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6 Aspects of aural perception in Homeric Greek¹

Abstract: The verb *akoúō* ‘hear’ in Homeric Greek can indicate concrete aural perception as well as acquisition of knowledge by hearsay, and mean ‘learn’. In addition, it can denote an uncontrolled state, either perceptual or cognitive, the controlled activity of listening, or an inchoative event. In this paper, we discuss its syntax and semantics and compare it with *klúō* ‘listen to’, which indicates activities, and *punthánomai* ‘learn’, which mostly has an inchoative meaning. We show that construction variation is connected with animacy of the stimulus, and is not triggered by semantic differences in the verbal meaning, with the partial exception of *punthánomai* when indicating uncontrolled situations. Different actionalities expressed by the three verbs are often matched by verbal aspect. We argue that the figurative extension of hearing to learning is explained through pragmatic inference. The same can be said of the much better studied metaphorical extension of seeing to knowing. Different meanings of perception verbs when referring to the domain of cognition are based on embodiment, in that they depend on our knowledge of the structure of perception events.

Keywords: perception, cognition, embodiment, pragmatic inference, construction alternation

6.1 Introduction

Cross-linguistically, perception verbs are often polysemous in referring not only to the physical senses, but also to knowledge. In ancient Indo-European languages, the standard example is the verb ‘know’ as instantiated by ancient Greek *oída* and Sanskrit *veda*. This form is the perfect tense of the root **wid-* ‘see’, and indicates knowledge as the result of having seen something (Mallory & Adams, 2006: 321–322). The metaphorical extension of “seeing” to “knowing” reflects embodiment, as does the connection with the resultative meaning of the perfect: cognition is a mental state, which results from sensory perception. However, within Indo-European linguistics, much less attention has been paid to the connection of aural perception with cognition, which is well known from non-Indo-European languages (cf. Evans & Wilkins, 2000). In this paper, we would like to fill this gap at least partially, and provide a discussion of the syntax and semantics of the verb *akoúō* in Homeric Greek.

¹ We would like to thank the editors for their comments, and all other colleagues who took part in the session we opened on Academia.edu. Our paper profited much from the discussion.

We will describe the attested constructions of this verb in connection with its various meanings, and compare it with two other verbs that have similar functions and share the same pattern of construction variation as *akoúō*, that is, *klúō* ‘listen to’ and *punthánomai* ‘learn’.

The extension of perception verbs to cognition has been discussed in the framework of cognitive linguistics, and has been explained as connected with the ‘MIND-AS-BODY’ metaphor: following this approach, knowledge is metaphorically understood as mental vision (Sweetser, 1990: 38). In our analysis of *akoúō*, we will show that its evidential function, by which the verb indicates acquisition of knowledge not only by direct aural perception, but often also by hearsay, is better understood as based on pragmatic inference. We will suggest that the same development can explain the extension of ‘seeing’ to ‘knowing’. Studies on evidentiality have shown that both visual and aural evidence are frequent sources for evidentials (Aikhenvald, 2005: 273–274). In this framework, visual perception seems to have a special status in the encoding of sensory evidentials (in line with a generalized bias that, since Aristotle, has privileged sight over the other senses), with hearing often merging with other senses. On the one hand, information acquired from hearing seems to be less perspicuous than information acquired from sight (cf., among others Jay, 1993). On the other hand, evidence from Homeric Greek suggests that information acquired from hearing is multifaceted, as it can be direct or indirect. In the latter case, it is often contrasted as uncertain with information from sight, which is a source of unquestionable knowledge, and is mostly direct.

The paper is organized as follows. In section 2, we discuss experiential situations, focusing on features of participants and on peculiarities of perception verbs. We show that experiential situations and their participants can be variously construed in terms of control and event structure. In section 3, we give some background information on argument structure variation in Homeric Greek, in particular between constructions involving accusative or genitive second arguments. Section 4 is devoted to *akoúō* and its meanings and constructions in Homeric Greek, especially in connection with animacy of the stimulus. Section 5 provides a survey of the use of *klúō* and *punthánomai*. In section 6, we then discuss possible changes in the three verbs’ actionality in connection with verbal aspect, the function of construction variation with the three verbs, the shift from perception to cognition, and the role of embodiment. Section 7 summarizes our findings.

6.2 Experiential situations

Verbs of perception and cognition belong to the broader group of experiential verbs. Such verbs typically feature two participants, an experiencer and a stimulus. The former is the participant who experiences the situation, and is necessarily sentient and hence animate, while the latter is the trigger of the experiential situation.

Experiential situations are of different types: beside perception and mental activities, they also include bodily sensations, emotions, and volitionality. Being typically animate, experiencers share an important feature of agents. In the case of verbs of perception and cognition similarity with action verbs is even higher than with other experiential predicates, as such verbs feature experiencers that can often be conceived as controllers. As discussed in the literature, experiential situations can be construed as implying control by the experiencer to varying extents (see Luraghi & Sausa, 2015 and forthc.). In particular, verbs of perception such as ‘hear’ or ‘see’ can often imply an intentional activity, and acquire the meaning of ‘listen’ or ‘look’, as discussed in sections 3 and 5.

Possible stimuli display a wider referential range, as they can be equally animate or inanimate. Remarkably, with some groups of experiential predicates, animate stimuli can be construed as being more or less active. For example, Luraghi & Sausa (2015) have shown that in Homeric Greek verbs that indicate negative feelings feature interactive stimuli in connection with experiencers construed as controllers, while verbs that indicate desire or yearning feature non-controlling experiencers and non-interactive stimuli. This suggests that the animacy of the stimulus must be taken into account in the case of perception verbs as well. In any case, the stimulus of experiential verbs cannot be said to undergo any change of state, and verbs of this type have a relatively low degree of transitivity, no matter how the experiencer is construed.

6.2.1 Verbs of perception

Viberg (1984) classifies perception verbs based on three parameters: sense modality (which indicates how the stimulus is perceived, whether through sight, hearing, touch, taste or smell), subject/topic selection, and dynamic system. The parameter of subject/topic selection classifies verbs based on their tendency to select either the experiencer or the stimulus as their subject, thus assigning either participant a higher degree of topicality: experiencer-based verbs have experiencer subjects, while phenomenon-based verbs have stimulus subjects. All verbs treated in this paper are experiencer-based, as are the majority of experiential predicates in Ancient Greek. The dynamic system parameter is thus more relevant for our discussion. It is based on actionality (or lexical aspect), causativity and agentivity, and singles out two groups of verbs: experiences and activities. Basically, this corresponds to a distinction between uncontrolled states, experiences in Viberg’s terminology as with *see* or *hear*, and controlled activities, as with *look* and *listen*, and combines control with

lexical aspect.² Notably, however, this connection does not necessarily exist: in fact, while states are always non-controlled, activities can be both controlled and non-controlled. We will return to this issue again. Apart from possible control, states and activities share the feature of being atelic, hence of involving no change of state in a patient. As Viberg (1984) points out, both activities and experiences display non-prototypical transitivity. This is because experiences do not have an agent (they are uncontrolled), while activities refer to non-resultative events: as we note above, there is no patient that undergoes a change of state. As we show, *akoúō* can refer both to uncontrolled and to controlled situation: apparently, contextual disambiguation is sufficient. In several occurrences, *akoúō* is virtually synonymous with *klúō*, whose function is to indicate controlled activities.

However, activities and states are not the only types of situation indicated by *akoúō*. In a significant number of cases, *akoúō* can also refer to inchoative, telic situations. Such occurrences may indicate sudden perception, but most often they indicate the acquisition of some new information (section 4). When expressing telicity, *akoúō* most often features the aorist stem, and its meaning comes close to the meaning of *punthánomai* (see further section 5).

