Competitive Indo-European syntax

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In the following article I will analyse the different constructions of embedded object clauses in the older Indo-European languages. In quite a lot of modern Indo-European languages the standard realisation of the sentential object clause is a finite subordinate clause introduced by a complementizer corresponding to the English conjunction that. In contrast, in some of the older Indo-European languages, this construction is only rarely attested, e.g., in Vedic, and a variety of structures without that-complementizer are used instead ("that-clause competitors"). By cross-linguistic comparison I will reconstruct that two object clause constructions were part of the Proto-Indo-European syntactic structure and that one of them, the explicative clause, can be considered as the predecessor of the modern finite that-object clauses. Furthermore I will show how the relational element of the explicative clause, a wh-operator corresponding to English which, could change to a complementizer element like that.

1. Introduction

Within the scope of the project "Competitive Indo-European Syntax" (Indogermanische Konkurrenz-Syntax) my team and I were studying constructions in older Indo-European languages which compete with finite subordinate clauses, for example infinitive or participial constructions, absolutes, gerunds, gerundives, supines or constructions including an abstract noun with or without a preposition. Our perspective is functional or onomasiological, for the data is structured to answer the following questions: Which of the mentioned constructions function as subject, object, adverbial or attribute? Which constructions could be used instead of a temporal, final or causal clause, etc.? Most other studies deal with subordinate clauses in a semasiological manner. One approaches a conjunction by examining its meaning. An example for such an investigation is Hettrich (1988), a very thorough study of conjunctions in the Rig-Veda. But having studied this book one does not know which functions, commonly expressed by conjunctions in other Indo-European languages, are not realized as such in Vedic. This is particularly regrettable because in the oldest stage of Vedic a very important conjunction function is hardly ever articulated as a conjunction: the conjunction that to
be specific. Since the main domain of this conjunction in German or English is undoubtedly to subordinate finite object clauses, a serious question arises. What does the syntactic structure of languages look like, that do not have such a convenient conjunction to mark finite object clauses, as in German *dass* or in English *that*? What constructions are used instead of such clauses? In the following they shall be referred to as *that*-clause competitors.1

First it will be shown which competing structures are available. I restrict myself to the oldest attested Indo-European languages: Hittite, Vedic, Iranian, Greek, Latin and Germanic. The data is primarily taken from our Thesaurus of Subordination Competitors in older Indo-European (*Konkurrenz-Thesaurus zur Subordination in der älteren Indogermania*).2 Among the Germanic languages Old Saxon was selected because of its abundant, uniform, indigenous record. In order to reconstruct which type of object clause or which syntactic competitor was used by the Indo-Europeans the next step is the determination of the least common denominator among the alternatives in the individual Indo-European languages. Supposing we have indeed determined the original Indo-European cognate of an object clause introduced by *that*, our task is then to elucidate such an object clause or its competing structure with respect to reconstructed adverbial clauses or relative clauses.

At this point one must reiterate the question put forth in Hermann’s 1894 doctoral thesis in Jena, “Did Indo-European have subordinate clauses?” The answer is undoubtedly “Yes”, but are these clauses embedded or can the reconstructed object clause also support Kiparsky’s (1995: 155ff.) opinion that such clauses are only adjoined? Modern generative syntax will help us to find an appropriate answer. Following a step back to the precursor of Indo-European, we will concentrate on the well documented older Indo-European languages again. Based on the evidence that later Hittite, Avestan, Old Persian, Old Greek and Germanic do indeed have object clauses introduced by *that*, it is our intention to outline the development of the reconstructed Proto-Indo-European object clause to the respective structure in the authenticated languages by means of one example. It will become evident that a typological change has taken place concerning subordination throughout the development of individual languages.

The preceding approach makes obvious that we are reconstructing a protolanguage. Working according the principle that the presence of numerous firmly established equivalences within individual Indo-European languages can neither be explained by coincidence or borrowing, nor treated as if these data reflect universal aspects of human languages, we only consider the hypothesis of derivation

from a common preliminary phase of these language groups to be a suitable explanation. In that we follow the classical linguistic comparative method keeping in mind that this method does not work equally well for grouping the Indo-European language family into chronologically deeper taxa. Moreover, we follow Dressler (1971: 6) in considering reconstruction as Wahrscheinlichkeitsschätzung ('probability estimation'), which depends upon six factors: (a) the spreading of a language phenomenon in the Indo-European languages; (b) the conformity of its significants; (c) the conformity of its significants in the individual languages; (d) the results of the internal reconstruction; (e) the possibility of inserting an individual phenomenon in the frame of a reconstructed more extensive phenomenon; (f) the typological factor. Dressler 1971 complained that the last point is often overlooked, a statement which more than 30 years later is still valid in Indo-European linguistics, though there is a simple checking procedure: If a reconstruction is contradictory to observable data of all living languages in the world, it is improbable. The more parallels exist in living languages the more probable it gets. So a reconstruction is some sort of "quasi-universal" and probably accurate. But if a reconstruction proves to be a linguistic universal, it is accurate. In the case of the that-clause competitors the claims (a) to (f) are fulfilled. Firstly, it is definitely possible to establish correspondences in syntax between the older Indo-European languages, which can be reconstructed as parts of the syntactic system of a proto-language. These are the subordination designating devices, namely conjunctions, mood, certain verbal forms. Secondly, all these devices have parallels in modern languages, too.

