



The semantic development of IE **weid-* to the meaning ‘know’ and the possible contrast with IE **gneh₃-*

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Abstract

This study is an attempt to trace the semantic development of the IE root **weid-* and the possible contrast with the lexical pair **gneh₃-*. The analysis covers cross-linguistic comparison assessed diachronically in connection with historical linguistic phenomena and synchronically by the examination of two particular Greek authors, Homer and Plato, and some examples in the use of living languages such as Spanish, French and German.

Keywords: Indo-European; lexical pairs; polysemy; verbs for “to know”.

1. Introduction¹

In the reconstruction of proto-languages the process of linguistic comparison between words invites us to reconstruct hypothetical meaning. This invitation, however, is full of conditions and risks. In this paper I will attempt to discover the semantic development of the IE root **weid-* ('see'), embracing the difficulties involved in such a project. In view of the impossibility of a direct and independent access to IE semantics, I will

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cover the analysis from cross-linguistic comparisons in their diachronic and synchronic dimension.

In the first part of the paper I will evaluate the process whereby words that originally refer to the senses come to refer to knowledge. To this end, I will consider the characteristic polysemy of *weid- in interaction with other synchronic developments pointing to metaphorically structured semantics. In the second part I will concentrate on the question of aspect since perfect-tense type *woid-a raises the question of what exactly the IE "perfect" is and how it is relevant in the evaluation of meaning. I will support this analysis with Bartolotta's (2005) study of the matter on Homer. Thirdly and finally, I will discuss the possible contrast between *gneh₃- and *weid- by evaluating in particular the cases of the Greek verbs *γιγνώσκω* and *οἶδα* as compared to other lexical pairs for the verb "to know" in modern European languages. In order to make a systematic comparison, I determine the value and effectiveness of the standard criteria of distinction between *knowledge by acquaintance* and *knowledge of a fact*, which, as I will suggest, is proved to adjust better to the European languages than to Greek.

In general, this study raises more questions than it answers. In addition to all the obstacles and extralinguistic elements involved in the problem of meaning, the present case seems particularly difficult since the linguistic treatment of lexica related to knowledge not only engages the analysis on a historical and cultural level, but also on a philosophical and epistemological level. Accordingly, some of the challenging questions cannot be answered within the limits of a linguistic analysis. In these cases, I tend to propose possible solutions or approaches, not without acknowledging that the issue might be inherently problematic, and therefore inconclusive.

2. Metaphorically structured polysemy

In what follows, it will be assessed whether the characteristic polysemy of the stem *weid-/woid-, in interaction with other synchronic developments, could satisfactorily be accounted for by metaphorical semantic patterns of change from particular to general.

Linguists have tended to limit the comparative analysis to the phonological and morphological aspects of language; in

fact, since semantic notions “are entangled in the extralinguistic ‘substance’” (Benveniste, 1971: 264) and governed by the principle of arbitrariness, there is no direct access to it. But even though the access seems limited and indirect, some alternative paths exist. Indeed, historical studies have registered enough evidence to map out systematic semantic changes pointing to synchronic semantic interconnections. “Through a historical analysis of ‘routes’ of semantic change, it is possible to elucidate synchronic semantic connections between lexical domains; similarly, synchronic connections may help clarify reasons for shifts of meaning in past linguistic history” (Sweetser, 1990: 46). One of these “routes” is traced by the way in which we tend to construct meaning. According to Lakoff & Johnson (1981), our conceptual system is largely shaped by metaphorical interconnections. Naturally, the access to this process of association is our immediate experience. Our conceptual system is therefore grounded by our direct experience with the physical world, and it is projected to a more abstract level metaphorically: “we typically conceptualize the nonphysical in terms of the physical—that is, we conceptualize the less clearly delineated in terms of the more clearly delineated” (Lakoff & Johnson, 1981: 59). This pattern, extending the semantic field of a lexical domain from the experience of immediate contact with the concrete to a more abstract and mediated realm, seems to be a source of the phenomenon of polysemy, which accounts for one word to have multiple and related meanings. “Polysemes are etymologically and therefore semantically related, and typically originate from metaphoric language” (Ravin & Leacock, 2000: 2). The first condition that raises the question of metaphorically structured polysemy is fundamental, for while the phenomenon of polysemy demands a basic semantic field, metaphor requires a sufficient degree of dissimilarity to produce comparison. “The essence of metaphor is understanding and experiencing one kind of thing in terms of another” (Lakoff & Johnson, 1981: 5). In view of this, I will consider to what extent the polysemy of *weid- can be fairly accounted for by metaphorical conceptualization.