Dik & Hengeveld (1991: 237) discuss four different situations to which verbs of perception may refer. Their remarks clearly hold for *see* and *hear* in instances like those described by (i) and (ii) below, mostly for *see* and only to a limited extent for *hear* in (iii), and in the case of (iv) virtually only for *hear*.³ The four types of perception are quite different: while (i) and (ii) refer to concrete perception, (iii) and (iv) refer to acquisition of knowledge. In the case of (iii) acquisition of knowledge follows from perceptual evidence, while in the case of (iv) it does not.

i. Immediate perception of individuals, as in *I heard Luciano Pavarotti several years ago*. The verb specifies the relation between two participants, and refers only to the physical act.

ii. Immediate perception of state affairs, as in *I heard him singing at Carnegie Hall*. The verb specifies a relation between the experiencer and the state of affairs in which the (human) stimulus is involved. This construction requires simultaneity of the state of affairs described in the complement with the event of perception and does not allow the complement to be independently negated (cf. *I didn't hear him singing* vs. **I heard him not singing*).

² Similarly, Croft, 2012: 156 points to the difference between verbs that highlight the condition of attending to a stimulus such as *listen to* or *watch*, defined as 'inactive actions' (and corresponding to activities in Viberg's terminology), and 'genuine' mental state predicates, such as *hear* and *see*.

³ The authors do not provide a list of the verbs for which their discussion is relevant, except for remarking in a footnote that they do not consider verbs such as *witness*, Dik & Hengeveld, 1991: 256. See further below, fn. 4.

iii. Mental perception of propositional content, which consists in acquisition of knowledge by an experiencer, as in *I heard that Mary had been crying* (e.g., *I realized that from the sound of her voice*). Perception is indirect and concerns acquisition of knowledge made possible by what the experiencer knows based on what they see or hear. Remarkably, perception verbs in this construction are inchoative rather than stative, and do not convey their concrete meaning, but rather mean something like ‘realize’.

iv. Reception of the propositional content of a speech act, illustrated by *I hear you will probably sing in the Royal Albert Hall next week*.⁴ Here, the experiencer acquires knowledge from a third party. The verb is inchoative again, and means ‘learn’. It involves cognitive perception, and is not directly related to physical perception by the experiencer, but it depends on an external source. The original source can be specified (e.g., *I heard from John that Peter had been fighting*).

Both (iii) and (iv) do not require simultaneity and allow independent negation in the complement clause.

Dik & Hengeveld (1991) devote much of their discussion to the difference between (iii) and (iv), which, in our case, is not very relevant. Indeed, while (iii) is only marginally relevant for *hear*, (iv) is not relevant for *see*, at least in an oral culture such as was the society described in the Homeric poems.⁵ This is a consequence of specific perceptual modalities: as noted in section one, while one can hear something both physically as in (i) and (ii), and from an indirect source, as in (iv), this is impossible for seeing. Similarly, one can understand that an event has taken place by seeing its consequences (e.g., *I looked for John in the library and didn't find him there, so I saw he had left*). This is also possible for hearing, as shown in the example in (iii), but audible consequences are much less frequent than visible ones.

6.3 Construction alternation with perception and cognition verbs

In Homeric Greek, *akoúō* occurs only marginally with subordinate clauses. Most often, it takes a noun phrase as its second argument, and the same holds for *klúō* and *punthánomai*, as shown in Tables 1, 3 and 5. For this reason, we discuss variation between argument structure constructions in detail in this and the following sections.

Experiential predicates with experiencer subjects feature a variety of argument structure constructions *vis-à-vis* second argument realization. In particular, verbs

⁴ Example (4) is taken from Dik & Hengeveld, 1991. We have provided different examples for (1)–(3), because Dik & Hengeveld use the verb *see*.

⁵ In fact, type (iv) is possible for seeing when *see* is equivalent to *read*: *I see (from what I've read) that you're performing in the Royal Albert Hall next week*. But this cannot be attested in an oral, pre-literate culture. We owe this remark to Lachlan Mackenzie.

of emotion may occur in three different constructions: Nominative-Accusative, Nominative-Dative, and Nominative-Genitive (henceforth NomAcc, NomDat, and NomGen), verbs of thinking mostly occur in the NomAcc construction, and verbs of cognition (i.e., verbs that indicate knowledge and memory) display alternation between the NomAcc and the NomGen construction (see Luraghi & Sausa, 2017). Verbs of visual and aural perception take an intermediate position between verbs of cognition and verbs of thinking: while the verb *horáō*, *eídon* ‘see’, only occurs in the NomAcc construction, *akoúō* and *klúō* feature construction alternation, and may take either the NomAcc or the NomGen construction.

Traditionally, possible case alternation for the second argument of specific verbs is explained as due to semantic properties of individual cases. According to this view, the object of a verb is inflected in the genitive when it is only partly affected by the verbal meaning (Delbrück, 1901: 310). In other words, case variation is connected with the partitive meaning of the genitive: while the accusative indicates that a referent is totally affected, the genitive indicates that only a part of the referent is affected. Ingestion verbs provide a good example of this type of alternation, as shown in (1) and (2).

- (1) *óphra píoi* *óinoio*. (Hom. *Od.* 22.11)
 for drink:OPT.3SG wine:GEN
 ‘In order to drink some wine’.
- (2) *pîné* *te* *óînon*. (Hom. *Od.* 15.391)
 drink:IMP.2SG PTC wine:ACC
 ‘Drink the wine!’

In (1), the verb *píoi* ‘drink’ takes *óinoio* in the genitive as its object, while in (2) the same verb takes an accusative object, *óînon*. The difference between the two consists in the opposition total/partial as instantiated by variation between the accusative and the genitive, which is also known from other Indo-European languages. As argued in Conti & Luraghi (2014) for ‘ingestion’ verbs, the partitive genitive indicates that the verbal action refers only to a part of the patient (though the action affects this part completely): the partitive genitive has a clear quantifying function here, and case variation is not connected with referential properties of the object. In addition, case variation in (1) and (2) does not trigger any semantic difference in the verb’s meaning. In particular, the degree of transitivity of the verb remains the same, and the object undergoes a change of state, the only difference being that in (1) this only holds for a certain part of the referent.

The semantic difference brought about by case variation is connected with the independent meaning of the genitive and is typical of partitive cases cross-linguistically (see Luraghi & Kittilä, 2014), but it becomes unclear when one approaches case variation with verbs of perception and cognition. In general, with Ancient Greek

verbs that take non-accusative, second arguments are all low transitivity predicates, and case variation may trigger differences in the verbal meaning connected with degrees of transitivity (see Conti & Luraghi, 2014; Sausa, 2015). However, in the case of perception verbs, explanations of case variation based on degrees of transitivity or affectedness are hardly compelling. As a matter of fact, as pointed out in section 2, these distributional differences are not easily accounted for in terms of partial vs. total affectedness, as these verbs do not really imply that the second argument is affected at all by the situation. Indeed, perception verbs are all low-transitivity predicates, and their second arguments are not patients that may be conceived of as undergoing a change of state. Thus, it is not clear to what extent the partitive meaning of the genitive as shown in (1) and (2) can account for case alternation with perception or cognition verbs.