The objection that real sentences, i.e., sentences in their full context, cannot be reconstructed is self-evident, cf. Dressler (1971: 5ff.). In addition one may not be able to verify that the reconstructed elements in a sentence all belong to the same historical phrase of a language. Historical linguistics has therefore been primarily interested in syntactic patterns. But once the patterns have been reconstructed, one might be able to consider what form the grammar of speakers at that stage must have had in order to produce such patterns, compare Harris & Campbell (1995: 372). With respect to language change the comparison of the syntax of the Indo-European language will demonstrate that syntactic change referring to subordinated propositions initially proceeds on the basis of syntactic variation, since speakers normally use multiple analyses during the period of actualisation (compare Harris & Campbell 1995: 83). The structure of that-clause competitors must only be able to designate an event containing an agent and some sort of verbal behaviour ("Verhaltensweise"), an activity, an event or a state. This constellation is universal, but not the means to express it. Secondly, it will be shown that our modern that-clauses arose by a pragmatic change. In this we follow Longobardi (2001: 278) who assumes that syntactic change only takes place if it is caused by
another type of change: "linguistic change proper [...] may only originate as an interface phenomenon".

2. Analysis

2.1 That-clauses and that-clause competitors in the function of an object in the older Indo-European languages

When examining that-clauses and that-clause competitors in the function of an object in the older Indo-European languages it is advantageous to concentrate on the denotation of actions, the agent or patient role of which are not included in the super-ordinate structure. Only in such cases are we dealing with a semantic assertion independent of the main clause. The following that-clause competitors are arranged according to their degree of inflection. Whereas abstract deverbal nouns constitute the lower end of the scale, subordinated structures with finite verbs differentiated for time and mode constitute the upper end.

2.1.1 Abstract deverbal nouns

Among the languages considered only the Anatolian branch yields productive formation of deverbal nouns. If such nouns, especially those ending in -uwar and -utar, are combined with genitive elements to implement the function of a genitivus subiectivus or genitivus obiectivus complete propositions can result.

(1) Hittite KUB XIX 23 Rs. 13'ff.

(13') GIM-an-ma ŠA [DUTU]\(^5\)
as soon-but-part gen-part det-sun-my

(14') TI-tar iš-dam-ma-aš-sir na-at-kān
life-acc.sgn. they heard-3.pl.ind.pret.act and they-nom.plc-part
nam-ma ar-ru-ša UL [pa-a-ir]
further fpx not they succumbed-3.pl.ind.pret.act

(15') ki-nu-un-ma GIM-an ŠA EN-YA har-ga-an
now-but-part as soon gen-part lord-my death-acc.sgn.c
iš-dam-ma-aš-sir
they heard-3.pl.ind.pret.act

(16') na-at nam-ma a-ru-ú-[ša] pa-a-ir
and they-nom.plc further fpx they succumbed-3.pl.ind.pret.act
'As soon as they heard of the life of the sun [genitivus subiectivus], they did not succumb. But now that they have heard of the death of my lord [genitivus obiectivus], they have succumb'
('Sobald sie aber von der Sonne Leben erfuhren, gingen sie nicht unter; jetzt aber, da sie von meines Herrn Umkommen erfuhren, gingen sie doch unter')
(2) late Hittite KBo V 6 III 5f.

(5) LÚMES KUR [UR]Mî-iz-ra-ma ma-ah-ha-an
     people-nom.pl country det-Egypt as soon

(6) ŠA KUR [UR]Am-ka GUL-ah-hu-wa-ar
     gen-part country det-Amka destruction-acc.sg.n
     iš-ta-ma-ša-an-zi
     they hear-3.pl.ind.pres.act

     'As soon as the Egyptians hear that the country Amka was destroyed'
     (genitivus obiectivus)
     ('Sobald aber die Ägypter hören, dass das Land Amka vernichtet wurde')

In the other languages this construction only occurs occasionally, for instance in the
conversion of a participle into a noun in Vedic.

(3) Old Indian RV 3,38,9
     viśve paśyanti māyínah ktyáni
     all-nom.plm they see-3.pl.ind.pres.act magician-gen.sg.m deeds-acc.pl.n

     'All see the deeds of the magic adept'
     ('Alle sehen die Werke des Zauberkundigen')

2.1.2 Infinitive constructions
As shown in Lühr (1993: 232ff.), infinitive constructions denoting whole
propositions can be found beyond the Anatolian languages. Thus, the accusativus-
cum-infinitivo (AcI) is present in Indo-Iranian, Greek and Latin for verbs of 'volition':

(4) Old Indian RV 1,129,4
     asmákam va indram
     you-gen.pl.m part Indra-acc.sg.m
     uṣṭmasiñāye sākhyāṇi
     we wish-1.pl.ind.pres.act-incite-inf.dat.sg.f friend-acc.sg.m
     viśvāyum ...
     lifelong-acc.sg.m

     'We wish that Indra as our lifelong friend incites you'
     ('Wir wünschen, dass euch Indra als unser lebenslänglicher Freund gerne
domme…'); Geldner; Disterheft (1980: 76ff.)