Based on the semantic pattern already discussed, intellectual operations of the mind will tend to be identified with physical bodily operations. Some mind-as-body metaphors expressed by IE languages are “touching is perception”: the Latin *capiro* (*percipio*) and *prehendo* (*comprehendo*) ‘seize, understand’, French *comprendre*, Spanish *comprender* ‘understand’, “hearing is understanding”: PIE *kleu-, Greek *κλίω* ‘hear, perceive’, Lat.

clueo 'hear, be esteemed', Skt. *çrnoti* 'he understands', Danish *lystre* 'obey'; "observation is thinking": PIE *spek-, Latin *specio*, *specto*, *specular* 'observe', Greek (metathesized) *σκέπτομαι* 'look, consider', Spanish *especular*, English *speculate* 'think, reflect'; "tasting is knowing": Latin *sapere* 'taste, know', French *savoir* 'know', Spanish *saber* 'taste, know'; "seeing is knowing": PIE *weid- 'see', Latin *videre* 'see', Greek *οἶδα* 'I know', Gothic *wait* and German *wissen* 'know', and English "wit" and "wise". As the paper deals particularly with the semantic development from the root *weid-, primarily referring to sense perception and secondarily to intellectual operations, I will shortly consider the case of *sapere* in the hope that it will shed some light on the metaphorically constructed semantic process.

At an early stage, even before its association with the Greek *σοφία*, *sapiō sapere* refers to the function of the sense of taste (more rarely of smell) also extending to the ability of good judgement. "Of all the five senses, 'taste' is the one most closely associated with fine discrimination, hence the familiar secondary uses of words for 'taste, good taste' with reference to aesthetic appreciation" (Buck, 1949: 1029). Indeed the Latin *gustus*, the subjective experience of taste, together with the French *goût* and Italian and Spanish *gusto* designates not only taste in food, but also in all areas of art. As a result, a man of good taste refers to a person that has developed informed aesthetic and intellectual personal preferences. In the case of *sapere* the metaphorical pattern structuring polysemy seems evident. "The normal functioning of one sense organ is extended to the functioning of all sense organs, to which is added the intellectual organ" (Luck, 2000: 75). Hence the possible identification of the operation of *sapere* with *animus*, the active intellectual capacity of reason, as it appears in L. Accius (fr. 296): "Sapimus animo, fruimur anima: sine animo anima est debilis". Accordingly, *sapientia* lies in the seat of *animus*, the *pectus*: "tum pauor sapientiam omnem exanimato expectorat" (Ennius, *Alcmeo* 17). Such is the nature of *sapientia* and thus it becomes as wide in meaning as the Greek *σοφία*, which can be associated to cleverness, intelligence, skilfulness, learning, and wisdom. Furthermore, *sapientia* can even correspond to Latin *scientia*. As Seneca (*Ep.* 89.5.1) observes in his examination of the difference between *sapientia* and *philosophia*, "Sapientiam quidam ita finierunt ut dicent divinorum et humanorum scientiam". Actually, this is the sense that better suits the meaning of the Spanish verb *saber*. The verb *saber* designates the kind of knowledge of facts

acquired by causal association, that is to say, the scientific knowledge that the Latin *scire* seems to designate.

At any rate, the gradation of meaning extending from one particular sense to the intellect should be understood metaphorically inasmuch as the activities at stake are proved to be different enough to be compared and similar enough to be associated. Strictly speaking “tasting” is not ‘knowing’, nor knowing is a kind of tasting. Nevertheless, the normal operation of the sense of taste is assimilated as an intellectual operation on the base that they are both active forms of discrimination regarding an object that, being more concrete or more abstract, moves from perception to intellection.

As contrasted with the sense of sight, the sense of taste, together with the sense of touch, tends to be related with subjective states: “distance is connected with objectivity and intellect, closeness with subjectivity, intimacy, and emotion. Vision and hearing are distant senses, while taste and touch require actual physical contact with the thing sensed” (Sweetser, 1990: 44). This is one possible way to understand the metaphor. For in the analysis of the polysemy of **weid-*, ‘see’, and ‘know’, the mind-as-body “seeing is knowing” metaphor gives place to a meaning interpretable in two different directions: i) Seeing with the mind (Sweetser, 1990), and ii) knowing with the body (Hintikka, 1974; Johnson, 1987). i) The sense of sight must be distinguished from other senses of general perception; it is indeed the most informative of all of them since it is capable of capturing numerous and various qualities, such as shape, colour, and motion. Apparently, this is how Aristotle understood it, for he declares in *Metaph.* 1.980a: “we prefer sight [$\tauὸ ὄρᾶν$], generally speaking, to all the other senses. The reason of this is that of all the senses sight best helps us to know things [$μάλιστα ποιεῖ γνωρίζειν$], and reveals many distinctions [$πολλὰς διαφορὰς$].”² In fact, sight is the only sense that offers such a vast range of data from the distance. According to Sweetser (1990: 37-8), the metaphor is mainly structured by the relationship between the subject and the object, which in the process of seeing can focus on the object controlling it. It is the case that only vision can select and target its object separating it from a wider field of perception. Similarly, mental activity proceeds by

