Interpreting Apollonius Dyscolus on mood and *psuchichē diathesis*

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Abstract

The Alexandrian grammarian Apollonius (*c* 80–160 CE) proposed that 'every mood may be paraphrased using an infinitive as the generic name of the verb' (*Peri Suntaxeōs* 1: 51). As Householder 1981 recognized, this interestingly foreshadows the since discredited 'performative analysis' of Ross (1970) and others; but it is still worth reconsidering Apollonius's analysis. Although specifically presented in a grammar of Ancient Greek, it has relevance for the grammar of today's English and, mutatis mutandis, other languages too.

To transfer the Apollonian idea to English is problematic. Apollonius wrote of mood, but I would agree with Palmer (2001, 2003) that English does not have a category of mood. Instead English (like many other languages including Greek) recognizes a realis–irrealis split that correlates with different sets of clause-types. To oversimplify, in English, indicatives are typically realis; imperatives, infinitives, hypotheticals, futures, deontics, complements of mandative and optative predicates are irrealis. Apollonius used no term that systematically corresponds to *clause*; so we take a liberty by construing what he says about mood in Greek to correspond to certain facts about clause-types in English. However, if we suppose the Greek moods to represent clause-types (which is not implausible), the parallels between the grammars of the two languages (in the area of interest) are explicable.

Apollonius links each mood to a *psuchichē diathesis* "mental disposition" which Apollonius represented by such underlying 'verbs in the indicative mood' as *I declare, I bid you* is reinterpretable in today's terms as a mood-like operator in semantic structure; his infinitive complements as underlying propositions. For example, where **T** is the declarative PI (primary illocution) operator and Φ is a semantic representation of the proposition in *I'll see you at 10*: **T**[Φ]; where **I** is the imperative PI operator, **F** is a semantic future operator, and Φ is a semantic representation of the proposition in *Be warned!*: **I**[**F**[Φ]]..

The *Syntax* of Apollonius Dyscolus (*c* 80–160 CE) is a magnificent tour de force that argues for the semantic basis of grammar, while still paying close attention to formal aspects of the object language. It is principally an exposition of the language structures found in classical Greek literature and in first century Greek. Its aim is to bring students to recognize the regularities that Apollonius perceived in the morphosyntax of the language and for which he offered rational explanations. The regularities often underlie a less regular surface structure which is derived by transformation from semantically based underlying structures.

Apollonius believed that linguistic phenomena are ordered according to knowable rational rules of grammar; and that knowing these rules is a better guide to correct language understanding and production than merely observing the usage of either poets and dramatists or ordinary speakers. There is a precursor here of the Chomsky 1965 distinction between competence and performance: in the view of Apollonius, authorities may disagree on what counts as proper usage; also everyone has gaps in their knowledge. Consequently it is knowledge of the rational analysis that provides a firm basis for decision and allows one to spot errors in usage. Cf. (1).

(1)   Just as the utility of the literary tradition is very great for correcting both the texts of poems and the usage of everyday speech, and determining the application of words among classical authors as well, in the same way also our present investigation of grammaticality will provide a rational correction for all sorts of errors.   (Apollonius *On Syntax* (*Peri Suntaxeōs*) from *The Syntax of Apollonius Dyscolus* (1981) Trans. by Fred W. Householder. Book I: 60)

According to Householder 1981: 17 (thinking in terms of post Chomsky 1965 grammar) 'Apollonius Dyscolus was the inventor of the abstract base.' *On Syntax* apparently justifies this claim. It is certainly true that Apollonius proposes underlying constructions which explicitly represent meaning using constructions that are in various ways distinct from the normal surface sentences of Greek; his underlying constructions need to be transformed into surface structure by epenthesis, rearrangement (*huperbaton*), ellipsis and substitution (*enallagē*). The use of such transformations in etymologies probably predates Plato; but Apollonius seems to have developed the concept. And some of his proposed underlying structures bear a close resemblance to analyses independently proposed in the late 20th century. For Apollonius the underlying structures are the regular and correct grammar from which both ordinary speech and poetry derive – though poets typically make more transformations than the ordinary language user. For instance he insists that the protasis of a conditional (*sunaptikos*) logically precedes the apodosis, thus conditional *ei* "if" and para-conditional *epei* "since, when" etc. are logically sentence initial even in (2).