Furthermore, one could envisage meaning variation of verbs of hearing as connected to transitivity. As the same verbal roots can mean both ‘hear’ and ‘listen’, it might be tempting to conclude that the presence of a controlling agent in the second case brings about a higher degree of transitivity and hence case variation. However, as we will show in section four, constructional differences are either disconnected from possible control, or when they show connections, occurrences referring to controlled situations are more likely to take the genitive. This contradicts the expectations raised by the semantics of partitivity. A more promising observation is based on the distribution of the accusative and the genitive with these verbs depending on animacy of the stimulus. In particular, with verbs of hearing, according to Chantraine (1953) the distribution of the genitive and the accusative appears to be determined by animacy: there is a clear tendency for the accusative to occur when the second argument is inanimate, whereas the genitive is used both when it is animate and when it is inanimate. For this reason, in the following sections we discuss construction variation in connection with animacy.

6.4 *akoúō*

The meaning of the verb *akoúō* can change depending on certain specific contextual features. The total number of occurrences of *akoúō* in the Homeric poems is 181; among these, 134 feature the verb with a NP as second argument, as shown in Table 1.⁶ In most of the occurrences that do not feature an object or some other complement, a null object is inferable from the context, as in (3).

⁶ This figure does not include occurrences of adverbial genitives indicating the source of information, as discussed below in this section.

- (3) *hòs éphat' ou d' ára hoi*
 so say:AOR.MID.3SG NEG PTC PTC 3SG.DAT
kêrux apíthēsen akoúsas. (Hom. *Il.* 4.198)
 herald:NOM disobey:AOR.3SG listen:PTCP.AOR.NOM
 'He said so, and the herald did not disobey him having heard (him)'.

Table 1: Constructions of *akoúō*

| NO OBJECT | NOMACC | NOMGEN | NOMDAT | PP | INFINITIVE | SUB. CLAUSE | TOTAL |
|-----------|--------|--------|--------|----|------------|-------------|-------|
| 39 | 77 | 56 | 1 | 1 | 2 | 5 | 181 |

In Table 2, we summarize the distribution of different argument structure constructions. Note that while the NomGen and the NomAcc construction account for almost all occurrences, the NomDat construction also occurs once.

Table 2: Occurrences of *akoúō* with different argument structure constructions

| | TOTAL OCCURRENCES | ANIMATE STIMULUS | INANIMATE STIMULUS |
|--------|-------------------|------------------|--------------------|
| NOMGEN | 56 | 48 | 8 |
| NOMACC | 77 | 1 | 76 |
| NOMDAT | 1 | 1 | 0 |

Experiencers with *akoúō* are human beings, gods or, less frequently, animals. Stimuli can be of three types: (a) sounds (voices, calls, sounds produced by objects), (b) individual animate participants (human beings, animals, gods), and (c) states of affairs. In the last case, as shown in Table 1, states of affairs are most often not encoded in subordinate clauses: rather, we find the human participant who is most relevantly involved in the event also functioning as stimulus, with a dependent participle which encodes the predication (see below, examples (10)-(12) and (17); in (11) a participle modifies a referential null object). We will return on this construction when discussing specific occurrences.

6.4.1 Inanimate stimuli

Type (a) (inanimate) stimuli are encoded either in the genitive or in the accusative with no detectable semantic difference, as shown in (4)-(7). The verb, often in the aorist, indicates a sudden perception, and has an inchoative, rather than a stative meaning.

- (4) *kōkutoû d' êkouse kai oimôgês apò púrgou.* (Hom. *Il.* 22.447)
 shriek:GEN PTC hear:AOR.3SG and groaning:GEN from tower:GEN
 'But she (Athena) heard the shrieks and the groaning from the wall'.
- (5) *ou gâr pō sphin akoúeto laòs aütês.* (Hom. *Il.* 4.331)
 NEG PTC yet 3PL.DAT hear:IMPRF.M/P.3SG host:NOM war.cry:GEN
 'For their host had not as yet heard the war-cry'.
- (6) *ēúte párdalis... oudé ti thumôi tarbeî oudè*
 as panther:NOM NEG INDF heart:DAT fear:PRS.3SG NEG
phobeítai, epeí ken hulagmôn akoúsēi. (Hom. *Il.* 21.573–575)
 flee:PRS.3SG when PTC barking:ACC hear:SBJV.AOR.3SG
 'As a panther is neither afraid at heart, nor flees when she hears the baying of the hounds'.
- (7) *hōs gâr egō óp' ákousa theôn aieigenetáōn.* (Hom. *Il.* 7.53)
 when PTC 1SG.NOM voice:ACC hear:AOR.1SG god:GEN.PL eternal:GEN.PL
 'When I heard the voice of the eternal gods'.

In (7), the experiencer is human, while in (6) it is a non-human animate. Stimuli are inanimate, and indicate the human voice or animals' calls. Example (5) features one of the few occurrences of middle forms. Again, the stimulus is inanimate and is a sound produced by human beings, while the experiencer is an animate collective noun. In the Homeric poems, there are two more occurrences of middle voice with this verb, both in the *Iliad*, one with a genitive third person pronoun (15.199), and one with an accusative demonstrative (15.91). The genitive object has human reference, and the context suggests the meaning 'listen to' (controlled activity) for the verb, while the accusative object has inanimate reference, similar to the genitive in (5). Thus, voice does not seem to convey any relevant semantic difference with *akoúō*.

Apart from lower frequency of inanimates with NomGen, it is difficult to see any difference between the two constructions when they occur with inanimate nouns. In some cases, the choice seems highly idiosyncratic: the word *múthos* 'word, discourse', for example, always occurs in the accusative in the singular, but a few occurrences in the plural feature the genitive. In this connection, a particularly interesting occurrence is (8), which shows coordination of a genitive and an accusative object, both referring to animals' calls.

- (8) *mukēthmōu t' êkousa boôn aulizomenáōn*
 lowing:GEN PTC hear:AOR.1SG cow:GEN.PL lodge:PTCP.PRS.M/P.GEN.PL
oiōn te blēkhēn (Hom. *Od.* 12.265–66)
 sheep:GEN.PL PTC bleating:ACC

‘I heard the lowing of the cattle lying (in the courtyard) and the bleating of the sheep’.

Remarkably, metrical factors, often adduced as an explanation for unexpected morphological marking in the Homeric poems, do not play a role here, as the accusative *mukēthmōn* would have yielded the same metrical structure here. The two objects instantiate the two constructions, and show that they are equivalent in this context. Occurrences of genitive inanimate stimuli, besides those mentioned above in examples (2), (3), and (6), are *múthōn* ‘words’ (*Od.* 21.290, 292), *stonakhês* ‘cry’ (*Od.* 21.237, 383), and *phthoggês* ‘voice’ (*Od.* 12.198).

6.4.2 Animate stimuli

When animate participants are involved as triggers of perception (type (b) stimuli), we find occurrences that can be described as immediate perception of an individual (see Dik & Hengeveld, 1991: 237), as in (9).

- (9) *síga* *nûn, mḗ tís* *seu* *Akhaiôn*
 keep.silent:IMP.2SG now NEG INDF.NOM 2SG.GEN Achaean:GEN
állos *akoúsēi*. (Hom. *Od.* 14.493)
 other:NOM hear:SBJV.AOR.3SG
 ‘Keep silent now, so that no other Achaean can hear you!’

Type (c) stimuli can refer to immediate perception of an individual (type (i) in Dik & Hengeveld, 1991: 237–, cf. section 2.2), as in (10) and (11).

- (10) *ê* *ouk otrúnontos* *akoúete* *laòn* *hápanta*
 PTC not encourage:PTCP.PRS.GEN hear:PRS.2PL army:ACC all:ACC.PL
Héktoros? (Hom. *Il.* 15.506)
 Hector:GEN
 ‘Don’t you hear Hector encouraging the army?’

