

Semantics of coordinators in EU languages – the multiple readings of ‘and’, ‘or’, ‘but’

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Abstract

The semantics of coordinators have not been studied in a broader cross-linguistic perspective to date. As they play an important role in the multilingual legal acts of the European Union with its 24 official languages and are frequently at issue in legal interpretation at the Court of Justice of the EU, the present article provides a first overview of the multiple readings of ‘and’, ‘or’ and ‘but’ in Germanic and Romance languages with outlooks on Finnish and Polish. It is shown within a framework of lexical semantics that language makes finer-grained distinctions than mathematical set theory and logic and that context contributes to the readings in a decisive way. The grid offered can be used to describe and compare the readings of connectors of further languages. The distinctions made allow a more pertinent analysis and legal comparison of the meaning of legal texts and beyond.

Keywords

Coordination, EU official languages, conjunctive, disjunctive, adversative

1. Introduction: Coordinators

Among the cases brought before the Court of Justice of the European Union (CJEU), preliminary ruling procedures centering around divergent wordings in the different language versions of legal acts of the EU are of special linguistic interest. Such cases feature several recurrent types of issues within the realms of terminology, semantics and syntax. A prominent linguistic question concerns the semantics of coordinators.

Whereas formal and structural characteristics of coordination have been treated to a greater extent in linguistic literature, a cross-linguistic systematic classification of the semantics is still wanting. Some semantic models describe coordination in terms of logic or truth values (e.g., Lang, 1991; Zamparelli, 2011; Kroeger, 2018; Huddleston et al., 2002, p. 1296), others analyse corpora (Breindl, 2014b; Waßner, 2014; Ariel & Mauri, 2018). Legal-linguistic approaches, such as Adams and Kaye (2006) and the *Joint Handbook* (2018, D.4.4.1) of the European Parliament, the Council of the European Union and the European Commission distinguish between “cumulative” and “alternative” uses of the coordinators ‘and’ and ‘or’. Moreover, ‘and’ or ‘or’ may be interpreted by legal professionals in a way which does not correspond to the general language usage and understanding of the forms (cf. Visconti, 2018).

Therefore, it is shown here that

- (i) coordinators do not behave alike cross-linguistically,
- (ii) context plays an important role in the readings of coordinators,
- (iii) the readings of coordinators are very variegated and
- (iv) coordinators cannot be adequately described by logical truth values and mathematical set theory **alone**, as language is finer-grained and more complex than logic (cf. Dik, 1968, ch. 12.4; Waßner, 2014, p. 591; Ariel & Mauri, 2018).

In this vein, the readings of coordinators will be designated by terms from set theory where possible and (non-)parallels to logic will be pointed out.

This description lays the basis for a cross-linguistic comparison of the official languages of the European Union (OLEU, see appendix) and beyond. In the context of EU institutions, awareness of the correspondences and disparateness of coordinators is of help in drafting European legal acts in order to avoid unequal law in the Member States, and in legal interpretation. It provides the linguistic concepts and terminology to describe a point at issue when the wording of different language versions is compared.

The presentation attempts the balancing act of addressing lawyer-linguists and legal professionals as much as linguists. It should not be forgotten, however, that linguistics is a science of its own, complete with its own mode of thought, methods, concepts, classifications and terminology, which makes it difficult to follow a linguistic analysis even of a familiar language without training. Plain language, on the other hand, does not provide the necessary terminology.

Coordinators comprise coordinating conjunctions (such as *and*), adverbs or particles (such as *moreover*, *plus*), a pair of correlative conjunctions (such as *both – and*) or other means (such as Latin clitic *que*). They are linguistic means which conjoin equally-ranked (same-level) structures, be they single words, phrases or clauses from the point of view of linguistic form. From the point of view of syntactic function, the structures which are conjoined may be nominal or verbal modifiers or complements, heads of noun phrases, of verb phrases, of adpositional phrases, of adjective or of adverb phrases.

A structure conjoined to another one is called a “connect” here (cf. Breindl, 2014a; regardless of its form), the conjoining of connects is called “nexus” (Van Valin & LaPolla, 1997, ch. 8.3). Under coordination, no connect becomes a part of the other, and their nexus forms a construction of the same type and rank as the single connects (disregarding ellipsis; cf. Lehmann, 2011, p. 182) without changing the semantic relations to surrounding elements (Haspelmath, 2007, p. 1). Coordinators are marked off from subordinators, which connect items of unequal structural rank. Haspelmath (2007, pp. 5f, 45-49) and Lehmann (2011) show some linguistic tests for identifying coordination in distinction to subordination.

Languages differ in

- (i) their inventories of coordinators,
- (ii) the distribution and readings of each coordinator,
- (iii) which structural entities may be coordinated,
- (iv) their clause structure connected to nexus,
- (v) including grammatical agreement and
- (vi) conditions for ellipsis, i.e., leaving out of parts of a connect which occur in another connect as well.

Maltese, for instance, normally repeats the verb when subject and object are different across the coordinated clauses (Haspelmath, 2007, p. 42).

Structural descriptions of coordination treating these issues in detail in the languages cited are, for instance, Dik (1968); Haspelmath (2004, 2007); Zamparelli (2011); Breindl (2014a, b); Waßner (2014); Hartmann (2015); Oirsouw (1993); Grevisse and Goosse (2016, ch. IV, IX); Riegel *et al.* (2014, ch. XIX); Real Academia Española (2013); Quirk *et al.* (2008, ch. 13); Huddleston *et al.* (2002, ch. 15).

Structural prerequisites of different languages may lead to pseudo-divergences (in the sense of Burr, 2013, 6.1.2, 6.1.3) in the wording of legal texts. As it is content which has to be convergent across the OLEU versions, not syntactic structure, the present focus will be on the semantics of coordination.

Generally, four main semantic types of coordination are distinguished: conjunctive coordination (‘and’), disjunctive coordination (‘or’), adversative coordination (‘but’) and causal coordination (‘for’); minor types are consecutive coordination (cf. French *donc*) or explicative coordination (e.g., English *i.e.*; Grevisse & Goosse, 2016, p. 340f; Haspelmath, 2007, p. 48). Conjunctive coordination is the most frequent type (Haspelmath, 2007, p. 4); adversative and causal relations may also be encoded by subordination.

Besides a coordinator, conjunctive coordination may alternatively use a comitative marker (marking accompaniment, such as a preposition meaning ‘with’). Stassen (2000, p. 37) distinguishes AND-languages, which use a conjunctive coordinator, and WITH-languages, which use an original comitative marker as coordinator: whereas most European languages belong to the AND-type, Slavic languages use both AND and WITH.