(2)   *phōs estin ei hēmera estin*
  light   is   if   day   is
  "It's day if it is light"

Of which he says (3):

(3)   For it is only in the surface order [*sunthesis*] that *ei hēmera estin* [in (2)] stands
        second, not in the explicit semantic structure [*diexodikē epangelia*]. For the mind
        must first accept the thought *it is day*, and then it can accept *it is light*. So never
        can we agree that the conditional particle *ei* is not sentence initial [semantically]
        even though it may sometimes occur later in the sentence.   (II: 77)

    Apollonius makes intriguing analyses of verbs and their subcategories. His most
interesting insight was recognizing that each mood or clause-type has a *psuchichē
diathesis* "mental disposition", which Householder 1981 correctly identifies as
illocutionary force and I refer to more particularly as the **primary illocution** of a
clause-type.1 (4)–(7) quote some of things that Apollonius writes on the topic.

(4)   [E]very mood may be paraphrased using an infinitive as the generic name of the
        verb. For example if we have a declarative sentence *peripatei Truphōn* ["Tryphon
        is walking"] we can turn it into a report of the utterance by adding the verb
        implicit in the indicative mood, namely *hōrisato* ["He declared"], giving *hōrisato
        peripatein Truphōna*. And similarly for the optative form *peripatoiē Truphōn*
        ["May Tryphon walk"]. Here too one may supply [the verb] inherent in wishing,
        and say *ēuxato peripatein Truphōna* ["He wished for Tryphon to walk"; see also
        On Syntax III: 95]. And similarly for the imperative mood *peripateitō Truphōn*
        ["Let Tryphon walk"] one would say *prosetaxe peripatein Truphōna* ["He ordered
        Tryphon to walk"].   (I: 51).

(5)   The Homeric practice of using the infinitive form by hypallage for the imperative
        construction, I think, is also explained by its generality, the fact that all special
        [moods] can be transformed into infinitives.   (III: 63)

(6)   But infinitives, since they [unlike finite verbs] have not yet acquired subject
        persons, naturally also have no expression of the mental attitudes of those persons.
        (III: 59)

(7)   [Because the infinitive] has no mental attitude [illocutionary force] it cannot be
        blocked from occurring with all moods [*enclisis*] with the addition of words
        signifying the characteristic mood; and conversely every mood can be converted
        into the infinitive. For *graphē* ["Write!] can be equated to *graphein soi prostassō*
        ["I bid you write!"] where we necessarily add the *bid* which is implicit in the
        imperative along with the pronoun [*you*]. For the infinitive has no share in either
        of these [mood or person]. *Peripatoiēs* ["May you walk!" is equivalent] to
        euchomai se peripatein ["I pray you walk!"], and *grapheis* ["You are writing"] to
        horizomai se graphein ["I declare that you are writing"]. The conversion
        [*metalēpsis*] is obvious also [in reports]: *graphoi Dionusios* ["Would that
        Dionysius write!"] goes to *ēuxato graphein Dionusion* ["He prayed for Dionysius

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1. There is some overlap between mood and clause-type and mood was mistakenly identified as the
    semantics of clause-type in Allan 2001, but they are distinguished here and in Allan 2006.

to write"], and *graphēto Dionusios* ["Let Dionysius write!"] to *prosetaxen graphein Dionusion* ["He gave the order for Dionysius to write"].   (III: 25; see also III: 612)

In passages like these Apollonius foreshadows an analysis that reappeared some 1800 years later in Ross 1970: 261 as 'Every deep structure contains one and only one performative as its highest clause' causing it to be known as 'the performative analysis'.3 The postulated deep structure was (8) which is not quite the same as what Apollonius wrote of: for instance in (4) Apollonius uses a third person subject rather than first person; and he certainly had a less sophisticated notion of illocutionary force than obtained in the late 20th century. Nevertheless his depth of insight is salutary. It gives him the basis for writing of negation in (9).