² Trans. by Hugh Tredennick. Cambridge, MA, Harvard University Press; London, William Heinemann Ltd 1933, 1989.

taking control and possession of its object, like it is expressed by the Latin words *capere* 'seize', *prehendere* 'grasp, catch', and by separating it, expressed by Latin *cernere* 'separate, discern', *scire* 'divide, distinguish, know'. In accordance with this, it can be said that there are mainly two distinctive features structuring the metaphor "seeing is knowing": the range of information perceived and the quality of objectivity of the process.

However, there is another possible approach covering the metaphorical structured polysemy between "see" and "know". ii) This approach, rather than relating the process of seeing to cognitive operations, emphasizes the rational activity as an operation of the body. "By using the term 'body' I want to stress the nonpropositional, experiential, and figurative dimensions of meaning and rationality" (Johnson, 1987: xxxvii). Mark Johnson (1987), in the attempt to reevaluate meaning beyond propositional structures of thought, discusses with the tradition of Objectivism, which evaluates intellectual operations as purely abstract. Our rationality is embodied, claims Johnson, determined by the physical conditions of movement, space, and time. To that extent, the metaphorical meaning of "seeing is knowing" is more likely to point to the direct, not mediated, and experiential quality of perception given in intellectual operations. Accordingly, this polysemy will be metaphorically structured on the feature of experience and immediacy characteristic of sense perception. In this regard, it seems pertinent to draw attention to what Hintikka (1974), together with other critics, regarding the behaviour of verbs of cognition in Greek literature, has identified as a "goal-directed model of knowing". This model tends to level the intellectual activity of knowledge with the rest of the sensory process, as if "he knows" was equivalent to "he sees". "A preference of the direct-object construction with verbs of cognition thus means a tendency to think of cognitive matters from the point of view of someone's personal acquaintance-situation" (Hintikka, 1974: 20). In fact, while the direct-object construction relates the subject directly with one existing object, the construction with subordinate clause assigns a proposition, which can be true or false.

Of course, none of these interpretations of the metaphor is more accurate or correct than the other; it seems in fact that both the intentional value of sight and the particular state of the subject are factors defining the polysemic nature of this root. The following section should clarify this point.

3. Polysemy of *weid- in terms of aspect

In view of the fact that we can reconstruct for IE not just *weid- meaning 'see', but also a perfect form *woid- (o-grade) meaning 'know', common to Greek, Sanskrit, Germanic, and Slavonic, raises the question of what exactly was IE perfect and how its particular status can lead us to reconstruct meaning. For one thing, it would be incorrect to evaluate this form in terms of tense since the paradigm of the perfect is what falls within the category of PIE "stative". Stative verbs, as contrasted with eventive verbs, would designate those actions that inherently indicate condition or situation rather than action in progression, such as the conspicuous cases of *lie*, *die*, *sit*, *be*, *know*. "Le rôle propre du parfait est en effet d'exprimer l'état" (Chantraine, 1927: 4). As for describing state there is no relevant distinction between passiveness and activeness, nor a possible time contrast³; both categories of voice and tense are not applicable to these kind of verbs. Stative verbs are said to express 'present' only in the sense that English present tense designates state, in which case a tense distinction becomes irrelevant (Cf. Sihler, 1995: 442). As Chantraine (1927: 16) affirms, "Le parfait se situe généralement dans le présent". But not a present resulting from a past action, which Chantraine identifies as "resultative". Thus, "Le parfait n'est pas 'un présent dérivé', mais un présent d'une spécie particulière qui exprime l'état acquis, au lieu de peindre le développement de l'action". Indeed, the perfect originally designates the state of the subject rather than the direction of a consummated action towards an object, later related to the question of transitivity. As the stative model starts operating as a tense-system in the IE daughter languages, the nature of the distinction between eventive and stative ceases to be aspectual and becomes temporal, then adopting the categories correspondent to tense. Nevertheless, some relics exist that retain the original sense. Amongst these perfect forms "with present meaning" usually designating internal operations of the subject on an intellectual level (such as Greek *μέμνημαι* and Latin *novi*

³ This is the general posture regarding the aspectual distinction between stative and eventive. Nonetheless, the fact that it was later reinterpreted in connection with past action suggests something different. "We should note that this shift to past reference offers support for the notion that the perfect originally referred to the state *following an action in the past*, and was not just a stative". (Clackson 2007: 122).

and *memini*) and emotional level (such as Latin *odi*), *oīδα* accounts for a substantial example.