The present presentation will focus on conjunctive, disjunctive and adversative coordination because of their relevance for legal texts.

The notation ‘and’, ‘or’, ‘but’ is chosen here for translational equivalents (in the sense of general linguistics, cf. Koller, 2004, p. 344) of conjunctive, disjunctive and adversative coordinators in any language. The idea of “translational equivalent” does not imply a direction, i.e., it does **not** take one language as the (primary) source, measure or blueprint in relation to others, but rather describes an equally-ranked bilateral meaning relation of expressions of any two languages under comparison. This means that the term translational equivalent may legitimately be used

for the description of legal acts of the European Union. These texts are equally authoritative in all their language versions, i.e., no version counts as the source text (*Treaty on European Union*, Art. 55).

When several readings for one formal item are listed here, this does not mean that this item is polysemous. It is employed in a wide range of contexts or is vague, with context imposing an interpretation on it.

The functions of single coordinators can, of course, be compared across languages, but they cannot be called polysemous **across** languages (polysemy can hold only **within** a single language), as any one form only belongs to its own language system and each system is distinct. Sections 2, 3 and 4 present formal and functional characteristics of conjunctive, disjunctive and adversative coordination, respectively; section 5 concludes.

2. Conjunctive coordination

Different readings of conjunctive coordination have not been described in greater detail to date. Quirk *et al.* (2008, pp. 953-958) distinguish a combinatory reading with joint, mutual and unitary participation subtypes and a segregatory reading; Huddleston *et al.* make a difference between distributive, joint, discrete set coordination and asymmetric coordination (2002, pp. 1281-1285, 1299-1306); Breindl (2014b) discusses intensional and extensional ‘and’. Further readings are described as well without an overall classification. Adams and Kaye (2006, pp. 1169, 1171f) distinguish members of a group “acting, or being acted on individually or collectively” and in the former case, in unison or not.

2.1. Formal characteristics

Conjunctive coordination is ‘and’-coordination in its widest sense, a relation of union of two or more connects. It can be asyndetic (without an overt marker of coordination, as in *Mary, Anne, Peter; veni vidi vici*) or syndetic (with a marker of coordination, as in *Paul and Harry*). Both forms are usually combined in the case of more than two connects, e.g., *Peter, Paul and Harry*, but Ballard (1995, p. 248f) shows that in the nexus of more than two connects, English may have *and* with each non-first connect where French has asyndesis. Also, French prefers the use of subordination with a *gérondif*, a participle or a relative clause to coordination with *et* (Ballard, 1995, pp. 242f, 252ff).

Among the formal characteristics, three points which differ most between OLEU shall be mentioned in passing:

firstly, structurally different connects, for instance an adjective and a relative clause or a prepositional phrase as in (1) (cf. e.g., Grevisse & Goosse, 2016, p. 329; Quirk *et al.*, 2008, pp. 967-984).

(1) *augmentation successive et par degrés*

secondly, nexus of morphemes, to different degrees in different languages (Quirk *et al.*, 2008, p. 970f; Grevisse & Goosse, 2016, p. 328f; Real Academia Española, 2013, p. 427).

- (2) a. *be- und entladen* ‘load and unload’
 b. *his or herself*
 c. *pour la trois ou quatrième fois* ‘for the third or fourth time’
 d. *clara y distintamente* ‘clearly and distinctly’

Thirdly, an important difference and source of misunderstandings is the grammatically fixed inclusory use of non-singular pronouns under coordination (cf. Haspelmath, 2007, p. 33f; Bhat, 2004; Grevisse & Goosse, 2016, p. 325f), found in Romance and Slavic languages. Inclusory

means that the pronoun refers to both (or all) coordinated participants of a state of affairs, but one (group) of these participants is, in addition, encoded overtly in the clause, usually in a comitative phrase. Like this, both the pronoun and the phrase refer to the same referent in a twofold way and the overt phrase names a proper subset of the referents of the pronoun. Thus, only two people are involved in (3), not at least three as it might seem to speakers of languages which do not feature the inclusory use of pronouns (such as English or German).

- (3) a. *Con Ana fuimos al cine.* = *Ana y yo*
‘Ana and I have been to the cinema.’
- b. *Nous l’avons fait avec ma cousine.*
‘My cousin and I did it.’
- c. Polish
My z Mirki-em poszliś-my na plażę.
we with Mirek-INS went-1pm to beach-ACC
‘Mirek and I went to the beach.’

2.2. Functional characteristics

Conjunctive coordinators have a range of readings, in part induced by the context.

- (i) ‘And’ coordination creates an intersecting set of properties or a unitary entity composed of two or more entities. In (4a, b), for instance, the expression denotes the friends which Peter and Paul have in common; in (4c, d), the clause deals with the book of a couple and one letter to a couple, respectively, in (4e) the two men worked together as a team. (4f) refers to sandwiches with both toppings on them, (4g) to two-coloured cabbage (otherwise the copula should be in the plural *are*) and (4h), in this reading, refers to temporary employees who work part-time. The intersecting reading is possible if it is not blocked by the context, i.e., by the lexical semantics of the connects.
- (4) (Haspelmath, 2007, p. 14; Quirk *et al.*, 2008, pp. 957-962; Adams & Kaye, 2006, p. 1177f)
- a. *die Freunde von Peter und Paul*
‘the friends of (shared by) Peter and Paul’
- b. *les amis de Pierre et (de) Paul*
- c. *J’ai emprunté ce livre à Jean et à Marie.*
- d. *I wrote a letter to John and Mary.*
- e. *Jean et Paul ont déplacé mon coffre-fort.*
- f. *salmon and cucumber sandwiches*
- g. *red and white cabbage is a useful ingredient for a salad*
- h. *temporary and part-time employees*
- i. *shelves for books on environment and climate*
- j. *a dishonest, lazy student*
- k. *the buses for the Houses of Parliament and Westminster Abbey*

When the coordinated connects are the complement of one preposition in German and in English, the preposition need not be repeated before the second connect (such as *von* before *Paul* in (4a) and *to* before *Mary* in (4d); cf. Quirk *et al.*, 2008, pp. 960-962). Besides a preposition, the two connects may share one (in)definite article. Omission of prepositions and articles is very restricted in French: (4b) is grammatical without *de* before *Paul* (Riegel *et al.*, 2014, p. 881), but (4c) is ungrammatical without *à* before *Marie* (Haspelmath, 2007, p. 14).