- (11) *allà klágxantos* *ákousan*. (Hom. *Il.* 10.276)
 but cry:PTCP.PRS.GEN hear:AOR.3PL
 ‘But they heard it (sc. the heron) crying’.

In (10), what is heard is the event of Hector encouraging the army: Hector, who is the participant responsible for bringing about the event, is encoded as the stimulus, and the event brought about by Hector is encoded by the participle *otrúnontos*. In (11), the stimulus is a non-human animate (a heron), which is referred to by a null object (it occurs in the immediately preceding context; see Luraghi, 2003: 169), and the act of crying is encoded by the participles *klágxantos*. The genitive inflection of

the participle indicates that a possible overt object would also be in the genitive. All occurrences of this type take the NomGen construction, except for (12), which features the only occurrence of the NomAcc construction with an animate stimulus.

- (12) *toùs nûn ei ptóssontas hup' Héktori*
 DEM.ACC.PL now if flee.cowering:PTCP.PRS.ACC.PL under Hector:DAT
pántas akoúσαι. (Hom. *Il.* 7.129)
 all:ACC.PL hear:OPT.AOR.3SG
 'If he were to hear now all of them cowering before Hector'.

Example (12) contains an object *toùs pántas* 'all (of the men)', which encodes the participant responsible for bringing about the event encoded by the predicative participle *ptóssontas*, similar to (10) with the genitive.

In various passages, *akoúō* indicates the controlled activity of listening. In this case, too, the stimulus may be animate or inanimate, and the verb most often features the NomGen construction. This is especially clear when imperative forms of the verb occur, as in (13) with the genitive and (14), the only occurrence of the NomAcc construction in an order.

- (13) *sù dê súntheo kaí meú ákouson.* (Hom. *Od.* 18.129)
 2SG.VOC PTC pay.attention:IMP.AOR.MID. 2SG and 1SG.GEN hear:IMP.AOR.2SG
 'Pay attention and listen to me!'

- (14) *hêso kaí állōn mûthon ákoue.* (Hom. *Il.* 2.200)
 be.seated:IMP.PRF.2SG and other:GEN.PL word:ACC hear:IMP.2SG
 'Remain seated, and listen to the words of other men'.

Even with verb forms other than the imperative the context may indicate reference to a controlled activity, as in (15).

- (15) *hestaótos mèn kalòn akouéin oudè éoiken*
 stand:PTCP.PRF.GEN PTC good:ACC hear:INF.PRS NEG seem.good:PRF.3SG
hubbállein. (Hom. *Il.* 19.79)
 interrupt:INF.PRS
 'It is appropriate to listen to someone who is standing, and it is not becoming to interrupt'.

In (13) the stimulus is expressed by a personal pronoun in the genitive, while in 0 the accusative encodes an inanimate stimulus. Both examples refer to direct perception of an individual entity in the terms of Dik & Helgeveld (1991), as does example (15): the stimulus is referred to by an indefinite null object (someone), which is modified

by a participle, similar to (11). Note however that *hestaótos* ‘standing’ refers to the situation in which the stimulus is involved, but it is not the object of aural perception.

Further occurrences in which the verb indicates a controlled event include other passages with imperatives (*Od.* 6.325, *Od.* 24.265, *Il.* 6.334), occurrences with the verb *ethélō* ‘want’ or adverbs that indicate obligation (*Il.* 6.281, *Il.* 15.199), and passages with descriptions of audiences listening to some speaker (*Il.* 2.98, *Il.* 19.256), and in general passages that suggest a controlled activity, such as example (36) discussed in section 5.2.

In several other occurrences in which we find type (c) stimuli, the verb refers to an uncontrolled event, and indicates acquisition of knowledge (type (iv) in Dik & Hengeveld, 1991: 238ff). In such cases, *akoúō* is equivalent to English ‘come to know, learn’, as shown by (16) and (17).

- (16) *è autèn pothésai kaí aphormēthéntos*
 or DEM.ACC.F miss:INF.AOR and depart:PTCP.AOR.PASS.GEN
akoûsai. (*Hom. Od.* 2.375)
 hear:INF.AOR
 ‘Either in case that she misses (me) or learns that (I) have departed’.

- (17) *all’ étôi keînos ge séthen zóontos*
 but PTC DEM.NOM PTC 2SG.GEN live:PTCP.PRS.GEN
akoúōn khaírei t’ en thumôi. (*Hom. Il.* 24.490–91)
 hear:PTCP.PRS.NOM be.happy:PRS.3SG PTC in heart:DAT
 ‘But he, learning that you are still alive, is happy in his heart’.

In (16) and (17), the experiencer does not perceive the situation directly, but relies on reports heard from someone else. Thus, *akoúō* no longer indicates the physical perception of hearing, but refers to the telic situation of learning some propositional content from hearing a report from someone else. In this type of occurrences, *akoúō* acquires the function of hearsay evidential. Indeed, the source of information is most often not specified: it can occasionally be indicated by a genitive NP with a human referent as in (18), but this only happens with indefinites, that is, uncertain sources. Notably, the difference between genitive of source (adverbials) and genitive stimuli (second arguments) remains clear, as shown in (19), where two genitive NPs in the two different functions co-occur.

- (18) *è autòs pareòn è állou*
 either DEM.NOM be.present:PTCP.PRS.NOM or other:GEN
akoúsas. (*Hom. Od.* 8.491)
 hear:PTCP.AOR.NOM
 ‘(As though) you had been present yourself, or had heard from someone else’.

- (19) *autàr Odussêos talasíphronos ou pot' éphasken,*
 but Odysseus:GEN stout.hearted:GEN NEG ever say:IMPRF.3SG
zōoû oudè thanóntos epikhtoníōn teu
 alive:GEN NEG dead:GEN mortal:GEN.PL INDF.GEN
akoúsai. (Hom. *Od.* 17.114–15)
 hear:INF.AOR
 ‘Yet concerning Odysseus steadfast heart, whether living or dead, he said he had heard from no man on earth’.

Another such example is *állou* in (20), which also contains an inanimate stimulus in the accusative.⁷ The same construction also occurs with *punthánomai*, cf. example (36).

- (20) *eí pou ópōpas ophthalmoîsi teoîsin è állou*
 if PTC see:PRF.2SG eye:DAT.PL POSS.2SG.DAT.PL OR other:GEN
mûthon akoúsas. (Hom. *Od.* 3.93–94)
 word:ACC hear:AOR.2SG
 ‘If you saw with your eyes or heard the word from someone else’.

This passage is also interesting because it contrasts knowledge acquired from sight with knowledge acquired from hearing. The former is clearly more reliable: indeed, knowledge from hearing can be acquired from someone else, as also shown in (18), in which the situation of hearing a report is contrasted by the situation of having taken part to an event in person. Note, too, that *ópōpas* ‘you saw’ is a perfect, and indicates a state, while *akoúsas* ‘you heard’ is an aorist, and indicates the very moment of learning: knowledge from sight is conceptualized as a lasting acquisition, while from hearing one can acquire information, but nothing is implied about its becoming part of permanent knowledge.

Occurrences in which *akoúō* takes an infinitive or a subordinate clause also refer to the acquisition of knowledge from some indirect source, as in (21) and (22).

- (21) *kaì sè géron tò prîn mèn akoúomen*
 and 2SG.ACC old.man:VOC DEM.ACC before PTC hear:PRS.1PL
ólbion eînai. (Hom. *Il.* 24.543)
 happy:ACC be:INF.PRS
 ‘You too old man, we know, were happy before’.

