A PROTOCOL FOR PSYCH VERBS

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Abstract: So-called psychological verbs such as Italian *temere* 'fear', *preoccupare* 'worry', and *piacere* 'like' present an extremely varied argument structure across languages, that arranges these two roles in apparently opposite hierarchies and assigns them different grammatical functions (subject, direct, indirect and prepositional objects). This paper wants to provide a descriptively adequate classification of such verbs in Latin and Italian to serve future analyses irrespective of their theoretical persuasion. We individuate six classes in Italian and seven classes in Latin, which comply with Belletti and Rizzi's (1988) original analysis of psych verbs and focus on the three less studied classes, namely unaccusatives, unergatives and impersonals. We show that diachronic variation and apparent intra-language idiosyncrasies are due to the fact that these classes are universally available to all psych roots. The presentation is set in a protocol fashion in the sense of Giusti and Zegrean (2015) and Di Caro and Giusti (2015).

Keywords: Latin, psych verbs, experiencer role, argument structure alternation

1. Introduction[1]

Psychological verbs denote a particular state that involves an <experiencer> and a second argument that causes, initiates or is related to the psychological state. This has been defined as <theme> (Belletti and Rizzi 1988, Grimshaw 1990), <stimulus> (Talmy 1985), or <target> (Dowty 1991, Pesetsky 1995), capturing different properties that characterize it. They present an extremely varied argument structure that arranges these two roles in different, in some cases apparently opposite, hierarchies and assigns them different grammatical functions (subject, direct object, indirect and prepositional objects). For this reason they are particularly difficult to describe and are usually a major source of frustration for foreign language learners.

This paper wants to offer a deep-down description, informed by generative syntax but aiming to provide accessible information to linguists of any theoretical persuasion, as well as to grammarians interested in enhancing language awareness in the teaching of classical languages, as exemplified by Giusti and Iovino (2016) and Cardinaletti et al. (2016).

1.1 Our theoretical starting point

The generative literature of the last three decades, (a.o. Perlmutter and Postal 1984, Rosen 1984, Grimshaw 1990, Pustejovski 1993, White 2003, Levin and Rappaport Hovav 2005) has aimed to capture the alignment of thematic roles and syntactic structure. In so doing, it has focused basically on the *fear*/*frighten*-dichotomy exemplified in (1).

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The two transitive verbs in (1) display apparently opposite alignments crosslinguistically: *fear* has a subject experiencer (henceforth SE) and an object stimulus (OS); *frighten* has an "inverted" structure (in the terms of Bossong 1998) with a subject stimulus (SS) and an object experiencer (OE). The symbol > indicates the relative order of the two arguments:

(1)	a.	Mary fears conflicts.	SE > OS
	b.	Conflicts frighten Mary.	SS > OE

Belletti and Rizzi (1988) introduce a third class of psych verbs in Italian, which coexists with the transitive dichotomy (2) and does not appear to have an English equivalent: the *piacere* class (3), with a SS and a prepositional object experiencer (henceforth POE). They note that unlike the transitive verbs in (2), the *piacere* class allows for the dative POE to appear in preverbal position, which they claim to be the sentential subject position (parallel to quirky subjects in Icelandic):

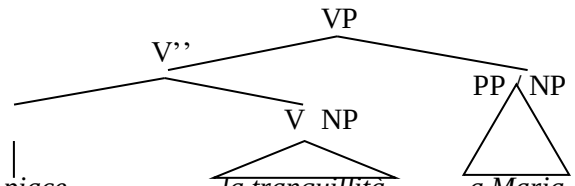
(2)	a.	Maria teme i conflitti. 'Maria fears conflicts.'	SE > OS
	b.	I conflitti preoccupano Maria. 'Conflicts worry Maria.'	SS > OE
(3)	a.	A Maria piace la tranquillità. to Maria likes the peacefulness	POE > SS
	b.	La tranquillità piace a Maria. the peacefulness likes to Maria 'Maria likes peacefulness.'	SS > POE

Belletti and Rizzi (1988) show that the SS of *preoccupare* does not behave as an external argument as regards extraction facts and binding[2] but is more similar to the internal subject of unaccusative verbs, despite the fact that *preoccupare* combines with auxiliary *avere* in the compound past tenses. For this reason, it cannot be considered as truly unaccusative. They also show that the accusative OE of the *preoccupare* class does not behave like an internal argument and propose that the *preoccupare* class assigns inherent accusative to the OE, which is structurally parallel to the POE of the *piacere* class. They therefore claim that the hierarchical alignment of Experiencer > Stimulus is universal, complying with the Uniformity of Theta Assignment Hypothesis (UTAH, Baker 1988: 46) according to which "Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure". The proposed structure for *preoccupare* and *piacere* is (4), which is set in a pre-X-bar-theoretic form:

[2] There is no space to review the many diagnostics that require subtle judgements by native speakers. We refer the reader to Belletti and Rizzi's paper and others after them, a.o. Arad (1998) for subject Experiencers and Landau (2002) for object Experiencers. In the course of the paper we will see that many of these diagnostics are not applicable or very difficult to check for Latin.