When adjectival modifiers are coordinated as in (4j), an asyndetic coordination is preferred. In the EU jurisprudential perspective, this means that leaving out an article or preposition in this context in one language version but not in others does not create a divergence in meaning but is due to grammatical constraints. A legal interpretation according to the wording is therefore possible.

Intersecting set coordination cannot be paraphrased with two clauses. However, nearly all examples in (4) are ambiguous, as will be taken up below. (4k), for instance, would be non-ambiguous if *bus* was in the singular; as it is, there could be one bus route to two places or two bus routes to one of the places each.

(ii) A second reading of ‘and’ is set union. There are two subtypes of set unions:

(ii-a) including any intersecting set, as in

- (5) a. *die Freunde von Peter und von Paul*
‘the friends of Peter and of Paul (together)’
- b. *die roten und die gestreiften Hemden*
‘the red and the striped shirts’
- c. *old and valuable books*
- d. *temporary and part-time employees*
- e. *shelves for books on environment and climate*

In this case, the two connects refer to two sets of properties or entities which are merged into one. They may have an intersecting set which forms part of the cumulation but need not. In (5a), the coordination joins the friends of Peter and the friends of Paul as different sets of people but does not exclude any people who might be friends of both men; (5b) may include red shirts with stripes (less so shirts with red stripes which would be *rotgestreift*). Note the “extra” preposition *von* ‘of’ before *Paul* and the article before *gestreiften* ‘striped’ in (5b). With, typically, prepositions and articles before both connects, German makes a structural difference between intersecting *und* and set union *und*.

(ii-b) without an intersecting set: disjunct set union

On the other hand, an intersecting set may be excluded, as in (6), where the coordination is a ‘plus’ relation of two discrete sets. Disjunct set union resembles a symmetrical difference in set theory. The exclusion of the intersecting set usually falls out from the semantics of the connects, i.e., from context, e.g., incompatibles in (6a). Context plays an important role in distinguishing the two set union types (cf. also Adams & Kaye, 2006, pp. 1172, 1178; Quirk *et al.*, 2008, p. 960).

- (6) a. *old and new houses*
- b. *retired people and football professionals*
- c. *I wrote a letter to John and to Mary.*
- d. *Je vais à Paris et Rome.*
- e. *temporary and part-time employees*
- f. *shelves for books on environment and climate*

As retired people are usually not football professionals, the connects in (6b) do not have an intersecting set. (6c), with the preposition marked before both connects, refers to two separate letters. Thus, English as well as German allows a disambiguation of intersecting ‘and’ and set union ‘and’. Whereas the preposition *à* before *Marie* in (4c) is obligatory in French, it can be left out before *Rome* in (6d). Haspelmath explains this with a “datival” sense in (4c) and an “allative” sense in (6d) (2007, p. 14). In addition, *Marie* is animate whereas *Rome* is

inanimate. (6e, f) stand for the second, non-intersecting reading of ambiguous (4h, i). In Polish, for disjunct set union the coordinator *a* is used (rather than conjunctive *i* ‘and’) which conjoins states of affairs in opposition (cf. Engel, 1999, pp. 1149, 1165) and therefore is usually glossed ‘but’.

A special case of disjunct union constitute dyads or binominals (cf. Haspelmath, 2007, p. 23f), i.e., coordination of closely related referents (which is frequent in English; Heath, 2004, p. 80), such as

- (7) a. *Vater und Mutter / father and mother, Tisch und Stuhl / table and chair, Treu und Glauben* ‘bona fide’
b. *the house and garden*

In German, the articles in dyads are omitted, in English, they may share one article (cf. Haspelmath, 2007, p. 24).

The non-intersecting set union reading also obtains in copulative compound nouns (and number terms) such as

- (8) a. *nasskalt, Bettcouch, gelbrote Karte*
‘wet and cold’, ‘daybed’, ‘caution and dismissal’
b. *schwarz-rot-goldene Fahne* ‘black-red-golden flag’
c. *Baden-Württemberg* (place name)
d. *enseignante-chercheuse, sourd-muet, papa-maman, bleu blanc rouge, vingt-et-un*

Set union ‘and’ is usually thought to express an exhaustive list in OLEU (e.g., Real Academia Española, 2013, p. 429; Huddleston *et al.*, 2002, p. 1293). However, exhaustivity of the enumeration is not necessarily the case and may be cancelled (cf. Mattissen, 2019), as in

- (9) *Da lagen rote und blaue und grüne, alle Farben des Regenbogens.*
Lit. ‘There were red ones and blue ones and green ones, of all colours of the rainbow.’

(iii) The third conjunctive reading brings together two autonomous sets without a unification. In this case, both connects are interpreted as acting separately in the same way rather than as a team or jointly (e.g., (10a, b)). This discreteness of sets in coordination has no analogue in logic or mathematics.

This reading is usually encoded by a correlative pair of coordinators, such as *sowohl – als auch, both – and, et – et* (10c); for lists see Haspelmath, 2007, pp. 16, 17f). The autonomous reading is obvious from the minimal pair in (10d) from Quirk *et al.* (2008, pp. 936, 955f): The autonomous conjunction reads as John and Mary having gotten divorced from their respective spouses, with a simple *and*, however, they got divorced from each other (reciprocal use, see (vi)).

- (10) a. *Sowohl Regierung wie Opposition haben dem Vorschlag zugestimmt.*
‘Both government and opposition consented to the proposal.’
b. *John and Mary have won a prize (each).*
c. *Et Jean et Marie l’ont dit.*
d. *Both John and Mary got divorced.* vs. *John and Mary got divorced.*
e. *shelves for books on environment and climate*

That example (10e) turns up in all three conjunctive readings shows its multiple ambiguity: books dealing with both climate and environment on more than one shelf (5e), books on climate and books on environment together on more than one shelf (6f), and at least one shelf of books on environment and at least another one for books on climate separately (10e) can be expressed with the same form.

- (iv) With at least two conjoined coordinations or with a plural or collective expression, an associative-correlative reading is possible, as in
- (11) (Adams & Kaye, 2006, p. 1175; Quirk *et al.*, 2008, p. 956; Grevisse & Goosse, 2016, p. 324)
- a. *Kim and Pat are studying law and economics.*
 - b. *John and Mary visited their uncles.*
 - c. *Pierre, Jeanne et Louis ont respectivement 15, 12 et 8 ans.*

Each one of the connects of the first coordination is correlated with one of the connects of the second one.