In consideration of the fact that any possible contrast between the stems **weid-*, **wid-* and **woid-* should be regarded as aspectual rather than temporal, it is necessary to set the adequate parameters to evaluate an internal distinction of the root **weid-* in terms of meaning depending on (\pm) stative. In a revealing study, Annamaria Bartolotta (2005) analyses the occurrence and behaviour of **wid-* in the aorist *εīδov* and **woid-* in the perfect *oīδα* present in Homeric poetry as bearing witness of a major diachronic development she characterizes as a typological change from “active-stative system” to a “nominative-accusative system”. To reach this conclusion Bartolotta departs from three relevant features present in Homeric poetry: i) although both forms correspond to one lexical entry, *oīδα* takes a DP-object in genitive and accusative when the form *εīδov* only takes a DP-object in accusative, ii) the instances in which *oīδα* takes genitive are considerably reduced from the Iliad to the Odyssey (and in Classical literature are near-zero), iii) the contextual distribution systematically engages the perfect *oīδα* with the mind and the aorist *εīδov* with the eyes. In order to articulate her theory, Bartolotta considers the phenomenon of polysemy of the IE root **weid-* as a gradual process of “meaning-split” between the less stative aspect of the zero-grade stem **wid-* in *εīδov* with a perceptive meaning of sight, and the more stative aspect of the o-grade stem **woid-* with an intentional meaning of sight. As a matter of fact, this would be in accordance with the distributional contexts (iii) and the morphosyntactic and aspectual differentiation (i). The relationship between *oīδα*+genitive is therefore originally semantic: the genitive is inherently concordant with the aspectual meaning of *oīδα*⁴. But as the aspectual model gives way to the temporal tense-system, the semantic value of the inherent case (*oīδα*+genitive) is replaced by the syntactic value of the structural case (*oīδα*+accusative). “In accordance with the nominative-accusative type, there is in fact a mere structural relation of transitivity between a verb and its internal argument, without involving any semantic concord” (Bartolotta, 2005: 282). The decrease in the instances of *oīδα*+genitive observed from the Iliad to the Odyssey responds, therefore, to the change

⁴ Bartolotta (2005: 268) hypothesizes a “genitive of inference”, which reflects a mediated contact with the object of sight.

of paradigm that the IE language undergoes from an “active-stative” system governing the case from the semantic value of the verb (\pm stative) to a “nominative-accusative” system under which the case is not semantically interpretable. Apparently, the same phenomenon can be accounted for in Sanskrit: “In the archaic dialect many more verbs may be constructed with the genitive of their object [...] with ‘to know’ it often occurs in the brähmana-works” (Speijer, 1968: 90).

So far two relevant elements for the present analysis have been established: the relationship between verb and noun is based in terms of semantic-lexical value, and the inherent semantic value responds to aspect, according to which + stative points to the state of the subject suggesting an intentional grade in the process of vision. Now, it remains to be settled the effect this will have on the previous study of polysemy. The phenomenon of polysemy is understood as a “semantic-split” occurring in connection with a differentiation on the grade of mediation of sight. The perceptive and the intentional aspect, initially overlapping, gains its own lexico-semantic status supported by the contextual differentiation. As a result, the o-grade of the stem *woid-, as contrasted with the zero stem *wid-, would indicate an indirect contact between subject and object mediated by an intellectual process. Consequently, “this verb originally assigns the genitive case to its internal argument, a case which semantically reflected a MEDIATED contact with the object of sight” (Bartolotta, 2005: 268). To demonstrate that case-assignment is connected with the semantic value of the verb, Bartolotta presents a set of examples from the Iliad and the Odyssey that systematically reflect this principle: while constructions with DP-object in genitive designate a conceptual mediated process of knowledge, constructions with DP-object in accusative point to an immediate and direct experience. The most conspicuous examples given by Bartolotta encouraging her thesis can be grouped according to two related criteria:

- 1) How universal is the object known.

DP-object genitive:

‘Αρχέλοχός τ’ Ακάμας τε μάχης εὖ ειδότε πάσης (Iliad II, 823)

“both Archelocus and Acamas, who well know **the whole battle**²⁵, versus DP-object accusative:

⁵ I use the translation given by Bartolotta with minor modifications.

αὐτὰρ ἐγὼν εῦ οἴδα μάχας τ' ἀνδροκτασίας τε (Iliad VII, 237)

"nay, I know well **battles** and **slayings of men**"

2) How abstract is the object known.