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(4)



The "inverted" constructions in (2b) and (3) are derived by independently motivated movement of the internal argument (stimulus) to subject position across the experiencer. This is achieved by different lexical specifications of the three classes. *Temere* externalizes the Experiencer and has no Case specification; the two arguments therefore get structural Case (Nominative on the SE and Accusative on the OS). The other two classes do not externalize the Experiencer to which they assign inherent Case: prepositional dative in the case of *piacere* and inherent accusative in the case of *preoccupare*. This leaves the Stimulus/Theme the only argument able to get the only available structural case, namely nominative.

Belletti and Rizzi's system predicts the non-existence of a genuine transitive with a SS[3]. It also predicts the existence of impersonal psych verbs that do not externalize any role and assign inherent case to both arguments, as is the case of *importa* in (5a) and of unergative psych verbs that externalize the Experiencer and assign inherent case to the Stimulus as is the case of *gioire* (5b). Finally, Belletti and Rizzi show that the reflexive clitic *si*, which appears on some verbs of the *preoccupare* class, as in (5c), is not a genuine reflexive but an unaccusative marker:

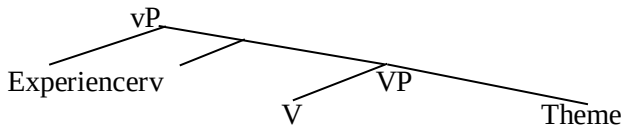
(5) a. A me importa solo di questo.
to me matters only of this
b. Gianni gioisce solo di questo
Gianni rejoices only of this
c. Gianni si preoccupa di questo
Gianni REFL worries of this

In a recent paper, Belletti and Rizzi (2012) revisit their proposal in the spirit of antisymmetry which only allows for left-branching specifiers. In this perspective the higher position of the Experiencer implies that the first-merge configuration of the arguments of the three classes must be as in (6), which is the same configuration of the *temere* class, with the experiencer naturally taking the function of clausal subject, where it receives nominative case, and the stimulus, which Belletti and Rizzi label as Theme, receives structural accusative Case:

[3] For reasons of space we cannot show the diagnostics provided by Belletti and Rizzi for transitivity, inergativity, and unaccusativity in Italian and the literature that in some cases questions them, showing quite convincingly that we are not dealing with clearcut classes, but with a continuum (Cennamo 1999, Bentley 2006 for an overview).

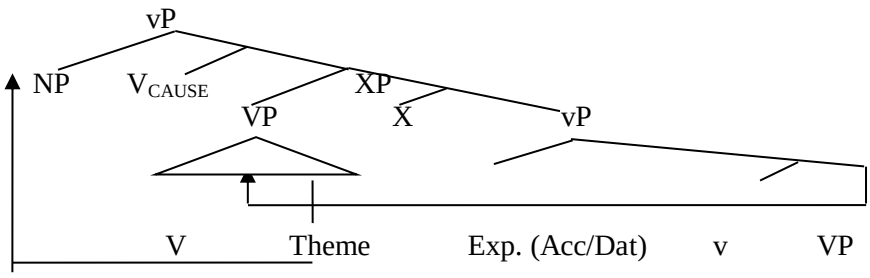
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(6)



In case of the *preoccupare* and the *piacere* class, the Stimulus can cross over the Experiencer through smuggling, in the sense of Collins (2005), namely with movement of the whole VP to the Specifier of a higher projection, call it SpecXP. From that position the Stimulus / Theme can move to the Specifier of a higher vP, which contributes a causative feature to the verb (also Arad 1998, Bentley 2006, Folli and Harley 2007):

(7)



To summarize, Belletti and Rizzi's system predicts six classes of verbs, two of which with "inverted" Stimulus > Experiencer order. The six classes distribute across the transitive / unergative / unaccusative spectrum, according to many tests. In (8) we give the auxiliary selection for each verb class. Transitives (8a), inverted transitives (8b) and unergatives (8c) select *have*; inverted (anti-causative) unaccusatives (8c) and unaccusatives (8d) select *be*; impersonal *importa* behaves as an unaccusative (8f):

(8) a. Mario ha sempre temuto la professoressa di matematica
'Mario has always feared his Math teacher.'

b. Gli esami di matematica hanno sempre preoccupato Mario
'Math tests have always worried Marion.'

c. Maria ha gioito della buona notizia
Maria has rejoiced of the good news
'Maria was happy about the good news.'

d. Maria si è sempre preoccupata della qualità della vita
Maria REFL is always worried of the quality of life
'Maria has always cared about the quality of her lifestyle.'

e. A Maria sono sempre piaciute le mele.
to Maria are always liked the apples

f. A Maria non è mai importato dei soldi.
to Maria not is never cared of the money
'Maria never cared about money.'