The clause in (11a) is ambiguous, however, between ‘Kim is studying law and Pat economics’ (the associative-correlative reading) and both studying both subjects (set union reading). (11b) even has three readings: John and Mary may visit their respective uncles (associative-correlative), the uncles they share (intersecting) or both visit the uncles of one of them and also the uncles of the other one (set union). For further details, see Adams and Kaye (2006, pp. 1169-1172) who specify which readings arise from the influence of plural nouns.

2.3. Context-induced readings

- (v) The coordinator ‘and’ can be employed in further relations, in which its reading is context-induced, i.e., forced upon it by sense relations of the lexemes in the connects.
- (v-a) In twin words or tautology two or more connects which are full, partial or near synonyms are coordinated, e.g.,
- (12) a. *hüpfen und springen, Herr und Meister, angst und bang*
‘hop and jump’, ‘lord and master’, ‘scared and frightened’
- b. *last will and testament, give and bequeath, cease and desist, null and void, from now and henceforth*
 - c. *les us et coutumes*

Example (12b) shows this use as a style figure of English legal language, frequently with an inherited and a Latinate word side by side. In the jurisprudential perspective, a translation of an English doublet by a single lexeme in another language does not constitute a divergence in meaning.

- (v-b) A reduplication constitutes a true tautology, used for intensification (13a), iterative or continuative ((13b), Haspelmath, 2007, p. 25; Quirk *et al.*, 2008, p. 980), e.g.,
- (13) a. *it grew bigger and bigger*
- b. *he talked and talked and talked*
- (v-c) On the other hand, two non-synonymous expressions may have an identical referent and describe it from two or more perspectives. This coreference can be identified by a singular form of the predicate, as in
- (14) a. *John’s mother and Mary’s aunt is outside.*
- b. *el pintor y poeta N. N.*
- (v-d) When both connects are true but not at the same time or with a temporal offset (i.e., an asynchronous relation), the coordinator gets a sequential reading, as in (15a), an iterative-of-alternation reading (15b) or a causal reading (15c). In the latter case, the connects cannot change their order (cf. Quirk *et al.*, 2008, pp. 930f, 967).
- (15) a. *Sie spielte Flöte und sang ein Lied.*
‘She played the flute and sang a song.’
- b. *He lay there opening and shutting his eyes.*

c. *He heard an explosion and phoned the police.*

A sequential reading depends on the semantics of verbal lexemes as well as on the grammatical aspect (perfective or imperfective) or tense of the verb forms, compare

(16) a. *L'inconnu traversa la place en courant, monta en voiture et démarra.*

b. *Il faisait soleil et les oiseaux chantaient.*

The sequential reading in (16a) arises from the *passé simple* (perfective past tense of the verb), the simultaneous one in (16b) from the *imparfait* (imperfective past tense).

(v-e) With antonymous sense relations between lexemes in the connects, a contrastive reading results (as in (17); cf. also Grevisse & Goosse, 2016, p. 1515; Quirk *et al.*, 2008, p. 931).

(17) a. *Dieser Tee ist zu heiß und der da zu kalt.*

‘this tea is too hot and that one too cold’

b. *Gestern schien die Sonne und heute regnet es.*

‘yesterday, the sun was shining and today, it is raining’

c. *In the courtyard, men were loading and unloading the trucks.*

d. *Nous t'hébergeons et tu nous voles.*

Polish employs opposition-marking *a* in this context, not conjunctive *i* ‘and’.

(vi) With verbs signalling that several agents act on each other as patients or beneficiaries or signalling a symmetry, ‘and’ has a reciprocal reading (“mutual participation” in Quirk *et al.*, 2008, p. 954f; Grevisse & Goosse, 2016, p. 323). In this case, coordination cannot be paraphrased by two clauses (cf. Quirk *et al.*, 2008, p. 943).

(18) a. *John and Mary got married. ≠ John got married and Mary got married.*

b. *John and Mary played tennis (against each other).*

c. *Mary and Anne look alike / are sisters.*

d. *Jean et Jeanne forment un couple uni.*

2.4. Further uses of ‘and’

Up to this point, conjunctive coordination has been regarded from the onomasiological (content or function) point of view. Switching to the semasiological (expression) perspective, the linguistic devices used for conjoining two items or sets can be used as less specified connectors for other relations, as well. In these contexts, structural patterns differ across languages and a uniform use of coordinators is striking.

(vii) The implicational ‘and’ introduces a consequence (similar to a logical condition, cf. Döhmman, 1974, p. 39f). The first connect serves as the protasis (condition), the second one as the apodosis (consequence). Implicational ‘and’ is used for the consequence of a fulfilled condition in the protasis, as in (19).

(19) a. *Eine Unachtsamkeit und du liegst im Graben.*

‘a moment of distraction and you will run into the ditch’

b. *Lies den Artikel und du wirst lachen.*

‘read the article and you will laugh’

c. *Make a move and I'll shoot.*

d. *One more word from you and I'll scream.*

In (19a, d), *und / and* conjoin two connects of different structural forms, viz. a noun phrase and a clause, pointing to the special use of the conjunction.

Logical implication has the following truth table:

p	q	$p \rightarrow q$	1 = true
1	1	1	0 = false
1	0	0	
0	1	1	
0	0	1	

Table 1. Truth values for logical conditional

Implication signalled by ‘and’ could be described by the logical condition, with the exception of the constellation in line three, which should have the value false for implicational ‘and’.

(viii) The expletive ‘and’ (Quirk *et al.*, 2008, p. 978f; Grevisse & Goosse, 2016, p. 341) conjoins two pseudo-connects which are a light verb (e.g., ambulative) and its lexical verb, or a noun/adjective and its modifier, e.g., in

- (20) a. *try and do*
 b. *sit and talk*
 c. *nice and warm*
 d. *rempli de voix et de prières*
 e. *va et fais un tour à la cuisine*

The relation between the pseudo-connects is hierarchical, a coordinator is therefore structurally “out of place”. Not unexpectedly, such non-equally-ranked uses of a coordinator are language-specific: Ballard (1995, pp. 237, 258f) discusses the translational possibilities of *and* in hierarchical relations into French. Finally, conjunctive coordinators are used in discourse, pragmatic and metalinguistic functions. Due to limitations of space this point cannot be elaborated upon further here.

