by Giusti & Iovino's (2019) seminal study aiming to provide an adequate taxonomy of psych verbs in Italian and Latin. However, the analysis and the taxonomy I construe is based on a different perspective. The empirical data I provide show that a consistent subset of Accusative Experiencer verbs (over 60% of the total) regularly undergo alternation between a lexical causative and a marked or unmarked anticausative construction, hence they are all included in the AOE verbs' subclass B1. Differently, Giusti & Iovino's (2019) taxonomy (see endnote 1) includes inverted transitive verbs like *preoccupare* 'worry' in type (b) and unaccusative verbs like *preoccuparsi* 'get worried, lit. worry.*si*' in type (c). By including *preoccuparsi* 'get worried, lit. worry.*si*' in a separate class, the authors do not show that these two verbs share seman-

tic properties (they are change-of-state verbs) and syntactic properties (the causative/anticausative alternation). If most Accusative Experiencer verbs semantically and syntactically behave like non-psych causative transitive verbs that undergo the causative/anticausative alternation, such as *rompere* 'break' (see Section 3), they cannot be considered unaccusative verbs, as Belletti & Rizzi (1988) hypothesise, but rather they are transitive verbs, in accordance with Pesetsky (1995) and Giusti & Iovino (2019).

Furthermore, Giusti & Iovino (2019) consider only the unergative *gioire* 'rejoice'-type (the (e)-type, see endnote 1) as Subject Experiencer non-transitive verbs, whereas the taxonomy I construed shows that Subject Experiencer non-transitive verbs can be unergative (*gioire* 'rejoice'), unaccusative (*vergognarsi* 'be ashamed, lit. shame.*si*') and, in a few cases, both (*trasalire* 'boggle', see the Appendix), falling into distinct classes and subclasses. I have also shown that most of these can be considered change-of-state verbs that exhibit a marked (or analytical) causative construction. Finally, as Giusti & Iovino (2019) are mainly interested in defining the argument structure of psych verbs, they consider a generic thematic role as the Stimulus, which may be an internal or an external argument. However, I have distinguished the roles 'Object of Emotion' and 'Cause of Emotion' and related them to stative and causative psych verbs.

Further research will address the analysis of those constructions involving psych nouns (Gross 1995; Fábregas *et al.* 2012; Marín & Marco 2012; Alexiadou 2016; Rozwadowska 2017; Rott *et al.* 2020), which may or may not be related to psych verbs. For example, the deverbal noun *agitazione* 'turmoil' and the denominal verb *angosciare* 'anguish, distress' are related to the verb *agitare* 'upset' and the noun *angoscia* 'anguish, distress', respectively. However, such a relationship does not occur in the case of psych nouns like *ansia* 'anxiety' or *panico* 'panic'.

Subclass B1 verbs are often in relationship with sentences where the psych state is expressed by a noun. Sentences (128) and (129) both express causation: (129) is a noun construction where the causative verb *mettere* 'put' occurs with the PP *in agitazione* 'in turmoil'. Sentence (130) is related to (131), and both denote a change of state: in (131) the PP *in agitazione* 'in turmoil' occurs with the aspectual verb *andare* 'go'. Sentence (132) and (133) denote the resultative state: the verb *essere* 'be' occurs with the PP *in agitazione* 'in turmoil' in (133):

(128) *Ciò   agita   Maria.*
      this   upset.PRS.3SG   Maria
      'This upsets Maria'

(129) *Ciò   mette   in agitazione   Maria.*
      this   put.PRS.3SG   in turmoil   Maria
      'This puts Maria in turmoil'

(130) *Maria   si agita*   (*per ciò*).
       Maria   *si* upset.PRS.3SG   (for this)
       'Maria gets upset over this'
(131) *Maria   va*   *in agitazione*   (*per ciò*).
       Maria   go.PRS.3SG   in turmoil   (for this)
       'Maria gets upset'
(132) *Maria   è*   *agitata.*
       Maria   be.PRS.3SG   upset
       'Maria is upset'
(133) *Maria   è*   *in* (*uno stato di*)   *agitazione.*
       Maria   be.PRS.3SG   in (a state of)   turmoil
       'Maria is in turmoil'

Such constructions belong to the more general category of complex predicates or light/support verb constructions. The comparison between psych-verb and psych-noun constructions will show common features and differences regarding the syntax and the semantics of psych predicates.