(8)   *I⌢*PERFORMATIVE*⌢you⌢*S

(9)   [The indicative mood] contains the force of affirmation [*kataphasis*]. And this is why the so-called negative adverb of denial [*ou(k)*], which has the force of fighting the yes assertion, regularly accompanies the indicative mood [*horistikē enklisis*] in order to reject the inherent affirmation: *ou graphei* ["Not he is writing" (I deny that he is writing)], *ou peripatei* ["Not he is walking" (I deny that he is walking)].' The imperative and optative take the prohibitive particle *mē* instead of *ou(k)*. (III: 90)

(9) combines the Stoic account of sentence negation, which is the direct ancestor of modern semantic accounts of negation, with Apollonius's own account of the illocutionary force implicit in each clause-type.

To transfer the Apollonian idea to English is problematic. Apollonius wrote of mood, using the rather general term *enklisis*. However, I agree with Palmer (2001, 2003) that English does not have a category of mood. There is instead firm evidence that English, like many other languages (including Greek), recognizes a realis–irrealis split that correlates with different sets of clause-types. To oversimplify: in English, indicatives are typically realis; imperatives, infinitives, hypotheticals, futures, deontics, complements of mandative and optative predicates are irrealis. Apollonius used no term that systematically corresponds to *clause*; so we take a liberty by construing what he says about mood in Greek to correspond to certain facts about clause-types in English. However, if we suppose the Greek moods to be (at least in part) signalled by clause-types – which is not implausible – the parallels between the grammars of the two languages in the area of interest are explicable.

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2.   'Just so every mood is transformed into [*metalambanetai*] nothing else but an infinitive plus a word conveying the meaning of the mood, as when we say *peripatiō* ["I am walking"] equals *hōrisamēn peripatein* ["I declared I was walking"], *peripatoimi* ["I hope to walk"] equals *ēuxamēn peripatein* ["I prayed I would walk"], *peripátei* ["Walk!"] equals *prosetaxa peripatein* ["I gave orders to walk"].'

3.   There is more detail on the performative analysis and its flaws in Allan 1986 8.10.3, Allan 1994c and works cited therein.

Apollonius links each mood to a *psuchichē diathesis* "mental disposition"4 which I have already said seems to correspond to my notion of primary illocutionary force. If we identify the **semantic properties** (rather than pragmatics) of each clause-type in terms of the typical primary illocution (PI) of the clause-type, the facts of English and Ancient Greek are explicable in similar terms. Recognizing the clause-type is the first step towards discovering the illocutionary point of an utterance via the PI. It is important to reaffirm that the PI is the semantic property of the clause-type. The point I am belabouring is spelled out in (10).

(10)   The primary illocution (PI) of *I'll see you at 10* is a statement (with its potential
       truth value); the statement makes a prediction about the speaker's future
       behaviour which, entering the pragmatic domain, constitutes a commissive; in
       turn this commissive may be a promise or a threat depending on several
       contextual factors. The PI is the crucial semantic basis for the pragmatic
       inferencing that leads to the illocutionary point.

A degree of coincidence between clause-type and illocutionary force has been recognized by grammarians in the western classical tradition since about the time of Protagoras (490–420 BCE, Diogenes Laertius 1925 Book IX).5

The western classical tradition identifies three moods: indicative, subjunctive, imperative. Jespersen describes these respectively as the 'fact-mood', the 'thought-mood', and the 'will-mood', cf. (11).

(11)   [T]hey express certain attitudes of the mind of the speaker towards the contents of
       the sentence, though in some cases the choice of a mood is determined not by the
       attitude of the actual speaker, but by the character of the clause itself and its
       relation to the main nexus on which it is dependent [i.e. it is grammatically
       conditioned]. (Jespersen 1958: 313; and cf. Jespersen 1909–1949 VII: 623)

This ternary division does not work for English because either there is no subjunctive, or else subjunctives are also found within indicatives. Furthermore, Protagoras split the indicative into interrogative and declarative moods. Based on the classical languages of the European grammatical tradition, Palmer 2001; 2003 recognizes only two moods: indicative and subjunctive which he compares with the realis–irrealis division proposed for some Native American and Papuan languages; and also with the assertive–non-assertive division.6 Although Palmer identifies only two moods, he discusses interrogatives, imperatives, jussives, prohibitives, exclamatives, and a few other mood-like categories; but he fails to clarify their status with respect to one another, or with his

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4. Apollonius's 'mental attitude' is a precursor to the 'expressed psychological state' in Searle 1975 and
    the notion of Speaker's 'attitude' in Bach and Harnish 1979.