1.2 A protocol for language description

The so-called Principles-and-parameters framework aims at discovering universal properties of language (the principles) and the restricted dimensions of variation that must

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be acquired through exposure to natural language data (parameters). Being able to disseminate the results of the research on principles and parameters, and of modern linguistics in general, in a form that is accessible to the general public and open to multidisciplinary enrichment can be the foundation of a new comparative grammar that can ground an innovative teaching method; a language teaching that enhances awareness on the mental processes that underlie the linguistic modules of cognition and allows to acquire language competence instead of learning grammar rules.

The urgency of innovation in language teaching through dissemination of the advances of theoretical linguistics is spelled out in Giusti and Rae (2008). A recent proposal for an ecumenical approach to language aimed at descriptive adequacy and maximal accessibility is sketched in Giusti and Zegrean (2015) and Di Caro and Giusti (2015), with the label of "protocol linguistics". In Giusti and Zegrean (2015), the protocols aim at the enhancement of inclusive cultural identity. In Di Caro and Giusti (2015) it aims at dialectal fieldwork. In this paper the protocols are applied to the teaching of a classical language (Latin) through comparison with the mother tongue (Italian).

A protocol is an established procedure which applies in the same way with the same tools in different but comparable situations. It permits to avoid interference that may cause problems of different types while pursuing an objective. Furthermore, when the objective regards the acquisition of information, it ensures that such information is comparable.

The table in (9) gives a protocol of the argument structures for psych verbs in Italian predicted by Belletti and Rizzi's hypothesis. It permits a straightforward comparison among languages at the cost of setting six features that are partially novel to traditional grammars; namely, "unaccusative", "unergative", "inverted", and "inherent vs. structural" Case:

(9)	verb class	externalized argument	inherent Case
a.	transitive *temere* 'fear'	SE	0
b.	inverted transitive *preoccupare* 'worry'	SS	OE (accusative)
c.	unergative *gioire* 'be glad'	SE	POS (*di*)
d.	unaccusative *preoccuparsi* 'worry'	SE	POS (*di/per*)
e.	inverted unaccusative *piacere* 'like'	SS	POE (*a*)
f.	impersonal *importa* 'matters'	0	POE (*a*) POS (*di*)

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Comparison of Latin with Italian shows that richness in argument structure is a general property of psych verbs at all stages, from Early Latin to modern Italian. This can enhance in the learner a kind of language awareness that allows to capitalize in the similarities with Italian and to control the differences arisen in the course of language change.

We will observe that diachronic variation only regards independent changes on verbal and nominal inflection, notably loss of deponent morphology on verbs and case morphology on nouns. These are properties that regard individual functional heads, namely micro-parameters in the sense of Biberauer and Roberts (2012). Shifts from one class to another may occur in diachronic but are also available synchronically, in the sense that more than one argument structure may be available to the same verb, as is the case of the inverted transitive/unaccusative alternation of *preoccupare/preoccuparsi* ('worry'), which is also present in English, a language that lacks a maker of unaccusativity. Changes of argument structure in individual lexical items are therefore changes in nano-parameters, in the sense of Biberauer and Roberts (2012).

1.3 Structure of the paper

Section 2 sets out the selectional properties of six classes in Latin and argues that none of the diagnostics presented for Italian can apply successfully due to independent properties of Latin. Section 3 briefly presents the diachronic changes between Latin and Italian, which impact on the argument structure of psych verbs, namely the different way to encode unaccusativity (from deponent morphology to insertion of an expletive reflexive) and the loss of overt case morphology on nouns. Section 4 concludes the paper, presenting intra-language variation, discussing verbs that belong to more than one class at the same stage of the language and argues that the greater part of diachronic variation is due to the instability of the argument structure of psych verbs, which is present at all stages of the language (and possibly universally).

2. Seven different classes of psych verbs in Latin

Latin presents the *temere*/*preoccupare* dichotomy as well as the *piacere* class, which have maintained the same argument structure in Italian, cf. (9a) with (2a), (9b) with (2b), and (9c) with (3) above:

(9) a. Timeo Danaos et dona ferentis — SE > OS
fear.1SG Danaos and present.PL.ACC bringing.PL.ACC
'I fear the Greeks even if they bring presents.'

b. nihil te perturbat — SS > OE
nothing.NOM you.ACC worries.3SG
'Nothing worries you.'
(Cic. *fam*. 11, 16,1)

c. Placent vobis hominum mores? — Dat. OE > SS
like.3PL you.DAT men.GEN behaviours.NOM
'Do you like these men's behaviour?'
(Cic. *Verr*. II, 3, 208)

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Latin also displays unergative psych verbs with external experiencer and oblique stimulus. In (10a) *ardeo* does not have a counterpart in Italian, but is structurally parallel to *gioire* in (5b) above. The Italian counterpart in (10b) shows that psych predicates can be formed periphrastically. We have no space here to account for this type of predicates:

(10) a. Donec non alia magis arsisti. SE > Abl.OS
until not another.ABL.F.SG more burn.PRAET.2SG
(Hor. *Carm*. 3, 9, 5-6)

b. Finché non ardesti d'amore per un'altra. SE > POS
until not burn.PRAET.2SG of love for another.ABL.F.SG
'Until you burnt [of love] for another [woman].'