Abbreviations

3PL = third person plural; 3SG = third person singular; AOE = Accusative Object Experiencer; CAA = causative/anticausative alternation; EC = Empty Category; INF = infinitive; OE = Object Experiencer; PRS = present; PST = past; PTCP = participle; SE = Subject Experiencer; UAH = Universal Alignment Hypothesis; UTAH = Uniformity Theta Assignment Hypothesis.

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Appendix

Ruwet (1994) points out the difficulty of sorting out psychological verbs and the "tendency among linguists to mix up true experiencer verbs with other verb classes […] Formal tests that might make the distinction clear are hard to come by." Among linguists, Ruwet cites Legendre (1989), Herschensohn (1992) and Gross (1975).

The taxonomy does not include those ambiguous verbs whose 'figurative' meaning has a psychological interpretation, like the verb *soffocare* 'choke, fig. distress' or *ferire* 'injure, fig. hurt'. I have included ambiguous verbs in two cases:

1) the psychological meaning has a very weak correlation (or has lost any correlation) with the concrete use, as in the case of *colpire* 'hit *vs* amaze, strike'. Moreover, this verb is cited in most literature, see Belletti & Rizzi (1988);

2) the psychological meaning is more common than the non-psychological one, as in the case of *agghiacciare* 'freeze, be terrorized': a search of this lemma in the Italian Web Corpus returns about 2.200 results, 90% of which refer to the psychological meaning. Furthermore, the pronominal form *agghiacciarsi* 'freeze, lit. freeze.*si*' is considered to be a common verb when receiving the psych reading and a low frequency verb when referring to the non-psych reading, according to the De Mauro Italian Dictionary (ver. 1.0.3.5, 2000).

However, the distinction between figurative uses and psychological verbs is not always clear-cut and, consequently, errors and omissions may still be present. Nonetheless, the inclusion or the elimination of a few verbs does not significantly change the prominence of the class B1 and the paucity (to different degrees) of the other classes.

Class **A** (43):
abominare 'abominate', aborrire 'abhor', acclamare 'cheer', adorare 'adore', agognare 'yearn', amare 'love', ambire 'aspire', ammirare 'admire', apprezzare 'appreciate', ardire 'have the courage', benvolere 'cherish', bramare 'long', commiserare 'commiserate', compatire 'pity', contemplare 'admire', desiderare 'desire', detestare 'detest', disdegnare 'disdain', disprezzare 'despise', esecrare 'execrate', godersi 'enjoy', gradire 'like', invidiare 'envy', irridere 'mock', lamentare 'complain', odiare 'hate', osare 'dare', paventare 'fear', prediligere 'prefer', rimpiangere 'regret', schifare 'disgust', scioccare 'shock', sgradire 'dislike', soffrire 'suffer', sopportare 'bear, stand', sperare 'hope', spregiare 'despise', svergognare 'shame', temere 'fear', tollerare 'tolerate', vagheggiare 'long for', venerare 'venerate', volere 'wish'

Class **B1** (197):
abbrutire 'demean', accalorare 'excite', accasciare 'prostrate', acchetare 'calm', accontentare 'please', accorare 'grieve', acerbare 'exasperate', acquietare 'calm',