5. See Sanctius 1585, Lancelot 1644, Lane 1700, Whitney 1888, Sadock 1974, Van Valin and LaPolla
    1997, Huddleston and Pullum 2002.

6. Cf. Chafe 1995, Mithun 1995; 1999; Roberts 1990; Quirk, Greenbaum, Leech et al. 1985, Wierzbicka
    1988, Lunn 1995.

binary mood system. Palmer denies that English has a subjunctive; but other scholars would disagree.7 Whatever stance one takes, the relationships among clause-types (and corresponding subsentences), moods and illocutions are controversial. English does not fit a binary system of mood any better than it matches a ternary system. In fact the traditional term *mood* does not adequately fit what we find, even if we were to admit a plethora of minor moods.8 To sidestep controversy, I discuss *hypotheticals* rather than *subjunctives* and *primary illocution* rather than *mood*; and whereas Palmer focuses on the morphosyntactic definition of mood, I focus on the distinctive semantic property of a clause-type, namely the primary illocution.

Palmer quotes with approval Mithun's (1999: 173) characterizations of realis (+R) and irrealis (–R), quoted in (12).

(12) The realis portrays situations as actualized, as having occurred or actually occurring, knowable through direct perception. The irrealis portrays situations as purely within the realm of thought, knowable only through imagination.

Cross-linguistically there is a cline between a basket of overlapping categories indicative/realis/assertive at one pole and another basket comprised of such categories as subjunctive/hypothetical//uncertain at the other.9 All languages have a declarative as the most frequent and least marked clause-type; here in this paper its PI is symbolized **T**, because its token potentially bears a truth value. The declarative is typically +R (though it may include a hypothetical, **H**, as we shall see). At the opposite extreme are hypotheticals, counterfactuals, intensionals, traditional subjunctives, and other –R categories for which there is often no unique morphology; to quote Givón 1994: 277 on the subjunctive 'an air-tight, categorial definition … remains an unrealistic goal.'10 Between the extremes of +R and –R are strung interrogatives, imperatives, negatives, futures, and habituals which may align with either +R or –R categories. For instance the negative clause *Jim is not here* describes an event that can be seen as a factual statement having a truth value; and therefore aligned with **T**, +R; alternatively, it is a counter-fact aligned with –R categories. A question *Who is that?* has no truth value (**It is true that who is that*), thus it can align with **H**; but in the western classical tradition it is indicative and aligned with **T**. In this short article, it is unrealistic to force all languages into a universal mould any more specific than that already described; so the focus is on English (with the occasional aside on Apollonius's Greek). The –R categories in English include:

- Futures (**F**)
- Imperatives (**I**)

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7. Cf. Palmer 2001: 104, 201f; Palmer 2003: 3f versus Jespersen 1958, Jespersen 1909–1949; 1958 VII, §18, Givón 1994, Övergaard 1995, Huddleston and Pullum 2002.

8. As in e.g. Harnish 1983, Harnish 1994.

9. Cf. Givón 1994, Wehmeier 2004.

10. Jespersen (1958: 318) writes: 'we regard the indicative as the mood chosen when there is no special reason to the contrary, the subjunctive as a mood required or allowable in certain cases varying from language to language.'

- Infinitives (*V* and *to V*)
- Complements of mandative and optative predicates
- Deontics11 (*must, ought to, should*)
- Hypotheticals (**H**)

The future is –R because it is not, in Mithun's words, 'actualized, as having occurred or actually occurring, knowable through direct perception'; that is why in many languages the future, especially less certain futures, are marked by a modal. However the future is not subjunctive: the irreality is temporal rather than other worldly, i.e. the world remains constant. 12 With deontics and hypotheticals the irreality is a different world w^h accessible from the world in which the utterance takes place, w^0, but none the less hypothetical. Although these brief explanations oversimplify the distinction between different types of irreality, they serve to show why different –R properties are differently signalled.