The differentiated uses of conjunctive coordinators as presented above cannot be aligned with the logical AND or with mathematical set theory alone because

- (i) the latter do not allow as fine-grained distinctions,
 (ii) are only applicable in very few contexts and
 (iii) do not take context into account (cf. Dik, 1968, ch. 12.4).

In addition, negated connects may in some languages be conjoined with ‘and’. Compare the examples in (22) corresponding to the four lines of truth table 2 (the starred expression is ungrammatical):

- (22) a. *Peter und Paul sind da.* ‘Peter and Paul are there.’
 b. *Peter und nicht Paul ist da.* (cf. *Peter, aber nicht Paul, ist da.* ‘Peter, but not Paul is there.’)
 c. **Nicht Peter und Paul ist da.* (*Nicht Peter, aber Paul ist da.*)
 d. *Nicht Peter und nicht Paul ist/sind da.* lit. ‘Not Peter and not Paul is/are there.’

P	q	$p \wedge q$	1 = true
1	1	1	0 = false
1	0	0	
0	1	0	
0	0	0	

Table 2. Truth values for logical AND

When, applied to language, the logical truth table is read in the way that ‘and’ can only be used when both connects are asserted, this is not the case: in German, *und* can be used for three of the four logical possibilities. Note number agreement (singular or plural) on the verb: plural is obligatory in the logically true cases only.

3. Disjunctive coordination

Disjunctive coordination is ‘or’ coordination in its widest sense, a relation of an alternative of two or more connects. It can be asyndetic as in *Peter, Paul, John* or syndetic as in *Peter or John*. Both forms are usually combined in the case of more than two connects, e.g., in *Peter, Paul or Harry*. As with conjunctive coordination, different kinds of structural entities down to morphemes may be conjoined disjunctively (such as German *be- [beladen] oder entladen* ‘load or unload’).

It is common in the OLEU to use the same coordinators for affirmative (positive) and negative disjunction. Languages may have more than one word for ‘or’, however, whose distributions are determined by the illocutionary, modal, metalinguistic, exhaustivity or inclusive/exclusive context or reading, as seems to be the case in Polish (for examples see sections 3.1 and 3.2). Finnish, for instance, stands out by way of having a special interrogative exhaustive disjunctive coordinator ((23b), Kotus, 2004, <http://kaino.kotus.fi/visk/sisallys.php?p=1098>):

(23) Finnish (Haspelmath, 2007, p. 25)

- a. *anna-n sinu-lle kirja-n tai albumi-n*
give-1s 2s-ALL book-ACC or albumi-ACC
‘I’ll give you a book or an album.’
- b. *mene-t-kö teatteri-in vai lepo-puisto-on*
go-2s-Q theatre-ILL or rest-garden-ILL
‘Are you going to a theatre or to a park?’

3.1. Functional characteristics

As with conjunctive coordination, grammatical disjunction covers more readings than the logical operator OR (cf. Waßner, 2014, pp. 591, 613), whose truth values are shown in Table 3.

P	Q	$p \vee q$	1 = true
1	1	1	0 = false
1	0	1	
0	1	1	
0	0	0	

Table 3. Truth values for logical OR

(i) The first disjunctive relation is inclusive-disjunctive synchronous coordination. Semantically, it corresponds to “adjunction” in the mathematical-logical sense and to the logical OR. This means that the relation is true if one of its connects is true or the other one is true or both of them at the same time, i.e., at least one.

(24) *Serviere einfach Rohkost oder Käsestangen.*
‘Simply serve assorted raw vegetables or cheese snack sticks’

In the situation referred to by (24), the speaker would be content with *Rohkost* or with *Käsestangen* or with both on the table at the same time. The inclusive-disjunctive reading is sometimes encoded by ‘and/or’ in legal texts (cf. *Joint Handbook*, 2018, D.4.4.1, D.4.4.2), even if others (cf. discussion by Adams & Kaye, 2006, p. 1189f; *Handbuch der Rechtsförmlichkeit* of Bundesministerium der Justiz, 2008, pt. 93) dissuade its use as being unclear.

Polish uses *lub* in inclusive and also non-exhaustive contexts (cf. Engel, 1999, p. 1160). In European Union legal texts, *lub* is by far the most frequent translational equivalent of ‘or’.

(ii) The second reading is inclusive-disjunctive and asynchronous, which means that one or the other connect or both can be true, but not at the same time but with a temporal offset or in alternation (a temporal overlap is not excluded, however).

(25) *Ich war nie allein, Peter oder Paul waren (immer) da.* (mal Peter, mal Paul)
‘I have never been alone, Peter or Paul were (always) there.’
(sometimes Peter, sometimes Paul)

The coordinator in combination with plural verbal agreement signals this reading in German. If the verb is singular, the reading is exclusive-disjunctive (see (iii)). If the coordinator were *und* in this context, both men would have been present at the same time.

Polish can render this reading by *bądź* (cf. Engel, 1999, p. 1161).

(iii) The third possible reading is exclusive-disjunctive, which in its semantics corresponds to the logical XOR (Table 4). This means the relation is true if one of its connects is true, or the other, but not if both of them or none of them is true, i.e., at least and at most one. This relation is expressed by a single (26a) or by correlative coordinators, such as *entweder – oder*, *either – or*, *ou (bien) – ou (bien)*, *o – o*, *sea – sea* and called “alternative list” in jurisprudential usage (*Joint Handbook*, 2018, D.4.4.1).

p	q	$p \oplus q$	1 = true
1	1	0	0 = false
1	0	1	
0	1	1	
0	0	0	

Table 4. Truth values for logical XOR

- (26) a. *Peter oder Paul war da, ich kann die Zwillinge nicht unterscheiden.*
‘Peter or Paul was there, I can’t tell the twins apart’
b. *Marie est ou à Paris ou à Rome ou à Londres.*
c. *online or offline*

For example (26b) the interpretation must be exclusive, as a person cannot be in different places at the same time. In (26c) two complements are coordinated. As complements are mutually exclusive and therefore true alternatives, their disjunctive conjoining can only be

read exclusively. This shows that context plays an important role in the distinction of inclusive and exclusive readings, but due to the existence of ambiguous examples cannot be held responsible for the reading alone.

(26a) shows a structural difference between inclusive and exclusive disjunction in German: whereas the verb in the inclusive case (25) is in the plural, in the exclusive case it is in the singular, we thus get a minimal pair. This use of singular and plural harmonises with the fact that in the asynchronous inclusive case there is a plurality of actors (active participants), whereas in the exclusive case there is only one actor. This is also true for Spanish (Real Academia Española, 2013, p. 418). Polish uses *albo* or the correlative *albo – albo* in exclusive and exhaustive contexts (cf. Engel, 1999, p. 1159).