addolorare 'grieve', adirare 'anger', adontare 'hurt', affliggere 'afflict', agghiacciare 'terrify', agitare 'upset', allarmare 'alarm', allegrare 'cheer', allettare 'cheer', allibire 'appall' 'unmarked', allietare 'cheer', amareggiare 'embitter', ambasciare 'afflict', ammansire 'tame', ammiserire 'deject', angosciare 'distress', angustiare 'distress', animare 'animate', annichilire 'annihilate', annoiare 'bore', appagare 'satisfy', appassionare 'thrill', arrovellare 'anguish', atterrire 'terrify', attristire 'sadden', avvilire 'debase', calmare 'calm', chetare 'keep quiet', colpevolizzare 'blame', commuovere 'move', confondere 'confuse', confortare 'console', consolare 'console', contentare 'satisfy, please', contrariare 'upset', contristare 'sadden', conturbare 'disturb', corrucciare 'frown', corrugare 'frown', costernare 'dismay', crucciare 'worry', deliziare 'delight', demoralizzare 'demoralize', demotivare 'demotivate', deprimere 'depress', dilettare 'delight', disacerbare 'ease', disaffezionare 'disaffect', disamorare 'disaffect', discoraggiare 'discourage', disgustare 'disgust', disilludere 'disenchant', disincantare 'disenchant', disinnamorare 'fall out of love', distendere 'relax', distrarre 'amuse', disturbare 'bother', divertire 'amuse', eccitare 'excite', emozionare 'thrill', entusiasmare 'thrill', esacerbare 'exasperate', esagitare 'upset', esasperare 'exasperate', esaurire 'exhaust', esilarare 'exhilarate', estasiare 'ravish', estenuare 'exhaust', euforizzare 'make euphoric', fiaccare 'exhaust', galvanizzare 'thrill', illudere 'delude', imbaldanzire 'embolden', imbarazzare 'embarass', imbestialire 'anger, get mad', imbizzarrire 'get mad', immalinconire 'sadden', impacciare 'embarass', impappinare 'confound', impaurire 'frighten', impazientire 'get impatient', impensierire 'worry', impermalire 'annoy', impietosire 'move to pity', impigrire 'get lazy', impressionare 'impress', inacerbare 'irritate', inacerbire 'irritate', incarognire 'make wicked', incattivire 'make wicked', incoraggiare 'encourage', incrudelire 'become cruel', indiavolare 'agitate', indignare 'get angry', indispettire 'annoy', indisporre 'annoy', infastidire 'annoy', infatuare 'infatuate', inferocire 'get angry', infervorare 'excite', infervorire 'excite', infuriare 'infuriate', ingelosire 'make jealous', inibire 'inhibit', innamorare 'cause to fall in love', innervosire 'make nervous', inorgoglire 'make proud', inorridire 'horrify', inquietare 'worry', insuperbire 'exalt', intimidire 'intimidate', intimorire 'frighten', intristire 'sadden', invaghire 'cause to fall in love', invelenire 'irritate', invigliacchire 'entice', invilire 'demean', inviperire 'get angry', irritare 'irritate', irritrosire 'make shy', letiziare 'rejoice', meravigliare 'marvel', mortificare 'mortify', nevrotizzare 'make neurotic', offendere 'hurt', orripilare 'horrify', ossessionare 'obsess', pacare 'quiet down', perturbare 'upset', placare 'quiet down', preoccupare 'worry', quietare 'calm', rabbonire 'appease', raccapricciare 'scare', rallegrare 'cheer up', rammaricare 'regret', rassicurare 'confort', rattristare 'sadden', rilassare 'relax', rimbaldanzire 'embolden', rincuorare 'encourage', rinfrancare 'embolden', ringalluzzire 'make bold', risollevare 'cheer up', sbalestrare 'upset', sbalordire 'astonish', sbigottire 'stun', scandalizzare 'shock', scocciare 'bother', scoglionare 'annoy', scombussolare 'upset', sconcertare 'disconcert', sconfortare 'discourage', sconsolare 'disconsolate', scontentare 'dissatisfy, displease', sconturbare 'upset', sconvolgere 'upset', scoraggiare 'discourage', sdegnare 'disdain', seccare 'annoy', sgomentare 'frighten, dismay', snervare 'exhaust', soddisfare 'satisfy', sollazzare 'amuse', sorprendere 'surprise', sovreccitare 'excite', spaurire 'frighten', spaventare 'frighten', spazientire 'get impatient', spoetizzare 'disenchant', spossare 'exhaust', stancare 'exhaust', stizzire 'irritate', strabiliare 'amaze', stranire 'upset', stressare 'stress', stufare 'bore', stupefare 'astonish', stupire 'amaze', svagare 'amuse', svilire 'debase', tediare 'bore', terrorizzare 'terrorize', tormentare 'torment', tranquillizzare 'calm', trastullare 'rejoice, amuse', turbare 'upset', umiliare 'humiliate', urtare 'irritate'

Class **B2** (27):
affascinare 'fascinate', angariare 'harass', assillare 'harass', attrarre 'attract', avvincere 'thrill', circuire 'flatter', colpire 'affect', compiacere '=*accontentare*, please', complessare 'stress out', deludere 'delude', desolare 'desolate', disagiare 'discomfort', frustrare 'frustrate', gratificare 'gratify', importunare 'bother', intrigare 'interest', lusingare 'flatter', molestare 'annoy, harass', oltraggiare 'outrage', ossessionare 'obsess', pervertire 'pervert, corrupt', provare 'exhaust', repellere 'repel', scioccare 'shock', sedurre 'seduce', terrificare 'terrify', vessare 'vex'

Class **C1** unaccusative (3):
affezionarsi 'grow fond of', attaccarsi 'become attached to', rassegnarsi 'resign'

Class **C2** unergative (7):
acclamare 'cheer', agognare 'yearn', ambire 'wish', anelare 'yearn', aspirare 'aspire', tenere 'to be fond of', tenerci 'to be fond of'