What criteria identify clause-type? Word order distinguishes declarative *He is tall* from interrogative *Is he tall?* Morphosyntactic marking distinguishes the hypothetical backshifted modal in the temporally non-past **Could** *you mail this letter for me?* from the indicative **Can** *you mail this letter for me?*, and these two interrogatives from the declarative *I can certainly mail it for you.* Intonation distinguishes declarative from interrogative versions of *John's gone to New York(./?)* Similarly in other languages: in Navajo, the imperative has the same morphosyntax as the declarative, but is prosodically distinct; in Korean, declarative, interrogative, imperative and propositive (*let's* constructions) are morphosyntactically identical in intimate and polite speech levels, but are distinguished by prosody. In addition to prosodic marking, the interrogative *John's gone where?* is lexically marked by the *wh-* word at the questioned location. Lexical marking is significant in identifying interrogatives in subordinate clauses: *She asked **how/whether/if** John had travelled to New York.*

Many (uttered) subsentences (clause fragments whose missing constituents are recoverable from context) clearly function like well-established clause-types. It is prosody (or its typographic counterpart) that distinguishes interrogative *John?* [Is that you?] and imperative *JOHN!* [Come in at once!] from each other and from declaratives. An utterance of the name *John* in answer to *Who's that?* must be judged declarative on prosodic and contextual grounds. The clipped clause *If only!* is judged hypothetical on lexical and perhaps also contextual grounds. Such subsentences seem intuitively to function like distinct clause-types and to have distinct PIs.

Clause-type is formally defined by morphosyntax, lexis, and prosody. In all languages, declaratives are the most frequent and least marked of all clause-types. The semantics of a clause-type is its **primary illocution** (PI). All languages have a **declarative** as the most frequent and least marked clause-type; here its PI is symbolized

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11. Given that there are various interpretations of modality terms like 'root', 'epistemic' and 'deontic' meanings, I use them as defined in Allan 2001: 358–65.

12. For example if the start world and time is w^0, t^0 the future is w^0, t^1 where $t^1 \succ t^0$.

T, because – as I have said – its token potentially bears a truth value when used by a speaker in an utterance in a certain context. There are examples of declaratives in (13).

(13) He just wouldn't stop whingeing.   Bill was shot by Max.   Bill, Max shot. Bill died.   Max gave the Salvos a donation.   *It's snowing* is a declarative sentence. Mortgage rates down at last.   Dunno who did it.

Because the declarative is the default clause-type, the clearest definition is semantic. The primary illocution of a declarative is defined as in 0.

(14)	<form>	**T**[Φ] an assertoric clause or subsentence such as (13). The typical prosody involves downdrift.13
	<description>	Speaker says that Φ. Declaratives potentially have truth values.
	<precondition>	Speaker has reason to believe that Φ.
	<illocutionary intention>	Speaker reflexively intends the utterance of the clause to be recognized as a reason for Hearer to believe that Speaker has reason to believe that Φ. (Notice Speaker's purported commitment to the truth of what is being said.)

T is the declarative PI operator. Recognition of the form of the clause-type leads to its identification in the description. A precondition, more or less the Austin 1975 'preparatory condition', is part of one's knowledge about the proper grounds for uttering a declarative clause (and therefore includes Speaker's presuppositions). The illocutionary intention of a declarative arises directly from Speaker's use of this clause-type, given the precondition. The primary illocution here is 'declarative', which is not to be confused with a 'declaration': the declarative performs an act of *saying*; a declaration performs acts of *declaring* such things as legal verdicts and umpiring decisions, or *effecting* states of affairs such as marriage, job appointment, etc. Declarations are expressed through declaratives; (15) is from a property sale contract in which deontic *shall* is used to identify legally binding conditions.

(15) The rents and profits of the property hereby sold shall belong to the Vendor up to and including the date of possession and thereafter to the Purchaser and shall be dealt with as follows ....

I shall not further discuss declarations, see Searle 1969; Searle 1975, Allan 1994b.