(iv) Disjunction of two or – usually – more connects can have a non-exhaustive (open) list reading (which can be reinforced by *for instance, e.g., oder andere (o.a.), zum Beispiel (z.B.), wie, etc.*), as in

- (27) a. *rot oder blau oder gelb oder oder*
Lit. ‘red or blue or yellow or or’
- b. *Waffen, z.B. Feuer-, Stich- oder ABC-Waffen*
 ‘weapons, e.g., firearms, pointed or ABC weapons’

Non-exhaustive lists leave the enumeration open for further appropriate properties or entities which could fit in and can be inclusive or exclusive.

(v) Reading number five is approximation, which corresponds to logical NAND (also called exclusion). This means that the relation is true if one of its connects or the other is true or none of them, but not both, i.e., at most one is true, as shown in Table.5.

- (28) a. *Zehn, (oder) elf Leute waren im Raum.*
 ‘ten (or) eleven people were in the room’
- b. *ten or twenty*
- c. *Tenía veinte o veinticinco años.*
 ‘s/he was twenty or twenty-five years old’

The utterances are true even if there were, for instance, nine or twelve people present in (28a). However, in distinction to logic, the choice of alternatives is restricted.

p	q	p q	1 = true 0 = false
1	1	0	
1	0	1	
0	1	1	
0	0	1	

Table 5. Truth values for logical NAND

(vi) The dissociative-correlative reading is expressed by ‘or’ or ‘respectively’ when the connects of disjunctive coordinations are set in relation to each other. This relation does not correspond to an operator in mathematical logic.

- (29) a. *Jeder bekommt 15 Hütchen, die mit einem roten, gelben oder blauen Punkt beklebt sind.*
 ‘Everybody gets 15 meeples, which bear a red, yellow or blue dot.’

b. *Der Antrag wird schriftlich oder mündlich gestellt, eine Antwort ergeht schriftlich bzw. mündlich.*

‘The application is submitted in writing or by word of mouth, a reply issued in writing or by word of mouth respectively.’

c. *Recently, John or Harry have come by car or bus.*

Example (29a) expresses that one set of 15 meeples has a red dot on each meeple, one set is marked with yellow dots and so on. However, (29a) can also be interpreted in the way that among each set of 15 meeples there are meeples with a red dot, meeples with a yellow dot as well as meeples with a blue dot on them. In any case, each meeple has only one dot on it. If *oder* is exchanged by *und*, each meeple carries three dots (red, yellow and blue).

A case heard by the CJEU illustrates the disjunctive-correlative use of *oder* in the German version of an EU legal act, where it causes a pseudo-divergence:

(30) Regulation (EC) No.207/2009, art. 47.para. 3; cf. C-207/15 P

a. *Failing this, **the request may be submitted and the fees paid** within a further period of six months ...*

b. *À défaut, **la demande peut encore être présentée et les taxes acquittées** dans un délai supplémentaire de six mois ...*

c. ***Der Antrag und die Gebühren können** noch innerhalb einer Nachfrist von sechs Monaten [...] **eingereicht oder gezahlt werden**, ...*

Whereas the English and French versions place each subject and corresponding predicate next to each other, viz. *the request may be submitted, the fees [may be] paid*, and have the adverbial shared by both clauses, viz. *within a further period of six months [...]* follow their coordination, German makes use of its syntactic bracket position and places the shared adverbial between the coordinated subjects *der Antrag und die Gebühren* plus their shared finite modal verb *können* in the left bracket position, and the respective lexical verbs *eingereicht oder gezahlt werden* in the right bracket position. If *oder* is read as “respectively”, no divergence arises between the versions: “eingereicht [werden]” is the predicate to “Antrag”, “gezahlt werden” the predicate to “Gebühren”. The sentence conforms to German syntax, but is awkward in view of the use of *oder*. In a later correction ((EU) 2015/2424) of the regulation the wording was changed accordingly from *oder* ‘or’ to *bzw.* ‘respectively’.

3.2. Further uses of ‘or’

Switching to the semasiological perspective, the linguistic devices used for disjunctive coordination can be used as less specific connectors for other relations, as well.

(vii) There are several metalinguistic uses of ‘or’-coordinators.

(vii-a) metalinguistic-restrictive “corrective” ‘or’ (*oder vielmehr, es sei denn, unless, ou plutôt, sauf si, à moins que*)

(31) a. *Bring Deinen Partner mit, oder hast du keinen?*
‘Bring your partner, or don’t you have one?’

b. *They are enjoying themselves, or (rather) they appear to.*

Polish employs *czy* in this function, which is otherwise obligatory in questions as ‘whether’ and occurs in modal contexts (cf. Engel, 1999, p. 1161).

(vii-b) metalinguistic-substitutive ‘or’ (paraphrasable in German by *oder auch, anders gesagt*), used for an alternation of synonyms or two different expressions for one referent (a *de facto* tautology).

- (32) a. *ein Computer oder Rechner* ‘a computer or calculator’
 b. *la girolle ou chanterelle* (Cantharellus cibarius)
 c. *el colibrí o pájaro mosca* ‘the colibri or hummingbird’
 d. *in segnali numerici ovvero in segnali digitali* ‘in digital signals’

Italian (*ovvero*), Romanian (*sau*) and Finnish (*eli*) have at their disposal a coordinator reserved for this function (Haspelmath, 2007, p. 27; Döhmman, 1974, p. 45; Kotus, 2004, <http://kaino.kotus.fi/visk/sisallys.php?p=1098>).

(viii) The implicational ‘or’ ((33a), similar to a condition with ‘if’) introduces a consequence of an unfulfilled condition in the protasis, expressing a metalinguistic pseudo-alternative. Besides ‘or’, *sonst*, *anderenfalls*, *or else*, *sinon*, *faute de quoi* can be used (cf. Waßner, 2014, p. 594; Quirk *et al.*, 2008, p. 933f; Kotus, 2004, <http://kaino.kotus.fi/visk/sisallys.php?p=1098> for Finnish; Riegel *et al.*, 2014, p. 882).