Class **D1** unaccusative (13):
arrabbiarsi 'anger', bearsi 'delight', compiacersi (=*provare piacere* 'be pleased'), disperarsi '=*disperazione*, despair', imbufalirsi 'get angry', incavolarsi 'get angry', incazzarsi 'get angry', lamentarsi 'moan', pentirsi 'repent', piccarsi 'be offended', risentirsi 'be offended', vantarsi 'boast', vergognarsi 'be ashamed'

Class **D2** unergative (5):
disperare (=*perdere la speranza* 'lose hope'), esultare 'exult', gioire 'rejoice', godere 'enjoy', smaniare 'wish, agitate'

Class **E1** unaccusative (7):
accigliarsi 'lour', disdegnarsi 'be indignant', immusonirsi 'get sulky', incollerire/incollerirsi 'get angry', imbronciare/imbronciarsi 'get in a huff', trasalire** 'boggle', trasecolare** 'dumbfound'

Class **E2** unergative (9):
delirare 'rave', patire 'grieve', paventare 'fear', penare 'suffer', soffrire 'suffer', temere 'fear', trasalire** 'boggle', trasecolare** 'dumbfound', trepidare 'be anxious'

Class **F1** unaccusative (6):
aggradare*** 'please', garbare 'like', importare 'matter', interessare 'interest, matter', mancare 'miss', piacere 'appeal'

Class **F2** unaccusative (4):
dispiacere 'be sorry', dolere 'regret', spiacere 'be sorry', rincrescere 'regret'
N.B.: unergative dative verbs like *compiacere* 'please' and *ripugnare* 'disgust' are not included in either class.

** these verbs can be unergative and unaccusative, therefore I listed them in both classes.
*** only in the third person, no compound tenses.

Notes

[1]   Giusti & Iovino (2019: 43) point out that "the transitive/unergative/unaccusative structures can be instantiated either externalising the Experiencer or externalising the Stimulus. We have called the latter cases 'inverted' following Bossong's (1988) terminology, which well represents the idea that there is an underlying hierarchy in which the Experiencer is higher than the Stimulus". The following table, which provides the taxonomy, is drawn from Giusti & Iovino (2019: 33):

	verb class	externalised argument	internal argument
a.	transitive *temere* 'fear'	Experiencer	Stimulus (structural accusative)
b.	inverted transitive *preoccupare* 'worry'	Stimulus	Experiencer (inherent accusative)
c.	unaccusative *preoccuparsi* 'worry'	Experiencer	Stimulus PP (*di/per*)
d.	inverted unaccusative *piacere* 'like'	Stimulus	Experiencer PP (*a*)
e.	unergative *gioire* 'be glad'	Experiencer	Stimulus PP (*di*)
f.	unaccusative impersonal *importa* 'matters'	0	Experiencer PP(*a*) Stimulus PP (*di*)

[2]   See also Belletti & Rizzi (2012).
[3]   In these examples I omitted the gloss on purpose; the deitalicized type highlights those psych verb sequences that express intentionality.
[4]   The verb *preoccupare* 'worry', largely cited in the literature since Belletti & Rizzi (1988), is an Object Experiencer verb related to the pronominal form *preoccuparsi* 'be worried, lit. worry.*si*'. In this case the PP can be headed by the prepositions *di* 'of' and *per* 'for'. However, *preoccuparsi* 'be worried, lit. worry.*si*' can also be an inherently pronominal verb semantically equivalent to *occuparsi* 'take care, lit. take_care.*si*' as in the sentence *Il dottore si (pre)occupa di curare i pazienti* 'The doctor takes care of the patients', where *di* 'of' is the only preposition that can head the PP.
[5]   I will not analyse this type of adjectival sentences, which deserves further research. Besides the verb *essere* 'be' also a verb like *rimanere* 'stay, remain' can occur. In particular, the construction *rimanere* 'remain' + past participle, as *rimanere stupito* 'remain astonished' is analysed as an anticausative/passive construction in Telve (2016).
[6]   Sentence (i) receives the telic reading, while (ii) receives the atelic reading:
(i) *La casa   è   bruciata   in un attimo.*
    the house   be.PRS.3SG burn.PTCP   in an instant
    'The house burned down in an instant'
(ii) *La casa   ha   bruciato   per ore.*
    the house   have.PRS.3SG burn.PTCP   for hours
    'The house burned for hours'
[7]   The debate on marked anticausative forms is still ongoing and unsolved. Chierchia (2004), Reinhart & Siloni (2005), Koontz-Garboden (2009) propose that the pronoun *si* is a 'reflexivizer' also in the causative alternation. Schäfer & Vivanco (2011) claim that the semantics of the reflexive form and the intransitive pronominal form is different as far as their semantics is concerned. Kayne (1975) argues that the reflexive forms should be analysed as if they were alternating causative verbs. Kailuweit (2005) considers the reflexive as an anti-passive.
[8]   The pronominal verb *colpirsi* 'hit oneself, lit. hit.*si*' is accepted only in case it

refers to a concrete/physical activity, see also Belletti & Rizzi (1988: 299).