There are reasons to suppose that the unaccusative class of psych verbs in Latin is made of those psych verbs that display deponent or semi-deponent morphology (e.g. *vereor* 'fear', or *gaudeo* 'rejoice' and *(con/dif)fido* 'trust, mistrust', respectively)[4]. Gianollo (2000, 2010) and Cennamo (1999, 2012) a.o. argue that deponent morphology is associated to non-agentive subjects. Furthermore, Cennamo (1999, 2012) shows that insertion of an expletive reflexive as a marker of anti-causativity was already available in early Latin and came to gradually replace the *R*-form of the eroded deponent inflection. Parallel to unergative psych verbs, unaccusative psych verbs have a SE; but unlike unergatives, which select a genitive stimulus, the stimulus of unaccusatives is realized in different ways, mostly ablative (11a) and (12b), but also genitive (11b), (inherent) accusative (11c), and dative (12a):

(11) a. **Ipsa liberatione et vacuitate** omnis molestiae gaudemus.
this freedom.ABL and lack.ABL all.GEN nuisance.GEN enjoy.1PL
'We enjoy this freedom and lack of nuisance.'
(Cic. *fin.* 1.37)

b. **Voti** gaudeo.
request.GEN rejoice.IND.PRES.1SG
'I am glad of the request.'
(Apul. *Met.* 1,24)

c. **Id** gaudeo.
that.ACC.SG.NT rejoice.IND.PRES.1SG
'I am glad of that.'
(Ter. *And.* 362)

[4] Embick (2000) argues against considering deponent morphology as a marker of unaccusativity on the bases of two observations. First, many deponent verbs, e.g. *hortor* 'exhort', have an accusative object. He rejects the hypothesis of an inherent accusative *à la* Belletti and Rizzi (1988) on the basis of sporadic passive forms with an overt prepositional agent: e.g. *ab amicis hortaretur* '[He] is exhorted by [his] friends' (Varro in Pisc GL II 387, 2). He also reports some agentive nominalizations of deponent verbs: e.g. *sequor* 'follow' > *secutor* 'follower', *aggredior* 'assail' > *aggressor* 'assailer, *consector* 'follow' > *consectatrix* 'follower'. This evidence becomes less compelling if we consider, as we will in section 4, that more than one argument structure may be available for the same verb. It is therefore possible to dismiss the apparent transitivity of the four verbs above with the hypothesis that they coexist with a transitive counterpart that is not attested; while it is generally true the accusative object of deponent and semideponent verbs cannot be turned into a nominative subject and that generally deponent and semideponent verbs do not provide the base for a *-tor/-trix* agentive nominalization.

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(12) a. **Arcae nostrae** confidito.
money.DAT.SG.F our.DAT.SG.F trust.FUT.IMPERAT.2SG
'Trust in our money.' (Cic. *Att*. 1,9,2)

b. **Alio duce** plus confidere.
another.ABL.SG.M boss.ABL.M more trust.PRES.INF
'Trust more in another boss.'
(Liv. 21, 4, 3)

The fact that accusative is one of the many possible choices, reinforces the hypothesis that deponent and semi-deponent morphology is a marker for unaccusativity and that the accusative that appears with these verbs is inherent, at least in the case of psych verbs.

Finally, Latin displays two classes of impersonal psych verbs: a well-studied group of five verbs (*paenitet* 'regret/repent', *miseret* 'pity', *piget* 'bother', *pudet* 'be ashamed', *teadet* 'disgust') selecting an accusative experiencer and a genitive stimulus (Traina and Bertotti 1985: 58-60, Fedriani 2012, Cavallo 2014), and second class which is usually treated separately (Traina and Bertotti 1985: 92-94) and includes *interest* (a compound with *esse* 'be') and *refert* (a compound with *fero* 'bring'), both meaning 'care / interest' and selecting a genitive experiencer and clausal structure or a neuter pronoun as stimulus. We consider them in turn.