DP-object genitive:

"*Εκτωρ δύο φῶτε κατέκτανεν εἰδότε χάρμης* (Iliad V, 608)

"Hector killed two men knowing **the art of fight**", versus

DP-object accusative:

εἰδὼς παντοίους τε δόλους καὶ μῆδεα πυκνά (Iliad III, 202)

"[Odysseus] knowing **each kind of crafts** and **cunning devices**"

According to both criteria, universality and level of abstraction, the instances of DP-object in genitive reveal a kind of knowledge mediated by a higher degree of conceptualization. As the lexical domain extends the semantic field from experience to a more abstract and mediated realm, the patterns of metaphorical constructed polysemy seems to operate in the process of differentiation. Nevertheless, the conditions also point to an alternative explanation. In fact, it is not completely clear whether this is truly a metaphorical constructed polysemy or rather a case of subcategorization, as Bartolotta presents it. The relationship between "see" and "know" will be a case of subcategorization if, according to Lakoff & Johnson (1981: 84), they are the same kind of activity and have enough of the same structural features; it will be metaphorical if they are different activities and one is only partially structured on the other. In principle, the activity of knowing and seeing is different, not just in degree, but also in nature: while seeing is a sensorial process, knowing is an intellectual activity. And yet, inasmuch as *wid- denotes both perceptive and intentional sight finally extended to *woid- meaning 'know', it can be said that knowing is a kind of seeing. In any case, they do not appear to have the same structural features; not all of the elements defining sight are elements defining knowledge, namely the organ perceiving and the object perceived. Before this set of conditions, the phenomenon of polysemy is better accounted for by a relationship that seems to be *in the middle of a continuum*: "The point here is that subcategorization and metaphor are endpoints on a continuum. A relationship of the form A is B will be clear subcategorization if A and B are the same kind of thing or activity and will be a clear metaphor if they are clearly different kinds of things or activities. But when it is not clear whether A and B are the same kind of thing or activity, then the relationship

A is B falls somewhere in the middle of the continuum" (Lakoff & Johnson, 1981: 85).

4. Traces of contrast between *gneh₃- and *weid-

As the internal distinction accounted for by case-assignment no longer operates under a tense-system paradigm, the differentiation defined by the degree of inference in the process of knowledge accounted for by *woid- should become more significant in contrast with other verbs of knowing. In this regard, there are two salient attested forms for verbs of knowing in Proto-Indo-European (PIE). The already seen *wid-/ *woid-, which corresponds to Greek *(f)οἶδα*, L *video*, Skt. *véda*, to German *wissen* and the English adjectives "wise", "wit", and *gneh₃-, which corresponds to Greek *γιγνώσκω*, L *gnosco*, Skt. *janāti*. Today it is attested in the Germanic English "know", "can", and German *kennen*, and in the Romance languages, i.e. Spanish *conocer*, French *connaitre*, and It. *conoscere* (<Latin *cognoscere* 'to become acquainted with').

In a first approach, it might be worth wondering if the contrast can be merely set in terms of aspect, in which case the stative stem of the perfect *woid- would point to a mediated intellectual process, as opposed to the eventive aspect of *gneh₃- possibly indicating direct contact with the object. The question is whether this is an original feature traceable back to PIE. Jasanoff (1988), in the attempt to explain the absence of coloration of Germanic *gne- before h₃, reconstructs a sigmatic present *gneh₃-s based on the evidence of the inchoative forms of Hitt. *ganes* and Toch. *kñas-*. "We are now in a better position to evaluate the status of the present *gne-s. The *-s- of this form is clearly of the 'inchoative' type; like the related *-ske/o- of Lat. *gnosco* and Gk. *gignosko*, its grammatical function is to derive a stem with processual meaning from an inherently punctual root" (1988: 236). According to this, "the stative meaning 'know' could then have evolved from 'come to understand' by a kind of pragmatic anticipation ('I am learning/getting to know French= I know some French already')". (Jasanoff, 2003: 80). But to set the difference in these terms is problematic. As Jasanoff admits, the *s- feature might have been treated just as the suffix *ske/o-* in *γιγνώσκω*, which ultimately, because of its meaning, is still stative in its use. If there is a reason to rule

out the inchoative semantic force of *γιγνώσκω* in its use in opposition to *οἶδα*, then there is also a reason to believe that the use in PIE was ambiguous.