- (33) a. *Du gehst jetzt schlafen oder es gibt morgen kein Eis.*
 ‘You go to bed now or you won’t have ice cream tomorrow.’
 b. *Hands up or I’ll shoot.*
 c. *Ou tu obéis, ou il t’en cuira.*

In (33b) *or* conjoins two connects of different structural forms, pointing to the special use of the conjunction. Logical implication has the following truth table:

p	q	$p \rightarrow q$	1 = true 0 = false
1	1	1	
1	0	0	
0	1	1	
0	0	1	

Table 6. Truth values for logical conditional

Implication signalled by ‘or’ can be described by lines 2 and 3 of this table, as the consequence follows iff (if and only if) the condition is not fulfilled (false). Disjunctive coordinators are used in discourse and pragmatic functions, as well.

4. Adversative coordination

The third major type of coordination is adversative coordination, a relation of contrast of two, rarely more than two (Grevisse & Goosse, 2016, p. 1514), connects. For this semantic relation of non-homogeneity or non-conformity in a wide sense there is no correspondence in logic.

In distinction to conjunctive and disjunctive coordination, adversative relations can be expressed by subordination, as well. Some of them may even be expressed by conjunctive or disjunctive means. In addition, adversative relations put a greater range of more specific connecting means at the speaker’s disposal.

- (35) coordination subordination
- a. *aber, doch, sondern, obwohl, auch wenn, während, wohingegen, anstatt dass zwar – aber, sonst*
- b. *but, else, yet* *instead of, despite, in spite of, although, even if, while, whereas*
- c. *mais, sinon, or* *tandis que, quoique, bien que, pendant que, même si*

Even morphemes may be conjoined (as in German *nicht be-, aber/sondern entladen* ‘not load but unload’). A detailed discussion of adversative nexus in German is Breindl (2014b), for English

see Quirk *et al.* (2008, pp. 935-953), for French see Grevisse and Goosse (2016, ch. 3^e-IX) and for Polish Engel (1999, pp. 1146-1158). Souesme (1995) discusses translation from English to French. Adversative coordination may also be expressed in an asyndetic manner (cf. Gallagher, 1995 for French).

(36) *The spirit is willing, the flesh is weak.*

As with conjunctive and disjunctive relations, there are several subtypes of adversative relations. The context plays an even greater role in the form of adversative semantic relations between lexemes in the connects and a difference in polarity (affirmative vs. negative) of the verb form. With respect to polarity, four different constellations arise:

(37)	negated clause	connected to	affirmative clause
	affirmative clause	connected to	negated clause
	affirmative clause	connected to	affirmative clause
	negated clause	connected to	negated clause

In the former two cases, the adversative relation hinges on the difference in polarity, in the latter two cases, on adversative sense relations of lexical items used in the clauses. In lexical semantics, five types of adversative sense relations are distinguished: antonymy (continuum: *hot – cold, silence – noise*), compleynymy (bipartite: *alive – dead, inside – outside*), heteronymy (multilateral: cohyponyms, e.g., colours), reverse (perspective: *buy – sell, husband – wife*) and converse opposition (direction: *load – unload, arrival – departure*; cf. Kroeger, 2018, 6.2.2).

4.1. Functional characteristics of ‘but’

The meaning range of adversative coordination comprises conjunctive adversative (including asynchronous) and alternative adversative coordination, as well as metalinguistic and discourse functions (which are not treated here). Conjunctive adversatives are confrontation, opposition and denial of expectation. These relations could otherwise be encoded by ‘and’, as the adversative character comes about by lexical semantics of the connects. The closeness of ‘and’ and ‘but’ in these readings may lead to the use of apparent non-equivalents (pseudo-divergences) across different language versions of EU legal acts. Converse and reverse relations are preferably encoded in conjunctive coordination (cf. section 2.3, (v-e)) because converse relations are quasi-synonyms and reverse relations tend to be sequential, two ambits we observed for conjunctive coordination above.

(i-a) Confrontation is the most basic adversative relation between two states of affairs; it is predicated with semantic antonyms or compleynyms.

(38) a. *Marie ist fleißig, aber Anne ist faul.*
‘Mary is industrious, but Anne is lazy.’
b. *Peter lebt noch, aber Paul ist tot.*
‘Peter is alive, but Paul is dead.’

(i-b) With heteronymic expressions, an opposition is denoted in the assessment of the states of affairs (evaluative opposition). In (39a) different weather phenomena and different days constitute heteronyms (although sunshine and rain can occur at the same time).

(39) a. *Gestern hat es geregnet, aber heute scheint die Sonne.*
‘Yesterday it rained, but today the sun is shining.’
b. *Das Haus liegt (einerseits) günstig, müsste (andererseits) aber voll saniert werden.*
‘The house is situated advantageously, but would have to be renovated in full.’

(ii) A frequent adversative relation between states of affairs is denial of expectation (cf. Breindl, 2014b, p. 525; Haspelmath, 2007, p. 28). The adversative character comes about by a subsequent connect denying an expectation invited by its preceding one. In

example (40a), uttering an intention implicates its future realization, which is cancelled by the ‘but’-clause. In (40b), the expectation is that a further negative property applies, which is cancelled in the second connect. (40c) shows that the relation may also be expressed by a correlative pair of coordinators.

- (40) a. *Ich möchte eine eigene Praxis eröffnen, aber / doch ich habe nicht genug Geld.*
‘I want to open my own practice, but don’t have enough money.’
- b. *Sie ist streng, aber gerecht.*
‘She is strict, but just.’
- c. *Er ist (zwar) gestern eingetroffen, aber wieder gefahren.*
‘He arrived yesterday, but he left again.’
- d. *Sie ist arm, aber ehrlich.*
‘She is poor, but honest.’
- e. *Il est millionnaire, mais honnête.*

When the lexical relation between the connects is not on the same plane, as in (40d, e), the coordinator (e.g., *aber*, *but*, *mais*) triggers a conventional implicature of unexpectedness. Conventional in this context means that it is inherent in expressions like *aber*, *but* or *consequently* and thus understood by any listener/reader. For (40d, e) this means that as poverty/wealth is independent from (dis)honesty, it is due to *aber* that the statement is read with a presupposed insinuation that poor (or rich) people are usually not honest. A connection with ‘and’ would have no overtones.

- (iii) With the temporal relation of the connects asynchronous or sequential, the “frustrated plan” reading (cf. Breindl, 2014b, p. 527) results as a further reading of ‘but’. As sequentiality is a possible reading of conjunctive coordination, ‘and’ could also be used instead.

- (41) *Der Riese versuchte in den Baum zu klettern, blieb aber in den Ästen hängen.*
‘The giant tried to climb the tree, but got stuck in the branches.’