The first subclass is made of five verbs that have not survived in Italian. *Pudet* in (13a) has been replaced by unaccusative *vergognarsi* (13b) which has no inverted transitive counterpart (13b); *taedet* in (14a) has been replaced by inverted transitive *disgustare* which has a marginal unaccusative counterpart, only in the past tenses:

(13) a. Pudet me$_{<exp>}$ non tui$_{<stim>}$ [...] sed Chrysippi$_{<stim>}$.
shame.3SG me.ACC not you.GEN but Chrysippus.GEN
(Cic. *Div*. 2, 35)

b. Mi vergogno non di te ma di Crisippo.
CL.REFL.1SG shame.1SG not of you but of Crisippus
'I'm ashamed not of you but of Chrysippus.'

c. *Crisippo mi vergogna.

(14) a. Si talium civium$_{<stim>}$ vos iudices$_{<exp>}$ taedet
if such.PL.GEN citizen.PL.GEN you.ACC judges.ACC disgust.3SG
(Cic. *Flacc*. 105)

b. Se questi cittadini$_{<exp>}$ disgustano voi giudici$_{<stim>}$
'If such citizens disgust you judges.'

c. *Vi disgustate di questi cittadini/
CL.ACC.2PL disgust of these citizens /
?Vi siete disgustati di questi cittadini
CL.ACC.2PL are disgusted of these citizens

Of the other three, *paenitet* has shifted to unaccusative *pentirsi* 'regret' with no inverted transitive counterpart **pentire*;[5] *piget* has been replaced by inverted transitive

[5] In late Latin, *peniteo* is attested as having a transitive argument structure: *peniteo errorem* (Hier. *Tract. in Ps.* II, 84, 37, cf. Fedriani 2012). We will return to this in section 4.

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disturbare ‘disturb’; *miseret* has shifted into transitive *commiserare* ‘pity’. The fact that the shift has gone in different directions suggests that there is no real tendency that favors one argument structure with respect to another, as will be further argued in section 3.

The second class of impersonal psych verbs has survived in Italian *importa*, as in (5a) and (8f) above. They display an inverted construction, with respect to the previous impersonal class: genitive is assigned to the Experiencer (15a), while the Stimulus is often clausal, as in both cases in (15):[6]

(15) a. quantum interesset P. Clodi se
how-much interest.SUBJ.3SG P.Clodio.GEN CL.REFL.ACC.3SG
perire [...] cogitabat
die.PRES.INF think.IMPF.3SG
‘[Milo] always thought that Clodius would have liked for him to die.’
(Cic. *Mil*. 55)

b. parvi refert ab te ipso ius
little interest.3SG by you-self.ABL.SG justice.ACC.SG.NT
dici aequabiliter et diligenter
be-administrated.INF.PRES.PASS equitably and diligently.[7]
‘It matters little that you administrate justice with equity and diligence.’
(Cic. *ad.Q. fr*. 1, 1, 20)

To summarize so far, Latin displays the six classes predicted by Belletti and Rizzi (1988) and one more, which is also included in their system, where the experiencer has inherent accusative and the stimulus is not smuggled out of the VP because it is assigned genitive case. We have observed that in some cases, we find the same argument structure we find in Italian e.g. (9) vs. (2)-(3), in other cases we find different argument structure e.g. (13)-(14). Table (16) is to be compared with table. Belletti and Rizzi’s impersonal class (f) corresponds to the inverted impersonal in Latin (16g):

[6] With these verbs the stimulus can be expressed by a neuter pronoun that traditional grammars assume to be accusative. In fact, it could as well be nominative, as neuter does not differentiate between nominative and accusative. If this is correct, we would have an inverted unergative, with a SS. Also note that when the experiencer is a first or second person pronoun, it is a possessive pronoun in the ablative feminine form. We have no space to elaborate on this:

(i) a. Vestra […] hoc maxime interest Abl. E > SS
you.ABL this.ACC.SG.NT mostly interest.PRES.IND.3SG
‘You care most about that.’
(Cic. *Sull*. 79)

b. Quid id refert tua? SS > Abl. E
why it matters you.ABL
‘Why do you care?’
(Plaut. *Cas*. 330)

[7] Note that in (15b) the Experiencer is missing and is understood as human generic.

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(16)	verb class	externalized argument	inherent Case
a.	transitive *timeo*	Experiencer	
b.	inverted transitive *perturbo*	Stimulus	Experiencer (accusative)
c.	unergative *ardeo*	Experiencer	Stimulus (ablative, optional)
d.	unaccusative *vereor, gaudeo, confido, diffido*	Experiencer	Stimulus (different realizations)
e.	inverted unaccusative *placeo*	Stimulus	Experiencer (dative)
f.	impersonal *paenitet, miseret, piget, pudet, teadet,*	0	Experiencer (accusative) – Stimulus (genitive)
g.	inverted impersonal *interest, refert*	0	Experiencer (genitive) Stimulus (optional, often sentential)