⁷ Note that we have translated *állou* ‘from, of another’ in (20) as indicating the source, and this is the most likely interpretation of this passage, but it could also be an adnominal genitive.

- (22) *Atreídēn dè kaī autoì̄ akoūete, nosp̄hin*
 son.of.A.:ACC PTC and DEM.NOM.PL listen:PRS.2PL away
eóntes, hós t' êlth' hós t' Aígisthos
 be:PTCP.PRS.NOM.PL how PTC go:AOR.3SG how PTC A.:NOM
emésato lugròn ólethron. (Hom. *Od.* 3.193–94)
 devise:AOR.MID.3SG terrible:ACC destruction:ACC
 ‘Concerning the son of Atreus, you too, though being far, know how he came, and how Aegisthus devised his terrible destruction’.

Example (22) contains an accusative adverbial, *Atreídēn*, which indicates the topic of the predication contained in the subordinate clause. A similar topic expression is also found with a prepositional phrase, *perì nóstou*, in (23).⁸

- (23) *hōs édē Odusēos egō̄ perì nóstou akousa*
 so PTC Odysseus:GEN 1SG.NOM about return:GEN hear: AOR.1SG
agkhoū, Thesprōtōn andrōn en pioni démōi,
 near T.:GEN.PL man:GEN.PL in rich:DAT land:DAT
zōō̄. (Hom. *Od.* 19.270–73)
 alive:GEN
 ‘Thus I heard, concerning his return, that Odysseus is near and alive, in the rich land of the Thesprotians’.

In example (24), the NomGen construction indicates indirect knowledge without the addition of a predicative verb form that encodes the event in which the stimulus is involved. As we will see later on, this meaning of the NomGen construction is frequent with *punthánomai*.

- (24) *dákru d' apò blephárōn khamádis bále*
 tear:ACC PTC from eyelid:GEN.PL to.the.ground throw:AOR.3SG
patrós akousas. (Hom. *Od.* 4.114)
 father:GEN hear:PTCP.AOR.NOM
 ‘Tears from his eyelids he let fall upon the ground, when he heard about his father’.

Finally, as shown in Table 2, the Homeric poems also feature one occurrence of a human stimulus coded by the dative in (25).

⁸ The adverbial status of the prepositional phrase becomes clear when one compares this passage with *Od.* 17.525, which does not contain it: *steútai d'Odusēos akousai agkhoū Thesprōtōn andrōn en pioni démōi, zōō̄* ‘And he declares that he has heard about Odysseus, near, in the rich land of the Thesprotians and alive’.

- (25) *dúnasai dè sù pántos'*
 can:FUT.2SG PTC 2SG.NOM everywhere
akoúein anéri kēdoménōi. (Hom. *Il.* 16.515–16)
 hear:INF.PRS man:DAT suffer:PTCP.PRS.M/P.DAT
 ‘But everywhere you can listen to a man that is in a sorrow’.

As argued by Ebeling (1885: 66), the contexts suggests that the verb here has another meaning, ‘fulfill a prayer’, also clear from the context in (26), which features a mismatch between the two constructions.

- (26) *hótti hoi ōk' ékouse mégas theòs*
 that 3SG.DAT quickly hear:AOR.3SG great:NOM god:NOM
euxaménoio. (Hom. *Il.* 16.531)
 pray:PTCT.PRS.M/P.GEN
 ‘(And was glad) that the great god had quickly fulfilled his prayer’.

In (26), the stimulus is referred to by the predicative participle *euxaménoio* ‘praying’, inflected in the genitive, and by the pronoun *hoi* ‘him’, in the dative. Another such occurrence mentioned by Ebeling (*Il.* 1.381) also features the participle *euxaménou* (genitive), but the co-referential pronoun *toîo* is in the genitive.

The NomDat construction is frequent in Homeric Greek, and it consistently features human second arguments. It is connected with verb classes that refer to various types of human interaction (see Sausa, 2015), such as ‘meet’, ‘trust’, ‘obey’, ‘fight’, ‘help’, and so on. The context in (25) suggests a meaning of *akoúō* which could easily fit into this group of verbs, that is, ‘fulfill a prayer’. Thus, one can view the occurrence in (25) as a sporadic extension of the construction connected with verbal semantics.

6.5 Hear, listen, learn

We have shown different contextual meanings of *akoúō*. In addition to the meaning “hear”, which can be considered basic, we have shown two secondary meanings, ‘listen’ and ‘learn’. We have shown that reference to a controlled activity of listening is indicated either by the occurrence of the imperative or by some other contextual feature. When the stimulus is an event, *akoúō* may indicate direct evidence through aural perception, or indirect evidence learned from hearsay. Concerning possible constructions, we have shown that variation does not bring about any semantic difference with inanimate stimuli. With animate stimuli, on the other hand, we almost only found the NomGen construction, both when the verb must be taken to have its basic meaning, and in the meanings of ‘listen’ and ‘learn’. Nevertheless, although infrequent, these meanings are also possible with the NomAcc construction. In this

section, we compare what we have seen for *akoúō* with the usage of two verbs that share its extended meanings, that is, *klúō* ‘listen’, and *punthánomai* ‘learn’, and show similar patterns of construction variation.

6.5.1 *klúō*

The verb *klúō* indicates the controlled activity of listening, and mostly occurs in formulaic contexts: out of 84 occurrences with a second argument, 35 contain imperative verb forms and the pattern shown in (27), 16 contain imperatives without a second argument, while 23 follow the formula *hōs éphato* ‘so s/he said’, as in (28).

(27) *kluthí* *meu*.
 hear:IMP.AOR.2SG 1SG.GEN
 ‘Listen to me!’

(28) *hōs éphat'*, *hoì* *d'* *ára* *toû*
 so speak:IMPRF.M/P.3SG DEM.NOM.PL PTC PTC DEM.GEN
mála *mèn klúon* *ēdè pítonto*. (Hom. *Il.* 14.133 and other six
 occurrences)
 readily PTC listen:IMPRF.3PL PTC obey:IMPRF.M/P.3PL
 ‘So he spoke, and they readily listened to him and obeyed’.

Attested constructions with *klúō* are shown in Table 3. As with *akoúō*, this verb most often occurs with a noun phrase as second argument and only infrequently with a subordinate clause. Occurrences in which it does not take a second argument are mostly imperatives.

Table 3: Constructions of *klúō*

| | NO OBJ. | NOMACC | NOMGEN | SUB. CLAUSE | TOTAL |
|-------------|---------|--------|--------|-------------|-------|
| <i>klúō</i> | 15 | 9 | 75 | 4 | 103 |

Table 4 shows the distribution of genitive and accusative stimuli with *klúō*. As with *akoúō*, the accusative is limited to inanimate stimuli, while genitive stimuli can be either animate or inanimate. Differently from *akoúō*, inanimate stimuli are much less frequent than animate ones, and there is no preference for accusative encoding, as they are divided in equal parts between the two cases.

Table 4: Occurrences of *klúō* with different argument structure constructions

| | TOTAL OCCURRENCES | ANIMATE STIMULUS | INANIMATE STIMULUS |
|--------|-------------------|------------------|--------------------|
| NOMGEN | 75 | 66 | 9 |
| NOMACC | 9 | - | 9 |

An example of the NomGen construction with an inanimate stimulus is (29).

- (29) *kékluté* *meu* *muthôn*. (Hom. *Od.* 10.189)
 hear:IMP.AOR.2PL 1SG.GEN word:GEN.PL
 ‘Listen to my words!’