The definition of declaratives refers to Speaker's reflexive intention. In the canonical speech event, there is an assumption that Speaker intends to communicate with Hearer; following Bach and Harnish 1979, I call this 'the communicative presumption'. As recognized by Grice 1957; 1968; 1969, the intention is reflexive: it is Speaker's

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13. In certain contexts, especially in some dialects, high rise terminals occur; for conditions on these see e.g. Allan 1984 and references cited there, also Horvath 1985.

intention to have a person in earshot recognize that Speaker wants him or her to accept the role of Hearer and therefore be an (or the) intended recipient of Speaker's message and consequently react to it. More precisely, Speaker's reflexive intention towards Hearer is the intention to have Hearer recognize that, when uttering U in context C, Speaker intends U to have a certain effect on Hearer partly caused by Hearer recognizing that Speaker has the intention to communicate with him or her by means of U.[14] So, when Joe hears Sue talking in her sleep, he will not assume she has a reflexive intention towards him, and therefore not expect that she intends her utterance to have any effect on him – though she might unintentionally keep him awake. There are innumerable mental, emotional, and physical effects that speakers might wish to produce, for instance persuading Hearer to an opinion, intimidating Hearer, alerting Hearer of danger, getting Hearer to do something by means of a suggestion, a hint, a request, or a command. Speaker tailors the utterance to suit Hearer, taking into account the presumed common ground[15] and what s/he knows or guesses about Hearer's ability to understand the message s/he wants to convey.

The fact that declaratives potentially have truth values is the principal way to positively identify them (which is why they are said to be 'assertive', cf. Quirk, Greenbaum et al. 1985, Wierzbicka 1988, Lunn 1995, Palmer 2001, 2003). In English, $T[\Phi]$ can be glossed *It is true / false that Φ*. A declarative illocution is the PI (the **primary** illocution) and not the illocutionary point of an utterance. This is clear from declaratives that issue directives, as in (16).

(16) a. I'm asking what your name is.

b. I'm telling you to stop making that noise!

In fact, there are few illocutionary points that cannot be achieved using a declarative. Performatives (cf. Austin 1963; Austin 1975, Allan 1994a) like those in (17) have the primary illocution of a declarative.

(17) a. I promise to be good.

b. You are prohibited from smoking.

How does this analysis connect with that of Apollonius? It appears that $T[\Phi]$ is an alternative formulation to that exemplified by Apollonius in (18).

(18) *horizomai se graphein*
I.declare you to.write

"I declare that you are writing".

The difference is that Apollonius lexicalizes the PI operator **T** just as Haj Ross and others were to do in the so-called Performative Analysis, representing it as a main clause as one has to do to spell out the meaning of the abstraction **T** in the words "it is true that". Where I propose the abstraction Φ, Apollonius, in a more user friendly

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14. There is input here from Récanati 1987.

15. As defined in Allan 2001.

manner, uses the infinitive *graphein*. Applying my analysis to his sentence gives (19), which is closer to surface structure than (18).

(19) **T**[*grapheis*]
      T[you.write]
      it.is.true.that [you.write]
      "You are writing"

Instead of paraphrasing the meaning of the clause-type (or mood) in terms of the object-language, (19) takes an operator from the metalanguage and keeps the original declarative sentence more or less intact. Thus on grounds of simplicity (19) should be preferred to (18). However, we shall see that this is not so feasible with some other clause-types. As alternative analyses, however, both offer descriptive and explanatory adequacy.

Unfortunately Apollonius does not discuss interrogatives in terms of mood, so we shall come back to him shortly. English interrogative clauses are exemplified in (20).

(20) Will you stop whingeing?   Care to come along?   Which came first? The chicken or the chicken nuggets?   Why bother?   After all, who wants to crash a convivial high by spending an hour at the sink?   I shouldn't have worn those heels today, should I?   He's not bad, huh?   Please may I be excused?   You were where on the night of eighteenth May?

The PI of interrogatives is shown in **Error! Reference source not found.**.