Alternative adversative relations constitute the substitution, compensatory and exemption readings.

- (iv) Substitution (cf. Haspelmath, 2007, p. 28) is a corrective relation where one term replaces the other.
- (42) a. *Auf Peter warteten wir vergeblich, aber es kam Paul / stattdessen kam Paul.*
‘We waited for Peter in vain, instead, Paul came.’
- b. *Ich möchte kein Opernhaus, sondern einen Flughafen bauen.*
‘I do not want to build an opera house, but an airport.’
- c. *Iván no es inteligente, sino listo.* ‘Ivan is not intelligent, but clever.’

German, Spanish (and Swedish, Breindl, 2014b, p. 519) have a specialised coordinator (German *sondern*, Spanish *sino*) for this relation, which is used when the first connect is negative (cf. Real Academia Española, 2013, p. 429). English, French, Dutch, Italian and Slavic languages use ‘but’ in this case. Breindl (2014b, p. 484f) notes that corrective *sondern* in German may contrast an element higher or lower on a scale, whereas restrictive *aber* (see (vii-b) in section 3.2) can only be used for a lower one (43a, b). In taxonomic relations (as in (43c), a beech is a kind of deciduous tree), *sondern* cannot be used:

- (43) a. *Peter war nicht dreimal verheiratet, sondern / aber zweimal.*
‘Peter hasn’t been married three times, but twice.’

- b. *Peter war nicht dreimal verheiratet, sondern (/ *aber) viermal.*
‘Peter hasn’t been married three times, but four times.’
- c. *Das ist keine Buche, aber (/ *sondern) ein Laubbaum.*
‘That’s not a beech, but a deciduous tree.’
- (v) A relation close to substitution is the compensatory reading, which implies an evaluative scale: part of or a lower degree of what could have been expected is fulfilled, compensating for the unfulfilled part or degree. The expression in the second connect is interpreted as being lower on the scale, but benevolently acknowledged.
- (44) a. *Es gab keinen Strom, (wohl/immerhin) aber warmes Wasser.*
‘There was no electricity, but warm water.’
- b. *Auf Peter warteten wir vergeblich, aber Paul kam.*
‘We waited for Peter in vain, but Paul came.’
- c. *Peter besitzt kein Haus, aber eine Wohnung.*
‘Peter doesn’t own a house, but a flat.’

The difference in meaning between (42a) and (44b) is that in the former the arrival of Paul was unexpected, whereas in the latter, Paul was expected to come as well as Peter and fulfilled this expectation as opposed to Peter.

- (vi) A further reading is that of exemption, where the second connect is singled out of the first one. Souesme (1995) makes finer distinctions with a view on the translation of *but*.
- (45) *Nothing was left but one crumb.*

4.2. Further uses of ‘but’

Turning to the semasiological perspective, the adversative devices can also be used for scalar relations without any natural non-homogeneity/non-conformity. Two subtypes may be distinguished: restraint and a comparative conversational implicature.

- (vii-a) In the restraint relation, the second connect restrains the degree of the state of affairs in the first one, with the degree opening up the scale.
- (46) a. *Drück hier, aber (/ wenn auch) nicht so stark.*
‘Press here, but not too hard.’
- b. *Zwar ist Paris eine aufregende Stadt, aber er vermisst die Berge.*
‘Paris may be an exciting place, but he misses the mountains.’

The relation could also be reformulated with a concessive subordinator (e.g., *wenn auch*).

- (vii-b) In the second type, the adversative coordinator triggers the conversational implicature that the state of affairs in the subsequent connect is higher on a pragmatic scale (47a, b). Besides *but*, *aber*, etc. other connectors are used in this relation (47c, d), note also the correlative *not only - but*, *nicht nur – sondern auch* for the conjunctive type (cf. also Quirk et al., 2008, pp. 940f, 790).

- (47) a. *The room isn’t large, it’s enormous.*
- b. *Peter hat ein Auto, aber Paul hat eine Limousine.*
‘Peter owns a car, but Paul owns a limousine.’
- c. *Wir haben nicht nur alles abgewaschen, sondern auch die Küche aufgeräumt.*
‘We did not just do the dishes, but also cleaned up the kitchen.’
- d. *Es gab nicht einmal einen Weg, geschweige denn eine / und erst recht keine Straße.*
‘There wasn’t even a path, let alone a road.’

Example (47b) presupposes a scale of car types or brands ordered according to their prices. As both men own cars, there is no natural adversative relation; the non-homogeneity consists in the fact that Paul owns a type of car higher on the scale.

5. Conclusion and outlook

The study of the three different coordinating relations which are frequent in European legal texts, conjunctive, disjunctive and adversative coordination, showed a broad range of readings each. This range is fairly parallel across the Germanic and Romance languages studied, with further parallels in Finnish, and thus contributes to the “Standard Average European” type of languages. This similarity makes multilingual European legislation easier; nevertheless because of the functional range of the conjunctive and disjunctive coordinators, ambiguities arise in legal texts, both within one language version and across language versions. This issue is further discussed in Mattissen (2019).

The main readings of conjunctive ‘and’ are intersecting set, set union and disjunct set union ‘and’; disjunctive ‘or’ is mostly inclusive or exclusive. For adversative relations, confrontation, opposition, denial of expectation, frustrated plan and substitution are the most important readings. Context, e.g., lexical relations between the connects, disambiguates or controls the actual reading.

The three coordinators treated here display overlaps in meaning and in application, e.g., in correlative, asynchronous and implicational relations. These overlaps are of special relevance for multilingual legal linguistics: an apparent divergence in use may be a pseudo-divergence in semantic effect. Importantly, the readings of ‘and’, ‘or’ and ‘but’ may only partially be aligned with logical operators and concepts of mathematical set theory. Language is finer-grained than logic, and context-dependent.

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Appendix

Affiliation of the official languages of the European Union

Indo-European

Celtic:	Irish-Gaelic
Germanic:	English, Dutch, German, Danish, Swedish
Romance:	Portuguese, Spanish, French, Italian, Romanian
Baltic:	Lithuanian, Latvian
Slavic:	Czech, Slovak, Polish, Slovene, Croatian, Bulgarian
Hellenic:	Greek

Finno-Ugric Finnish, Estonian, Hungarian

Afroasiatic Maltese

1pm 1st person plural masculine

1s, 2s 1st singular, 2nd singular

ACC accusative

ALL allative (‘to’)

ILL illative (‘into’)

INS instrumental (‘by’)

Q question particle



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