This example is particularly interesting because it contains an imperative with an inanimate genitive stimulus, a pattern we have not found with *akoúō*.

An occurrence of *klúō* with the NomAcc construction is (30).

- (30) *ēē tin’* *aggeliēn* *stratoû* *ékluen*
 if INDF.ACC news:ACC army:GEN hear:IMPRF.3SG
erkhoménoio *hén* *kh’ hēmîn* *sápha*,
 come:PTCP.PRS.M/P.GEN REL.ACC.F PTC 1PL.DAT clearly
eípoi *hóte* *próterós* *ge púthoito*. (Hom. *Od.* 2.30–31)
 tell:OPT.AOR.3SG when first:NOM PTC learn:OPT.AOR.MID.3SG
 ‘Perhaps he has been listening to some news of the army returning, and now wants to report it to us, as he first learned (about it)?’

In comparison with *akoúō*, *klúōklúō* does not only display a high number of occurrences in formulaic or semi-formulaic expressions, it also shows a more limited range of meanings, being virtually restricted to controlled situations, and indicating activities, rather than states or inchoative situations. In fact, even in passages such as (30), one of two occurrences which refer to coming to know some information (the other one is *Od.* 3.42), the verb takes the second argument *aggeliēn* ‘announcement, news’, which is then specified by an adnominal genitive, so it refers to concrete perception of a report, and not to the acquisition of the propositional content of the report. This is indicated in the second part of the sentence by *púthoito* ‘he learned’ (see also below).

6.5.2 *Punthánomai*

The verb *punthánomai* indicates direct perception and acquisition of knowledge. This verb has a metrical variant (cf. Chantraine, 1942: 111), *peúthomai*, which supplies almost all occurrences of the present stem. It displays a similar range of constructions as *akoúō* and *klúō*, as shown in Table 5.

Table 5: Constructions of *punthanómai* and *peúthomai*

| | NO OBJ. | NOMACC | NOMGEN | PP | SUB. CLAUSE | TOTAL |
|--------------------|---------|--------|--------|----|-------------|-------|
| <i>punthanómai</i> | 20 | 25 | 19 | 1 | 4 | 69 |
| <i>peúthomai</i> | 6 | 8 | 0 | 0 | 2 | 16 |

Again, like *akoúō* and *klúō*, *punthánomai* (*peúthomai*) shows a pattern of construction variation connected with animacy. The distribution is closer to that of *akoúō*, as the NomGen construction can occur both with animate and with inanimate stimuli but with the latter the NomAcc construction is much more frequent. Animate stimuli occasionally also occur in the NomAcc construction: the number, although limited, is more relevant than with *akoúō*. Frequency of constructions is shown in Table 6.

Table 6: Occurrences of *punthanómai* and *peúthomai* in different argument structure constructions

| | | TOTAL | ANIMATE STIMULUS | INANIMATE STIMULUS |
|--------------------|--------|-------|------------------|--------------------|
| <i>Punthánomai</i> | NOMGEN | 19 | 15 | 4 |
| | NOMACC | 25 | 4 | 21 |
| <i>Peúthomai</i> | NOMACC | 8 | 0 | 8 |

The verb *punthánomai* can occasionally refer to direct perception. Even though sensory modality is not specified by the lexical meaning of the root, the context most often indicates that the verb refers to aural perception, as shown in (31). However, (32) suggests that this is not necessarily the case. Apparently, direct perception is connected with the NomAcc construction and inanimate stimuli, as in (31); an animate stimulus occurs in (32).

- (31) *eí pōs érga ídoimi brotôn enopén te*
 if ever work:ACC.PL.N see:OPT.1SG mortal:GEN.PL voice:ACC PTC
puthoímēn. (Hom. *Od.* 10.147)
 learn:OPT.AOR.MID.1SG
 ‘If I ever saw works of mortals or I heard the voice’.

- (32) *all’ aièn opíssō kházonth’ hōs epúthonto*
 but always backward give.ground:IMPRF.M/P.3PL when learn:AOR.MID.3PL
metà Tróessin Árēa. (Hom. *Il.* 5.702)
 among Trojans:DAT.PL Ares:ACC
 ‘But they always gave ground backward, when they realized that Ares was among the Trojans’.

In (31), *punthánomai* indicates a type of perception triggered by human voice, and is contrasted with *ídoimi* ‘I saw’, hence the implication that aural perception is involved. Other similar stimuli occur in *Il.* 15.379, 17.102, and 18.530. In (32), there is no contextual clue implying that perception modality is hearing rather than sight: rather, the choice of *punthánomai* leaves it unspecified.

More frequently, *punthánomai* indicates acquisition of knowledge, both with the NomAcc and with the NomGen construction. Occasionally, the stimulus can be indicated by a noun phrase that refers to the message, with its content in a further specification, as in (33). In some other occurrences, the pattern is the same as with *akoúō*: the verb refers to the acquisition of a propositional content, with the main participant encoded as stimulus and the event indicated by a predicative participle. Examples are (34) with the NomAcc construction, and (35) with the NomGen construction.

- (33) *ού μιν οίομαι ου δὲ πεπύσθαι*
 NEG 3SG.ACC think:PRS.M/P.1SG NEG PTC learn:INF.PRF.M/P
lugrēs angeliēs, hōti hoi phīlos ōleth'
 sad:GEN.F news:GEN.F that DEM.DAT dear:NOM die:AOR.MID.3SG
hetairos. (Hom. *Il.* 17.641–42)
 comrade:NOM
 ‘I do not think he had already known about the sad news, that his dear comrade died’.

- (34) *εί κεν ἐμὲ ζοῶν πεπύθοιτ' ἐπὶ*
 if PTC 1SG.ACC alive:ACC learn:OPT.AOR.MID.3SG at
nēusīn Akhaiōn. (Hom. *Il.* 10.381)
 ship:DAT.PL Achaean:GEN.PL
 ‘If he knew that I am alive at the ships of the Achaeans’.

- (35) *δύο δ' οὐ πῶ φῆτε πεπύσθην ἀνέρε*
 two PTC not PTC man:NOM.DU learn:PPF.M/P.3PL man:NOM.DU
kudalimō Thrasumédēs Antilokhos te
 famous:NOM.DU Thrasymedes:NOM Antilochus:NOM PTC
Patrōkloio thanōntos amúmonos. (Hom. *Il.* 17.377–379)
 Patroclus:GEN die:PTCP.AOR.GEN noble:GEN
 ‘Two men that were famous warriors, even Thrasymedes and Antilochus, had not yet known that noble Patroclus was dead’.

Example (33) contains the second argument *aggeliēs* ‘news, announcement’, similar to *aggeliēn* (in the accusative) with *klúō* in (30). Notably, the latter example also contains a form of *punthánomai* highlighting that information has been acquired, and not only listened to.

Like *akoúō*, *punthánomai* may take a genitive adverbial that indicates the source of information, as shown in (36) with the NomAcc construction (with *peúthomai*). In three formulaic passages (*Od.* 10.537, 11.50, 11.76) an adverbial genitive indicates the source of information, while the direct stimulus, i.e., the second argument of the verb, is omitted.

- (36) *polláki gâr tó ge mētròs epeútheto*
 often PTC DEM.ACC.N PTC mother:GEN.F learn:AOR.MID.3SG
nósphein akouōn (Hom. *Il.* 17.408)
 by.far hear:PTCP.PRS.NOM
 ‘I often heard that from my mother, listening [to her] secretly’.