[9] As regards the English counterparts of examples (52) and (54), see the discussion on examples (31) and (32).

[10] The internal argument of the VP complement of *fare* 'make' moves to the subject position of the clause. The external argument of the VP can be realized as a *by*-phrase.

[11] The *venire* 'come'-passive of *preoccupare* 'worry' is rarely found in the corpora. A Google search reveals that this construction is found either in linguistics texts that cite Belletti & Rizzi (1988) (as one of the anonymous reviewers suggested) or in non-contemporary texts, such as the ones I found at the links <it.wikisource.org/wiki/Autobiografia_(Monaldo_Leopardi)/Capitolo_LXVIII>, <asa.archiviostudiadriatici.it/islandora/object/libria:238683/datastream/PDF/content/libria_238683.pdf> (search made on 28/10/2023).

[12] Sentence (63) is drawn from Jacques Le Goff, *San Francesco d'Assisi*, 2012, Laterza, while sentence (64) is drawn from Mark Twain, *Le avventure di Tom Sawyer*, 2011, Piemme.

[13] The passive applied to the progressive form (incompatible with stative predicates) is one of the diagnostics adopted to verify if a *frighten*-type verb accepts the verbal passive. The sentence *The situation was depressing Mary* does not accept the passive **Mary was being depressed by the situation*, whereas *The government is terrifying people* accepts the passive *People are being terrified by the government* (for further dicussion see Pesetsky 1995; Anagnostopoulou & Iatridou 2007). This diagnostics is anavailable to Italian that lacks the progressive passive (see Bertinetto 2000).

[14] The periphrastic causative is not available with stative SE verbs: in (iii) *Maria* is the Experiencer, while in (iv) *Maria* can only be the Causer of someone else loving math:

(iii) *Maria   ama   la matematica.*
      Maria   love.PRS.3SG   the math
      'Maria loves math'

(iv) *Maria fa   amare   la matematica   agli studenti.*
      Maria make.PRS.3SG   love.INF   the math   to_the students
      'Maria makes the students love math'

[15] Georgian is the official language of Georgia, a former Soviet Republic, located in the Caucasus region of Eurasia.

[16] According to the main Italian dictionaries *ammuffire* 'turn moldy' is an intransitive verb, however the transitive structure is frequently found in texts.

[17] I want to point out that the main dictionaries indicate the non-pronominal intransitive verb *vergognare* 'shame'. De Mauro indicates that it has a popular and a low usage, while Treccani, Zingarelli and Devoto-Oli refer to it as a literary or popular usage. The transitive *vergognare* 'shame' is a variant of the verb *svergognare* 'shame'.

[18] The preposition *a* 'at' may be accepted in some cases, as in (v) (see also the endnote 20):

(v) *Gianni   gode   a quella vista.*
    Gianni   delight.PRS.3SG at that view
    'Gianni enjoys that view'

[19] The acceptability of the prepositional accusative when left-dislocated in the case of AOE verbs as in (vi) will not be discussed in this article. Benincà (1986, 1988) and Berretta (1989, 1991) investigate this construction:

(vi) *A me (mi)   spaventano   le tue   idee.*
     to me (CL)   frighten.PRS.3PL   the your   ideas
     'Your ideas frighten me'

[20] Some verbs may also take the preposition *a* 'at', which is accepted only with eventive nouns as in (vii). The preposition *di* 'of' never heads the PP in case of non-

psych lexical causatives as in (viii):

(vii) *Maria si allarmò*   *a quella notizia.*
       Maria *si* alarm.PST.3SG   at that news
       'Maria was alarmed at the news'

(viii) *La vetrata   si ruppe*   *(*del + per il)*   *vento.*
       the window   *si* break.PST.3SG   (of_the + for the)   wind
       'The window broke for/with the wind'

[21]   The two verbs are etymologically correlated. The verb *temere* 'fear' is derived from the Latin *timēre*. The verb *intimorire* 'frighten' is a denominal verb: the noun *timore* 'fear' is derived from the Latin *timor-ōris,* a deverbal noun from the verb *timēre.*