It is very difficult to establish dependable diagnostics to support the classification given in (16). Adjectival participles can be of help, even if they could have a life of their own, as already noted by Belletti and Rizzi (1988), and therefore are not completely trustworthy. For example, *ardeo* 'burn, love passionately' is clearly unergative and not transitive or unaccusative, as it is reported in dictionaries to miss the past participle tout court. This suggests that it has no passive or middle (anti-causative) voice. The present participial adjective of unergative *ardeo* in (17a) interestingly contrasts with both unaccusative (semi)-deponent (17b) and inverted (17c) unaccusatives, whose adjectival past participles refer to the SE (17b) and SS (17c) respectively:

(17) a. animus audax, subdolus, [...] ardens in cupiditatibus
soul.NOM daring deceitful burning in passion.ABL.PL
'daring, deceitful character, burning in [as regards] passions'
(Sall. *Catil*. 5)

b. minus veritus navibus, quod ...
less worried.NOM ships.ABL because ...
'less worried of the ships because ...'
(Caes. *Gall*. 5, 9, 1)

c. ita divis est placitum
thus gods.DAT is liked
'Gods like it that way.'
(Plaut. *Amph*. 635)

Other diagnostics are either not applicable or not dependable. For example, *ne*-extraction and auxiliary selection do not apply, given the fact that Latin does not have

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clitics and does not have auxiliaries in the active voice. Inverted orders are certainly found with inverted unaccusatives, parallel to Italian (3) above, as in (18), where the Subject stimulus can be postverbal (18a) and (9c) above, or preverbal (18b); and the relative order of the arguments can be Experiencer > Stimulus, as in (18a) and (9c) above, or Stimulus > Experiencer (18b):

(18) a. Quam multis placet illa [...] auctoritas! Dat.OE > SS
how many.DAT like.3SG that.NOM authority.NOM
(Ps. Quint. *decl.* 17, 8)
'How many like that kind of prestige?'

b. atque Afrae volucres placent palato SS > Dat.OE
and Africa.NOM chicken.NOM like.3PL palate.DAT
'the palate likes African chickens'
(Petron. 93)

However, Latin allows displacements triggered by discourse features (in the left periphery of the clauses as well as a sort of clause internal scrambling) quite freely. Reversed orders with the object preceding the subject are possible with all verbs: not only with inverted transitive (19), but also with direct transitives (20):

(19) a. Sin te auctoritas commovebat.
if-then you.ACC authority.NOM move.IMPERF.IND.3SG
'If then the authority moved you.'
(Cic. *Finibus* 4, 22, 61)

b. commoverunt Vulcanum Veneris verba
move.PERF.IND.3SG Vulcanus.ACC Venus.GEN word.NOM.NT.PL
'Venus' words moved Vulcanus.'
(Donatus, *Interpretationes Virgilianes*, 2, 8)

(20) a. Deos nemo sanus timet
god.ACC.PL.M no one.NOM.SG honest.NOM.SG.M fear.PRES.IND.3SG
'No honest man fears the gods.'
(Sen. *De beneficiis* 4, 19, 1)

b. Eandem meretricem amaverunt duo
same.ACC.SG.F whore.ACC.SG.F loved.PERF.IND.3PL two
iuvenes
youngster.NOM.PL.M
'The two youngsters loved the same whose.'
(Quint. *decl.min.* 344, 12)

More quantitative corpus search is needed to check whether word order tendencies may distinguish inverted classes from direct ones, in other words whether experiencers tend to precede stimuli independently from how they are realized.

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3. Diachronic variation

It is generally accepted in the literature that the different classes of psych verbs assign different degree of "agentivity" to the experiencer or stimulus. There have in fact been semantic and syntactic approaches to bound each class to different featural composition of the two arguments and to explain the loss of certain classes (ultimately limited to the impersonal class (16f)) to a general tendency of modern European languages to align biargumental predicates as direct transitives. In this section, we claim that these motivations have a circular flavor, as the argument goes as follows. Some structures get lost for the general tendency of the language to prefer "transitive" structures; what becomes the subject of the transitive structure is the more "agentive/active" participant, and this may vary in psych verbs; the way participants get interpreted depends on their position in the structure, as the external argument is interpreted as more agentive. This way of arguing cannot decide whether (change in) meaning is the cause of change in argument structure or vice versa. Furthermore, the hypothesis that changes in argument structure are due to the general tendency of modern languages to prefer transitive structures is at odds with the fact that out of sevent classes, six have survived in all Romance languages.