A frequent function of the NomGen construction with *punthánomai* is to indicate the topic about which some information is acquired, as in (37). In other occurrences, the verb refers to a controlled situation, in which an experiencer/agent actively tries to inquire about someone or something, as in (38), in which the verb is followed by a subordinate clause.

- (37) *eis agorēn iénai, ópbra xeínoio*
 to square:ACC.F go:INF.PRS in.order.to guest:GEN
púthēsthe. (Hom. *Od.* 8.12)
 learn: SBJV.AOR.MID.2PL
 ‘Go to the square in order to learn about the guest’.

- (38) *dē tot’ egōn hetárous proíein*
 PTC then 1SG.NOM comrade:ACC.PL send:INF.PRS
peúthesthai ióntas, hoí tines
 learn:INF.PRS.M/P go:PTCP.PRS.ACC.PL DEM.NOM.PL INDF.NOM.PL
anéres eîen epì khthonì. (Hom. *Od.* 9.88 = 10.100)
 man:NOM.PL be:OPT.PRS.3PL in land:DAT
 ‘I sent forward my comrades to go and learn about the people who lived in that land’.

When the verb does not take a second argument, it mostly indicates learning through an intentional action as in (39).⁹

⁹ Example (39) contains an occurrence of *peúthomai*. Note that the wider context could also support an intentional reading of the verb.

- (39) *ouk ídon, ou puthómēn, allā stónon oíon*
 NEG see:AOR.1SG NEG learn:AOR.MID.1SG but groaning:ACC alone:ACC
ákousa kteinoménōn. (Hom. *Od.* 23.40–41)
 hear:AOR.1SG slay:PTCP.PRS.M/P.GEN.PL
 ‘I did not see, I did not inquire; I only heard the groaning of men that were being slain’.

Example (39) contrasts the activity indicated by *punthánomai* with sensory perception. The speaker, Penelope’s nurse Eurycleia, has not acquired knowledge by direct visual perception, nor has she intentionally tried to acquire it: she has evidence from hearing and knows that killing must have happened, but cannot explain how.

6.6 Discussion

We have discussed several occurrences that illustrate the use of the three verbs *akoúō*, *klúōklúō* and *punthánomai* and the patterns of construction variation. In this section, we discuss the distribution of aspectual stems in relation to the verbs’ actionality, and show that the three verbs differ in the extent to which they can have an atelic, inchoative, or resultative meaning. We then turn to construction variation, and compare the three verbs with other verbs of perception and cognition. Finally, we discuss the role of embodiment in the semantic extension of perception verbs to cognition.

6.6.1 Aspect and actionality

We have argued that perception verbs can indicate both states and activities, that is, atelic situations. In addition, we showed that *akoúō* can have an inchoative meaning and refer to a telic situation in which the experiencer acquires knowledge. The verb *klúō* refers to the controlled activity of listening, while *punthánomai* most often refers to the telic situation of acquiring information. In this section, we show how different actionalities are matched by verbal aspect, and how they are kept distinct by lexical features of the three verbs. The distribution of aspectual stems for the three verbs is shown in Table 7. We also add *peúthomai*, whose occurrences must be counted as part of the total occurrences of *punthánomai* (see above, under *punthánomai*).

Table 7: Distribution of aspectual stems

| | PRESENT STEM | AORIST STEM | PERFECT STEM | FUTURE | TOTAL |
|--------------------|--------------|-------------|--------------|--------|-------|
| <i>akoúō</i> | 64 | 115 | 0 | 2 | 181 |
| <i>klúō</i> | 53 | 50 | 0 | 0 | 103 |
| <i>punthánomai</i> | 2 | 46 | 9 | 11 | 68 |
| <i>peúthomai</i> | 16 | 0 | 0 | 0 | 16 |

As shown in Table 7, *punthánomai* is the only verb that features all aspectual stems. In particular, it is the only one that has perfect forms. The Homeric perfect has a resultative meaning, and indicates a state that results from a change of state. Perfect forms of *punthánomai* can be translated as ‘know’ but, contrary to *oída* ‘know’, which simply indicates the state of being conscious or having some expertise (see Luraghi & Sausa, 2017), these occurrences imply that knowledge has been achieved as the result of having been informed, or often of having actively sought information from some source.

Aorist forms, both with *akoúō* and with *punthánomai*, most often indicate sudden perception, or acquisition of some new information, and indicate telic, inchoative situations, in line with the perfective aspectual meaning of the aorist. While with *punthánomai* the acquisition of information is often actively pursued, and the situation is controlled, as in (39), this is never the case with *akoúō*, which indicates spontaneous events, both in cases of concrete perception, and in cases of acquisition of some propositional content. Notably, *akoúō* never occurs in the perfect. This does not mean that it cannot indicate a state: indeed, this is the basic lexical aspect of perception verbs when indicating uncontrolled situations, as argued in Viberg (1984). Cases in which *akoúō* occurs in the present stem (imperfective) can indicate states, but most often these are cognitive states, rather than concrete perception. In these cases, the verb can be translated as ‘know’. From the point of view of actionality, they are similar to occurrences of *punthánomai* in the perfect, without the resultative component: while with the latter verb knowledge is acquired as the result of having sought information, with *akoúō* it is simply the effect of perception, most likely with a habitual nuance. We have argued that *akoúō* can mean ‘listen’. In such cases, it denotes an activity: its actionality is atelic, and is often matched by imperfective aspect as indicated by the present stem. Occasionally, *punthánomai* (*peúthomai*) can also indicate an activity, in which the present stem has a durative meaning (it indicates the activity of seeking information from another party).

The verb *klúō* occurs with the same frequency in the present and in the aorist. In the case of this verb, the distribution of verbal mood is also significant. Indeed, occurrences of the aorist stem are almost all in the imperative, while the present stem features prominently in constructions like the one in (28). This distribution is in accordance with the fact that the verb indicates an activity, hence an atelic event, which is more coherent with imperfective aspect, while perfectivity in the imperative gives prayers and orders a stronger urgency.

6.6.2 The function of construction variation

We have shown that the NomAcc/NomGen alternation is typical of the syntactic behavior of the three verbs analyzed here. With all three verbs, inanimate stimuli can occur both in the NomAcc and in the NomGen construction. Construction variation

does not indicate any semantic difference, at least with *akoúō* and *klúō*. Nevertheless, animate stimuli are very infrequently encoded by the NomAcc construction.

More specifically, the frequency of the NomAcc construction with *akoúō* is rather high as compared with the NomGen construction (77 occurrences vs. 56). The verb can indicate states, activities and inchoative events, but this does not seem to be connected with either construction. In fact, even though the genitive displays more variation, we also found one occurrence with an imperative and one which indicates acquisition of knowledge with the NomAcc construction. The fact that the genitive more frequently displays the whole range of semantic variation depends on the higher likelihood that animate participants are being listened to, or being learned about. In a limited number of occurrences, the genitive can also indicate the source of information. In such cases, it is syntactically an adverbial, as shown by the possible co-occurrence of another genitive NP functioning as stimulus (hence as argument). Furthermore, the verb *akoúō* also occurs once in the NomDat construction with the meaning of ‘listen to, fulfill (a prayer)’. This meaning of the verb explains the occurrence of this construction, being compatible with the meaning of the NomDat construction itself, which is strongly connected with interaction between human participants in Homeric Greek (see Luraghi & Sausa, 2015; Sausa, 2015).

Like *akoúō*, *klúō* also occurs in the NomAcc construction with inanimate stimuli, and in the NomGen construction both with animate and with inanimate ones. In the case of this verb, not only the meaning, but also the frequency of the two constructions with inanimate stimuli is the same. Animate stimuli occur only in the NomGen construction, which is by far the most frequent construction with this verb (75 vs. 9 occurrences).