Certainly the aspectual feature is not significant enough as to discriminate the use of these verbs. At least, there is no evidence indicating this in texts where the difference should be relevant. Lyons (1963) establishes a systematic methodology to ascertain a pattern of semantic correlations and equivalences between operations involving understanding in the work of Plato. In the contexts where the aspectual feature is expected to have a function in establishing a relation of consequence between the aorist or perfect of *γιγνώσκειν* and the present of *εἰδέναι*, it does not. "It seems doubtful, therefore, whether it can sensibly be asserted that the aspectual functions of the non-existent aorist and perfect of *εἰδέναι* are taken over by the relevant 'tenses' of *γιγνώσκειν* and *μανθάνειν*" (Lyons, 1963: 179). Both *γιγνώσκω* and *οἶδα* function mainly as stative verbs.

Even if the contrast is proved not to be aspectual, it must be assumed some type of distinction, for it does not seem legitimate to presume these are synonyms. As Lyons recalls, "it is generally agreed that two different units are very seldom, if ever, substitutable in all contexts *salva significatione*" (Lyons, 1963: 52). In line with the next strategy, I will consider cross-linguistic evidence between IE languages (German, French, and Spanish⁶) using two words for the verb "to know" (lexical pairs) in order to determine whether the distinction between them is always the same or whether it differs from one language to another. The discriminating criterion tested is the one offered by LSJ, where *οἶδα* = 'know by reflection', differs from *γιγνώσκω* = 'know by observation'. In more precise terms, this distinction will be regarded as the one that Bertrand Russell describes in *The Problems of Philosophy* between "knowledge by acquaintance" and "knowledge by description": "we have *knowledge by acquaintance* with anything of which we are directly aware without the intermediary of any process of inference or any knowledge of truth" (1912: 73), whereas *knowledge by description* involves knowledge of propositions, "which is composed

⁶ The selection of these three languages is not accidental. All of them present a contrast of the kind, but as German attests the IE roots *gneh₃-, *kennen*, and *weid, *wissen*; French and Spanish present the romance development from Latin *sapere*: *savoir/saber*, and *cognoscere* (IE *gneh₃): *connaître/conocer*.

wholly of constituents with which we are acquainted" (1912: 91). The principle behind the distinction lies in the degree of conceptualization in the process of knowledge.

In what follows, I will evaluate some relevant instances in the use of these two verbs, which is *wissen-kennen* in German, *savoir-connaître* in French, and *saber-conocer* in Spanish. Even when the contrast is not absolute and can be expressed on many levels, a remarkable correspondence defined by the main criterion can be observed. In general, *wissen*, *saber*, and *savoir* designate propositional forms of knowledge, that is, the knowledge of "the/a so-and-so" (Russell, 1912: 82). To that extent, they are constructed with a subordinate clause, or a pronoun in accusative referring to a sentence. For instance, German *ich weiß, daß X* ("I know that x is the case"), or *ich weiß es* ("I know it", where "it" refers to a sentence as "I know that $2 + 2 = 4$ "), Spanish *yo sé que x*, and French *Je sais que x* ("I know that x"). The non-propositional forms are the *know-how* or *wissen-wie* in German, expressed by the form *können*, for instance in *ich kann radfahren* ("I can/I am able to ride a bicycle"). These forms are expressed in Spanish and French by the verb *saber*, *savoir*. Hence, French *Savez-vous conduire?* and Spanish *¿Sabes conducir?* ("Do you know how to drive?"). Instances with direct object construction usually imply the idea of knowledge 'by heart', such as French *Je sais cette nouvelle* and Spanish *yo me sé la novela* ("I know this short story"). In addition, *wissen*, *savoir* and *saber* normally implies certainty, *ich weiß es!*, French *Je le sais*, and Spanish *yo sé*, pronounced in certain contexts means something like "I know this as a matter of fact and not as a mere opinion". The case of *kennen*, *conocer*, and *connaître* are different in this regard. They are mostly used to refer to "simpler" forms of knowledge, that is, with a minor degree of conceptualization. This is the case of German *ich kenne mich in dieser Gegend nicht aus* ("I do not know this area") or *Ich kenne den Weg*, Spanish *conozco el camino*, French *Je connais le chemin* ("I know the way"). The idea that *kennen*, *conocer*, and *connaître* designates a knowledge obtained by familiarity is clearly shown by derivative forms, such as the nouns *bekannte*, Spanish *conocido*, and French *connaissance* respectively, all meaning 'acquaintance'.