Dahl and Fedriani (2012) study the variation in the argument structure of experiential constructions (bodily sensation, emotion, cognition, volition and perception verbs) in early Indo-European languages (early Vedic, Homeric Greek and early Latin), highlighting five possible combinations. Psych verbs (verbs of emotion, in their terminology) display the highest degree of variation having all combinations available: a nominative experiencer can be combined with an accusative, genitive or dative stimulus; a nominative stimulus can be combined with an accusative or dative experiencer. Dahl and Fedriani do not address impersonal constructions which are not represented in early Indo-European languages except for Latin (also cf. Cuzzolin and Napoli 2008). This fact suggests that their presence in Latin is not a conservative feature and its loss in Italian, as in (13) and (14), cannot be related to an on-going change towards personification and transitivization (*pace* Cavallo 2014 and other literature reported in Fedriani 2012).

The perspective provided by Belletti and Rizzi's analysis (1988, 2012) can easily explain this state of affairs postulating that Latin made use of structural accusative, not only for the OE of inverted transitives (16b), but also for one class of impersonal verbs (16d.i). Inverted transitives as well as inverted unaccusatives would make use of the smuggling mechanism to promote the stimulus to subject position, as in Italian, while for the impersonal verbs would not occur.

The diachronic change occurring between Latin and Italian is therefore transversal to psych verbs. On the one hand, argument structure was specified for inherent cases while in Italian we only have a residue of inherent accusative and prepositional phrases. As exemplified throughout the paper, this did not have many consequences. A second substantial change is the erosion of deponent and semi-deponent morphology which has been replaced by anti-causative *si* in Italian, as convincingly argued by Cennamo (2012). Psych verbs are by no means central to this change, but there are many examples, as in (21) with deponent *laetor* corresponding to Italian *allietarsi/rallegrarsi*:

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(21) a. Laetatur ille adulterio.
rejoices that.NOM.SG.M adultery.ABL
(Sen. *epist*. 97, 11)

b. Lui si allieta / rallegra del suo misfatto
he CL.REFL rejoices of his misdeed
'He is happy about his misdeed.'

Semi-deponent verbs may shift to unaccusative reflexive or transitive. The case of *fido/diffido* 'trust/untrust' is rather telling in Latin they are both semi-deponent, as shown by the absolute participles in (22):

(22) a. Mithridates [..] in regnum remeavit, fisus
Mitridate in kingdom came-back confiding.PAST.PART
Pharasmanis opibus.
Pharasmane.GEN deeds.ABL.PL
'Trusting Pharasmane's help, Mitridatis came back to his reign.'
(Tac. *An*n. 11, 8, 1)

b. Diffisus municipii uoluntati Thermus cohortes
untrusting.PAST.PART town's intension.DAT Thermus cohorts
ex urbe reducit
from city withdraw
(Caes. *civ*. 1.12.2)
'Thermus withdraw the cohorts from the city because he did not trust the intention of its governors.'

Parallel to Latin, Italian *fidarsi* is unaccusative but unlike Latin *diffidare* is unergative, as shown by the different auxiliary selection:

(23) a. Mitridate si è fidato degli aiuti di Farasmane.
Mitridatis CL.REFL is trusted of the help of Farasmane
'Mitridatis trusted the help of Farasmane.'

b. Termus ha diffidato delle loro promesse.
Termus has mistrusted of their promises
'Termus mistrusted their promises.'

To conclude, in this section we have shown that diachronic change regards micro-parameters related to the functional heads of Tense and Case, and nano-parameters affecting individual lexical items. In particular, there is no tendency in the shift from one verb class to another, opposite to what has been hypothesized in previous literature (cf. Fedriani 2012 and Cavallo 2014).

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4. Intra-language variation

In this section, we observe that many psych verbs display more than one argument structure in both languages. The nano-parametric change resulting in class-shift could be due to a general lexical economy that tends to suppress more than one argument structure for the same lexical root, even if in many cases, more than one argument is available.

In Latin, impersonal *pudet* discussed in (13a) above, coexists with inverted transitive *pudeo*, as in (24) which shows again that the order of the two arguments is rather free:

(24) a. non te haec pudent
not you.ACC this.NOM.PL.NT feel ashamed.PRES.IND.3PL
'These things do not make you feel ashamed.'
(Ter. *Adelph.* 754)

b. me autem quid pudeat
me.ACC but what.SG.NT feel ashamed.PRES.SUBJ.3SG
'But what should make me feel ashamed?'
(Cic. *Arch.* 12)

Another member of the lost impersonal class with accusative experiencer and genitive stimulus, *miseret* (25a), may have two more argument structure: as unergative (25b) and unaccusative (25c), with subject experiencer and genitive stimulus:

(25) a. Miseret te aliorum
have pity. PRES.IND.3SG you.ACC other.GEN.PL.M
'You have pity of the others.'
(Plaut. *Trinumn.* 431)

b. miserere [tu] domus
have pity.PRES.IMPERAT.2SG house.GEN.SG.F
labentis
collapse.PART.PRES.GEN.F SG
'Have pity of the collapsing house.'
(Verg. *Aen*. 4, 318, from Fedriani 2014: 270)

c. me rei publicae maxime miseritum est
me.ACC republic.GEN.SG.F especially have pity.PERF.IND.DEP.3SG
'I had pity especially of the republic.'
(Macr. *Sat.* 3, 14, 7)

The three argument structures are all attested in early Latin, as noted by Fedriani (2012).