In the case of *punthánomai/peúthomai*, there seems to be a partial semantic motivation for construction alternation, as the NomAcc can occur both when the verb indicates direct perception, and when it indicates acquisition of knowledge. The NomGen construction, which, similar to the other two verbs, is preferred with human stimuli, is limited to the second meaning.

Summing up, construction variation has a very limited semantic function: basically, a difference in meaning only occurs with cases in which *punthánomai* indicates direct perception, which are limited to the NomAcc construction, and with the sporadic occurrence of the NomDat construction with *akoúō*, which triggers a special meaning of the verb. In other occurrences, construction alternation is triggered only by referential properties of the stimulus, whereby this only happens for animate stimuli, as inanimate ones can occur in either construction.

If we now broaden our observations to construction alternation with other experiential predicates, it is remarkable that it does not pattern in the same way. In particular, with verbs of cognition, alternation between the NomAcc and the NomGen construction may trigger some semantic difference in the verbal meaning, as with *oída* – or not, as with *mimnḗskomai* – but in any case, it is not connected with animacy (see Luraghi & Sausa, 2017). Among perception verbs, verbs of seeing display a different

behavior, as they do not allow construction variation, but virtually only occur with the NomAcc construction. Verbs of hearing, in spite of being characterized by a special pattern of construction variation, seem to be closer to verbs of cognition than verbs of seeing. Indeed, as we have seen in sections four and five, verbs of hearing, and in particular *akoúō* and *punthánomai*, do not only indicate perception, but also a complex cognitive activity, and the fact that they share, to some extent, the constructional properties of cognition verbs is a reflex of their meaning. In turn, the connection of construction variation with animacy, rather than being semantically motivated by some implications of partitivity, as has been suggested (cf. section 3), seems to be a common feature that singles out these three verbs as a coherent group in the wider field of experiential verbs.

6.6.3 Perception, cognition and embodiment

In the discussion of *punthánomai*, we have shown that *akoúō* frequently indicates acquisition of knowledge, and that it also often indicates that the new information does not derive from direct perception, but rather from hearsay. In this evidential function, *akoúō* is contrasted with *hóraō/ eîdon* ‘see’, which indicates knowledge deriving from direct visual perception. As we have argued, imperfective forms of the verb indicate a cognitive state, whereby the experiencer knows something that s/he has repeatedly learned from indirect sources. From the point of view of embodiment, it could be tempting to connect the meaning ‘learn’ with *akoúō* to the ‘MIND-AS-BODY’ metaphor mentioned above, by which knowledge is metaphorically understood as (a kind of mental) vision. In this framework, the polysemy of ‘hear’ and ‘learn’ could be explained as learning being metaphorically understood as (mental) hearing. However, we would like to suggest a different and simpler explanation. In our opinion, the meaning ‘learn’ conveyed by *akoúō* depends on a pragmatic inference: a person who hears some report acquires its propositional content. Note that this explanation can easily also apply to the extension of ‘see’ to ‘know’: someone who has seen something knows it. Common knowledge of perception modalities also explains why ‘see’ indicates certain knowledge, while ‘hear’ indicates knowledge by hearsay, as seeing is only possible in person, while hearing is possible both directly and from secondary sources.

This is not to say that the extension of perception verbs to cognition does not reflect embodied processes: in fact, pragmatic inference is based on our own experience of perception, and of the ways in which different perception modalities can be activated, and as such is fully embodied. Notably, pragmatic inference is a “lighter” explanation, that does not require positing a conceptual metaphor whose universality is far from being demonstrated.

Neither *klúō* nor *punthánomai* are used as evidentials in Homeric Greek. They both specialize in the denotation of controlled situations, brought about intentionally by an

experiencer/agent, and intentionality does not match the expression of the speaker's attitude toward the propositional content of an utterance. In fact, *punthánomai* can also indicate uncontrolled perception, but note that such occurrences only refer to direct perception, and not to indirect acquisition of knowledge from indirect sources.

6.7 Conclusion

In this paper, we have provided a discussion on the syntax and semantics of *akoúō* 'hear' in Homeric Greek in comparison with *klúō* 'listen to' and *punthánomai* 'learn'. Our aim has been two-fold. In the first place, we have discussed construction variation and tried to find its possible triggers. In the second place, we aimed to detect the connection between two experiential domains, i.e., perception and cognition, based on embodiment.

In section 2, we discussed experiential situations, arguing that they can be variously construed in terms of control and actionality. We have focused on peculiarities of perception verbs and on features of participants, based on the treatment of perception verbs by Viberg (1984) and the discussion carried out by Dik & Hengeveld (1991) on different types of perception situations, in particular, direct and indirect perception through hearing.

Then, we have provided some background information on argument structure variation in Homeric Greek, in particular between the NomAcc and NomGen constructions (in section 3). We argued that NomAcc/NomGen alternation typical of perception verbs in Homeric Greek can hardly be connected with the partitive meaning of the genitive; however, we found a connection between animate stimuli and the NomGen construction.

In section 4, we analyzed the meanings of *akoúō* in different constructions considering various parameters. We have observed that animate stimuli are almost exclusively encoded by the NomGen construction, with one occurrence of the NomAcc and one of the NomDat construction. With inanimate stimuli, *akoúō* shows NomAcc/NomGen alternation with no detectable semantic difference. We have argued that contextual factors can trigger different meanings of *akoúō*. In particular, the verb can indicate a controlled or uncontrolled situation, or it can refer to the situation of learning some propositional content from hearsay. In such occurrences, *akoúō* is contrasted with *horáō/eídon* 'see' in terms of different degrees of evidentiality.

We have devoted section 5 to the syntax and semantics of *klúō* and *punthánomai*, showing that *klúō* mostly occurs in the NomGen construction, often in the imperative form, and indicates the controlled activity of listening. As with *akoúō*, the accusative is limited to inanimate stimuli, while genitive stimuli can be either animate or inanimate, even though genitive stimuli are much more frequently animate. The verb *punthánomai/peúthomai* indicates acquisition of knowledge and, to a limited extent, direct perception. Similar to the other two verbs, construction alternation is

connected with animacy, but there is also a partial semantic motivation for it, as direct perception can only be expressed through the NomAcc construction, including with animate stimuli. To the contrary, acquisition of knowledge can be indicated by both constructions. Contrary to *akoúō*, *punthánomai* mostly denotes a controlled situation, and implies that acquisition of knowledge is actively pursued by an experiencer/agent.

In section 6, we discussed the data presented in the previous sections, and compared the three verbs in terms of actionality, construction variation, and possible evidential function. Concerning the interaction between aspect and actionality, we argued that inchoative situations are mostly indicated by the aorist stem with *akoúō* and *punthánomai*, while stative situations are characterized as resultative with *punthánomai*, hence by the perfect stem, while with *akoúō* the present stem indicates that there is no such implication. The verb *klúō* indicates an atelic activity, hence the occurrence of the present stem. The aorist is also frequent, but virtually limited to orders. Construction variation with these verbs is significant only to a very limited extent in the case of *punthánomai*. In the majority of occurrences, the trigger is animacy of the stimulus, but this is not connected with other semantic features. Finally, with regard to the overlap between the domains of perception and cognition which results from the extension of the meaning of *akoúō* from hearing to learning and acquiring knowledge we have argued that, rather than advocating the ‘MIND-AS-BODY’ metaphor, this is a consequence of pragmatic inference, based on our bodily experience of different perceptual modalities.

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