(21)	<form>	**Q**[Φ]. Lexical markers such as post clausal English *eh?*, clause final Japanese *ka*, English *wh-* words, *if* and *whether* in subordinate clauses, and/or morphosyntactic markers such as subject–auxiliary inversion in main clauses. Because rising intonation typically marks orientation towards Hearer, interrogatives typically display updrift.
	<description>	Speaker asks Hearer something – makes a request (cf. Allan 1986; questions are requests for information to be delivered verbally). There is a purported option for the Hearer to refuse (or plead inability) to comply.
	<precondition>	Speaker purportedly believes that Hearer can or might be able to respond appropriately to what is asked in the clause.
	<illocutionary intention>	Speaker reflexively intends the utterance of the clause to be taken as asking Hearer something.

The purported option for the Hearer to refuse or plead inability to comply distinguishes interrogatives from imperatives – which purportedly offer no such option. These different options are what make interrogatives (askings) 'more polite' than imperatives (tellings) – but the pragmatics of the comparative uses of interrogatives and imperatives are too complex to be adequately discussed here.

The obvious formal similarity between **T**[Φ] and **Q**[Φ] enables one to directly contrast, e.g. (22) and (23).

(22) **T**[He is sick]

"He's sick."

(23) **Q**[He is sick]

"Is he sick?" / "He's sick?"

The word order and prosodic differences are a function of the PI.

Turning to imperatives, Apollonius wrote '*graphē* ["Write!] can be equated to *graphein soi prostassō* ["I bid you write!"].' We can apply a similar notion to the English imperatives in (24).

(24) Stop your bloody whingeing!   Move it, Grandma.   Be warned!   Get yourself checked by someone qualified.   You give me that ball, you!   Nobody move! Let the Games begin.   Let me help.   Let's eat.   Have a good day!

Imperatives have the PI in 0.

(25) <form>   **I**[**F**[Φ]]. Prosodic marking: falling intonation. Imperatives occur only in independent clauses (including coordinate and appositive clauses). The verb is in the base form and non-past tense, but semantically future (**F**).

<description>   Speaker directs or entreats Hearer to do A. The direction or entreaty is present time, the act A is future – though often expected to start immediately. There is purportedly no option for the Hearer to refuse (or plead inability) to comply.

<precondition>   Speaker purportedly believes that Hearer can do A.

<illocutionary intention>   Speaker reflexively intends Hearer to take the utterance of the clause as a reason to do A.

Many imperative clauses are entreaties; they include supplications to someone powerful or wronged (*Forgive me*), propositives (*Let's eat*), and instructions which are of primary benefit to Hearer (*Have a nice day!*). Cross-linguistically, first and third person 'imperatives', often called 'jussives' are frequently subjunctive (Palmer 2001); this is so for Apollonius's Greek.

English has two independent **hypothetical** constructions which contrast with the three major clause-types. The PI, **H**, is defined in 0.

(26) <form>   **H**[Φ] where Φ is either *Would that* S (e.g. *Would that I were rich*) or *May* S (*May he rot in hell!*) in which *Would* and *May* are main verbs using the root senses of these modals, and in which neither *Would* nor *May* can be negated.

<description>	Speaker vehemently wishes (hence the root senses) that the proposition in S may (or may have) come about in some hypothetical world accessible from the real world in which the utterance takes place.
<precondition>	Speaker has some reason to wish that S may (or may have) come about.
<illocutionary intention>	Speaker reflexively intends the clause to be taken as a reason for Hearer to believe that Speaker vehemently wishes that S may (or may have) come about in some hypothetical world.

There is some similarity here with Greek, cf. Apollonius's '*graphoi Dionusios* ["Would that Dionysius write!"] goes to *ēuxato graphein Dionusion* ["He prayed for Dionysius to write"].' Apollonius here uses a third person in the main clause in a reportative, rather than a first person performative; it is a type of paraphrase he uses several times, and one must conclude that he was not undertaking a performative analysis (to be anachronistic); instead he was exemplifying an explanatory analysis of mood. I think he should rather have used a first person to represent the speaker, the person 'praying'; but he still captures the meaning of these hypotheticals in his report of someone's saying *Would that Dionysius write!*

Other than in the two rather archaic constructions *Would that S* and *May S* English hypotheticals occur within the scope of declaratives, interrogatives, and imperatives, whose prosody they adopt along with their values. Hypotheticals may occur within the scope of a declarative, **T**, such that they (potentially) have truth values within some hypothetical world; for example, the complement of a verb of wishing. In (27) the 'were' is backshifted, i.e. looks like a past tense, but is in fact the nonpast derived from Old English subjunctive *wǣre* (past tense would be *I wish(ed) I **had been** rich*).