The inverted transitive/anti-causative alternation, which is present in Italian *preoccupare/ preoccuparsi* 'worry', is also found in Latin, in the parallel *perturbo / perturbor* 'worry'. Note that *pertubetor* in (26b) is not a passive of the inverted transitive *perturbo*, since the stimulus is expressed by a prepositional object *de* + abl that is not the usual form of agent (*ab* + abl) or inanimate agent (simple ablative):

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(26) a. Sed perturbat nos opinionum varietas
but worry.3SG us.ACC opinion.GEN.PL variety.NOM
'But the variety of opinions worries us.'
(Cic. *Leg*. 1, 47)

b. cum T. Annius ipse magis de rei publicae salute quam
because T.Annius self more of republic.GEN welfare.ABL than
de sua perturbetur
of his own worried
'Because T.A. is worried more for the republic welfare that for his own.'
(Cic. *Mil* 1)

It is important to note that many psych verbs derive from or coexist with a non-psychological interpretation. We have already seen some examples, e.g. *ardo* 'burn' is metaphorically psychological but it also has an empirical change of state interpretation. A similar point can be made of *paeniteo*, which can mean 'regret (of doing something wrong)' but also 'expiate (one's guilt)'. In this case the experiencer of the expiation is the subject and the guilt is the direct object. It is probably for this reason that *paeniteo* abundantly appears as a transitive in Fedriani's (2012) search. Notably the transitive structure of *paeniteo* has gone lost in Italian together with the expiation meaning for this verb, showing – once more – that the preference for a transitive structure, if it ever exists, is not so compelling at least for psych verbs.

Intra-language variation is also found in modern Italian. We find many inverted transitive/anti-causative pairs as in the *preoccupare*/*preoccuparsi*. As argued more generally by Folli (2002), this dichotomy cannot be fully derived in syntax, as there are inverted transitives, e.g. *affascinare* 'fascinate', which do not have an unaccusative reflexive counterpart, e.g. **affascinarsi*, and viceversa there are unaccusative reflexives like *fidarsi* 'trust' or *pentirsi* 'regret' that do not have a transitive counterpart **fidare*, **pentire*. Furthermore, there are unaccusatives that have an inverted unaccusative counterpart, e.g. *dispiacersi* 'be sorry' > *dispiacere* 'unlike':

(27) a. Maria si è dispiaciuta della tue scortesia
Maria CL.REFL is disliked of your impoliteness
'Maria was sorry for your unpoliteness.'

b. La tua scortesia è dispiaciuta a Maria
DEF your impoliteness is disliked to Maria
'Maria didn't appreciate your impoliteness.'

There are other dimensions of variation. For example, *interessare* can be found in four different argument structures: as an inverted transitive and its anti-causative unaccusative counterpart (28a, b); but also as an unaccusative with auxiliary essere and inverted construction (28c), and as impersonal with dative experiencer and genitive stimulus (28d):

(28) a. La linguistica interessa Maria e Gianni.
DEF linguistics interests Maria and Gianni
'Linguistiscs interests Maria and Gianni.'

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b. Maria e Gianni si interessano di linguistica/alla linguistica.
Maria and Gianni CL.REFL interest of/to linguistics
'Maria and Gianni are interested in linguistics.'

c. A Maria non sei mai interessato tu.
to Maria not are never interested you.2SG
'Maria has always been only interested in you.'

d. A te non è mai interessato di noi due.
to you not is never interested of us two
'You never cared about the two of us.'

5. Conclusions

This short overview could be corroborated by many more examples; but the point, we hope, is already made: the different possibilities are still compatible with Baker's (1988) Uniformity of Theta Assignment Hypothesis. For psych verbs, the experiencer is hierarchically higher than the stimulus. Apparent evidence to the contrary is due to the fact that the experiencer can be assigned inherent case. When this occurs, the stimulus is either also assigned inherent case (in impersonal structure) or it is smuggled after VP preposing inside the lower phase. As regards Latin, we hope to have shown that despite the fact that no dependable diagnostics are available, comparative evidence with Italian suggest that it already displayed the same mechanisms suggested by Belletti and Rizzi for Italian.

The ultimate purpose of this paper was not to compare this generative approach to other more recent generative or non-generative approaches, but to provide a sound protocol of features and properties for a classification of argument structures in general which can be of use to any further study of the interaction between the selectional properties imposed by the lexicon and their satisfaction in syntax. Psych verbs have provided us the most intricate application domain.

If such a protocol is proven to be adequate, it is conceivable that it can be successfully applied to other verb classes.

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