Although there are some elements varying from one language to another and the semantic boundaries of the distinction within one language are sometimes overlapped, all of them can

be easily paralleled with regard to two discriminative conditions: whether the verb designates propositional or non-propositional forms of knowledge, and, in direct-object construction, whether the verb is followed by a more concrete or abstract noun. Indeed, there is never a case where *kennen*, *conocer*, and *connaitre* are constructed with subordinate clause. The formula *kennen daß*, *conocer que*, does not exist in meaningful speech, and *connaitre que* is only translatable to "recognise that" (which already implies a higher degree of conceptualization). Regarding the nature of the defendant object, there are not categorical distinctions, but in general *wissen*, *savoir*, *saber* are more likely to assign universal and abstract entities, as opposed to *kennen*, *connaitre*, *conocer* which, as conditioned by direct acquaintance, assign instead individual and concrete entities. For example, *wissen*, *savoir*, *saber* do not usually refer to concrete objects like a table, a mirror, or a bed, as *kennen*, *connaitre*, *conocer* do. Thus, to some extent, Russell's distinction operates, especially to the extent that in the inductive order of knowledge one form presupposes the other, namely *knowledge by description* is preceded by *knowledge by acquaintance*. In light of this, it seems more natural to discover the contrast by establishing their relationship rather than their differences. As Taylor (1985: 650) asserts in her article about Spanish *saber* and *conocer*, "the key to clarifying this confusion lies, I believe, in establishing the relationship between *conocer* and *saber*" and to this end she attempts "to show that *conocer* is a subset of *saber* and might be conceived as a tool or building block of *saber*".

It remains to be settled if this relationship established in terms of consequence is also effective for the Greek pair. There are instances in which the contrast between *οἶδα* and *γιγνώσκω* agrees with the *wissen-kennen* type, although in some significant cases (particularly 1 and 11) there is no correspondence.

- 1) To be acquainted with: *οἶδα-γιγνώσκω*; *kennen*; *connaitre*; *conocer*
- 2) To perceive directly: *γιγνώσκω*; *kennen*; *connaitre*; *conocer*
- 3) To have a clear perception of: *οἶδα-γιγνώσκω*; *wissen-kennen*; *savoir-connaitre*; *saber-conocer*
- 4) To recognize: *γιγνώσκω*; *kennen*; *connaitre*; *conocer*
- 5) To discern: *γιγνώσκω*; *kennen*; *connaitre*; *conocer*
- 6) To be informed: *οἶδα-γιγνώσκω*; *wissen*; *savoir*; *saber*
- 7) To possess knowledge: *οἶδα*; *wissen*; *savoir*; *saber*
- 8) To be skilled/to know how: *οἶδα*; *können*; *savoir*; *saber*

- 9) To learn: *γιγνώσκω; savoir* (In the *passé composé*, *J'ai su que*)
- 10) To regard as true: *οἶδα; wissen; savoir; saber*
- 11) To know that: *οἶδα-γιγνώσκω; wissen; savoir; saber*

Of course, this list simply outlines some of the most used meanings of the verb “to know”. The semantic value of each verb varies considerably in relation to context. Here I present some suggestive examples illustrating the coincidence with the *kennen-wissen* type of contrast in which *γιγνώσκω* designates a knowledge achieved by acquaintance, and *οἶδα* by reflection:

Theodorus

ἀλλὰ σκόπει εἰ γιγνώσκετις αὐτόν

“See if you recognise him”.

Socrates

γιγνώσκω: ὁ τοῦ Σοννιᾶς Ειφρονίου ἐστίν...τὸ δὲ ὄνομα οἴκ οἶδα τοῦ μειρακίου
“Yes, I do. He is the son of Euphronius of Sunium... But the youth's name I do not know” (Pl. *Thet.* 144c).

Alcibiades

εὖ γάρ ἴστε ὅτι οὐδεὶς ὑμῶν τοῦτον γιγνώσκει

“you know well that no one of you knows him” (Alcibiades introducing Socrates, Pl. *Symp.* 216c)

However much these instances adjust to the standardised criteria, they should not be regarded as systematically representative. For though the occurrences are less frequent, it is possible to find something like this in Greek literature: *ἐγὼ εἰδὼς Θεόδωρον* “I know Theodorus” (Pl. *Thet.* 192d), and also *γιγνώσκειν τὰλλά τε πάντα* “I know everything else” (Pl. *Phil.* 63c). As opposed to the *kennen-wissen* model, *γιγνώσκω* can also take a subordinate clause *γνοὺς ὅτι οὐδὲν ἔμοι δέονται* “knowing that they do not have need of me” (Pl. *Thet.* 151b). There are two particular consequences from this analysis: the use of propositional clauses are not discriminative between one form of knowledge and the other, and in the construction with direct object, though there is not a distinction between concrete and universal nouns, there seems to be one between personal and impersonal. Lyons (1963), in his study, observes that the only relevant contrast between *οἶδα* and *γιγνώσκω* appears in those contexts in which the dependent object is a personal noun or personal nominal phrase, or no personal noun or personal nominal phrases. In these, the occurrences of *γιγνώσκειν* with personal nouns are as regular as those of *εἰδέναι* with common

nouns. “On the other hand, the most characteristic environments of *γιγνώσκειν* (in which *εἰδέναι* and *ἐπίστασθαι* rarely occurred) are those in which the object of the verb was a personal noun” (Lyons, 1963: 179).