(27) **T**[I wish **H**[I **were** rich]]

In conditional (28), the protasis invokes a hypothetical world; the apodosis is imperative and supplies the PI.

(28) **I**[**H**[If Harry **should** call], tell him 'No']

Within interrogatives like (29), the hypothetical is marked by one of four backshifted modals: *could, might, should, would*.

(29) **Q**[**H**[you could mail this for me]]

What is in (27)–(29) called 'hypothetical' is often referred to as 'subjunctive mood'; but the fact that it occurs within the scope of other moods, makes this classification problematic – at least for those who wish to retain traditional definitions of mood.

I think there is another distinctive 'clause-type', but a problematical one. **Expressives** are not traditionally recognized as a clause-type because none are full syntactic clauses, e.g. cf. (30).

(30) Goodness gracious!   Wow!   Jesus!   Thanks.   Congratulations.   Hi.
      Bye.   Good luck!

They can be distinguished on semantic and lexical-cum-morphosyntactic grounds; they
are short and usually verbless. Like clauses, they can stand alone in 'expressing a
complete thought'. They are **idioms**, often with idiomatic counterparts in other
languages. They do not admit passivization or negation. Expressives do not have truth
values, so they are not declaratives; they do not make requests, so they are not
interrogatives; they do not direct or entreat, so they are not imperatives. Some are
hypothetical. Their principal function is to display a sometimes perfunctory, sometimes
strongly felt emotive reaction or social interaction on account of something that has
occurred, cf. 0.

(31)   <form>   **X**[IDIOM], where the idiom is usually verbless and consists of few
                     words (often only one or two).

   <description>   Speaker is reacting to Ω i.e. something that has occurred, by
                     uttering IDIOM.

   <precondition> Speaker believes it appropriate to express a reaction to Ω
                     (showing some degree of feeling) by uttering IDIOM.

   <illocutionary   Speaker intends the utterance of the expressive IDIOM to be taken
      intention>   as expressing a particular (sometimes perfunctory, sometimes
                     strongly felt) attitude toward Ω.

One subset of expressives will serve to illustrate all. *Thanks* is presumably foreclipped
from *I offer you my thanks*. However, one can't willy-nilly strip out the possessed noun
from a string *I offer* (*you*) *my NOUN* to create a synonymous utterance. The monosyllable
Book could, in a well defined context such as proffering the book, be interpreted as *I
offer you my book*; but this not the kind of condition applicable to *Thanks*. Furthermore
one cannot foreclip *I offer you my help* to create the monosyllable *Help,* which is
imperative. Apparently, utterances with an expressive illocutionary point facilitate the
creation of brief idiomatic counterparts for ritualized behaviour and to satisfy the
constraints on verbal ejaculation. *Thank you* is normally subjectless and idiomatic by
contrast with the declarative *I/We thank you.* It is not part of a normal paradigm: it is not
imperative like *Thank him.* It cannot be tensed: *Thanked you* is perhaps possible as an
aphetic diary entry, but not as a normal report of past behavior. Both *Thanks* and *Thank
you* are reported like any declarative (*I thanked him*) – which is normal for expressives.
No thanks and *No thank you* are idiomatizations of two separate subsentences (*No,
thanks / thank you*) from which the disjuncture has disappeared. *Thanks* and *Thank you*
mean "I thank you"; their negation is *I don't thank you.* This is not the meaning of *No
thanks / thank you* which are explicit rejections of an offer; just as *Yes, thanks* is an
acceptance. A full account of expressives must be undertaken in another paper.

   In this paper I have claimed that the *psuchichē diathesis* of the moods which
Apollonius represented by such underlying 'verbs in the indicative mood' as *I declare, I*

bid you is reinterpretable in a semantics of English clause-types today as a mood-like operator in semantic structure, one of the set **T**, **Q**, **I**, **H**, and **X**; his infinitive complements as underlying propositions, generalized to Φ in my formulae.

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