Even when the cross-linguistic analysis does not reflect the state of the question in Greek, it ultimately proves that the contrast –if any– brings into question the general principle distinguishing **woid-* and **gneh₃-* in terms of what appears to be an “inductive gradation” of knowledge. In the terms that Bertrand Russell sets the difference between “knowledge by acquaintance” and “knowledge by description”, the underlying premise is that the second is only possible by means of the first, that is to say, the knowledge of “the so-and-so”, as he puts it, is only possible by means of acquaintance. In that case, **gneh₃-*, defined roughly as “knowledge by acquaintance”, would indicate a direct and immediate relationship between subject and object, whereas **weid-*, as “knowledge of a fact”, would designate a contact with the object mediated by a higher level of conceptualisation. That is, I think, the underlying premise authorising the general difference between **woid-* and **gneh₃-*, at least as presented in most dictionaries and grammars. But this generalisation is in tension with two situations, at least in relation to Greek: if the difference were one of grades, i) it would be possible to trace a systematic relation of consequence between *γιγνώσκω* (antecedent) and *οἶδα* (consequent), which is not the case; *οἶδα* is not issued by *γιγνώσκω* because they are both stative. ii) This would be reflected (as in many other languages) by the constructions with direct object versus indirect dependent clauses characteristic of propositional statements. This is not the case either. In fact, we see that, at least in Greek, both verbs often take direct object (usually in acc.), and both take propositional clauses through the participle, the infinitive, or the conjunctions. The occurrences between them might vary, but not in a systematic way.

From the works of Bartolotta in Homer and John Lyons in Plato, the semantic value of each stem or the possible contrast between them is set in connection with the nature of the object known. Lyons, for example, observes that *γιγνώσκω* usually takes personal nouns (nouns referring to persons, pronouns, proper names), when neither *ἐπίσταμαι* nor *οἶδα* would generally do it. Bartolotta demonstrates the original semantic value of *οἶδα* by quoting examples in the Iliad that would connect it

with more abstract nouns. Since syntactically they do not behave so differently, maybe it is the nature of the object known that should be looked at carefully to predict or reconstruct a possible contrast. At least in the Homeric and Platonic literature what is more notorious is the relationship, in construction with direct object, of *oīδα* with abstract nouns and *γιγνώσκω* with personal nouns. Thus, the distinction seems to point not to a "gradation" of knowledge –they operate similarly– but rather to the relationship of each verb with the object known, for which each activity admits its own grades.

5. Conclusion

In this paper I attempted to trace the semantic development of the IE root *weid-, covering the analysis through a cross-linguistic comparison evaluated diachronically in connection with historical linguistic phenomena and synchronically by the examination of two particular Greek authors, Homer and Plato, and some examples in the use of living languages, such as Spanish, French and German. The starting point takes into account the polysemic nature of the root *weid- as a phenomenon metaphorically structured. The metaphor "knowing is seeing" is hardly problematic to accept; historical examples of semantic change points to the fact that "knowing" can be understood in terms of "seeing". The metaphor points in two directions: one taking the objective structural feature of sight, the other taking the experiential and subjective feature of sensory perception. The significance of the metaphor, however, is not evaluated until the end of the second section, in which the stative aspect of *woid- is discussed. Based on the Homeric textual evidence, here the internal polysemy is defined in correspondence with the stative feature of the root, according to which +stative suggests an intentional grade in the process of vision. But as this is a phenomenon occurring under an early stative-model, the same phenomenon under a tense-model is not semantically interpretable: aspect ceases to be significant in this regard. In the last section, I examine whether the semantic value of *woid- can be specified in contrast with another salient IE root designating knowledge: *gneh₃- . For this purpose, I bring into question the standardised distinction between *knowledge by acquaintance* and *knowledge as a fact* as applied to other lexical pairs for the verb "to know". Some particular instances of the use of the

German, Spanish, and French languages, in contrast with the use of Greek, particularly in reference to Platonic texts, prove this standard to be effective only in part. The contrast in Greek is not that straightforward as to declare that it may lead us to conclude a contrast in IE. Even when the analysis of IE *weid- is not conclusive in establishing the relationship between *oīδα* and other verbs of knowledge, it is highly informative of the various conditions determining its process of formation.

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