3. The genitive case depends on a verbal substantive here. It is equivalent to the agent
(Lühr 1994).
(5) Avestan Y 34,4

at tōi ātrām ahūrā aagīnyānāntom
then of your-gen.sg fire-acc.sg.m Herr-voc.sg.m vigorous-acc.sg.m
ašī usimāhī aśītim
truth-instr.sg.n we wish-1.pl.ind.pres.act impetuous-acc.sg.m
āmañāntom Stōi rapanē...
strong-acc.sg.m be-inf supporter-dat.sg.m

'We desire Thy fire, O Ahura, (which is) strong through truth, very vigorous (and) impetuous, to be a bright help to (Thy) supporter ...';
Humbach (1991: 140).
('Nun begehren wir, o Lebensherr, von deinem durch Wahrhaftigkeit starken Feuer, das gar schnell und durchdringend ist, dass es dem Freunde mit glanzvoller Hilfe diene ...')

(6) Old Greek Od p 81

autōn eγνώρ σὲ
him-acc.sg.m keeping-prt.pres.act.acc.sg you-acc.sg.m
βούλομαι ἐναερέω, tīς
I prefer-1.sg.ind.pres.med enjoy-infaor.act someone-acc.sg.m
tῶνδε
of these-gen.pl.m

'... I wish that you should keep and enjoy these things yourself rather than one of them'
('... so will ich lieber, dass du es, indem du es behältst, genießt als einer von diesen')

(7) Latin Plautus, Amphitruo 980

volo deludi illunc
I wish-1.sg.ind.pres.act be laughed at-inf.pres.pass the former-acc.sg.m

'I want that he be ridiculed'
('Ich will, dass jener verlacht wird')

It is present in Greek and Latin contingent on verbs denoting 'belief', 'opinion', 'knowledge', 'speaking' and 'hearing'.

4. More examples can be found in Disterheft (1980: 99f.).
5. In Latin the infinitive can also be absent; cf. volo te consulam – 'I want [you] to be consul'
(Hofmann & Szantyr 1965: 43).
(8) Old Greek Od a 323

\[ \deltaιακρε \quad γαρ \quad θεόν \quad εἰνα \]
he believed-3.sg.ind.aor.med for god-acc.sg.m be-inf.pres.act
‘for he suspected this (individual) to be a god’
(‘denn er glaubte, dass es ein Gott ist’)

(9) Latin Plautus, Amphitruo 416

\[ Egomet \quad mihi \quad non \quad credo. \quad cum \quad \]
1-1.p.nom.sg me-1.p.dat.sg not 1 believe-1.sg.ind.pres.act when
\[ iliae \quad autumare \quad illum \quad \]
this-acc.pl.n speak-inf.pres.act the former-acc.sg.m audio
\[ \quad i \quad hear-1.sg.ind.pres.act \]
‘I do not believe myself, when I hear him speak in such a way’
(‘Höre ich den so reden, glaube ich selbst mir nimmer’)

(10) Latin Plautus, Amphitruo 104

\[ nam \quad ego \quad vos \quad novisse \quad for \quad 1-1.p.nom.sg \quad you-2.p.acc.pl \quad know-inf.prv.act \quad \]
\[ credo \quad iam \quad ut \quad \]
1 believe-1.sg.ind.pres.act already how
\[ sit \quad pater \quad meus \quad \]
sit-3.sg.sbj.pres.act father-nom.sg.m my-nom.sg.m
‘for I believe that you already know, how my father be’
(‘denn ich glaube, ihr wisst schon, wie mein Vater ist’)

(11) Old Greek Iliad A 521

\[ \ldots \quad καὶ \quad τέ \quad μέ \quad φησι \quad μύχη \quad \]
and part me-1.p.acc.sg she says-3.sg.ind.pres.act battle-dat.sg.f
\[ Τρόισπολλ \quad ἄρρηται \quad \]
Trojans-dat.pl.m help-inf.pres.act
‘and she says that I am helping the Trojans in the battle’
(‘... und sie behauptet, ich würde im Kampf den Troern helfen’;
Hettrich 1992: 232)

(12) Latin, Plautus, Capitivi 511

\[ dico \quad eum \quad esse \quad \]
say-1.sg.ind.pres.act him-acc.sg.m be-inf.pres.act
\[ apud \quad me \quad \]
by me-1.p.acc.sg.m
‘I say that he is with me’
(13) Old Greek
\[ \text{οἴκω\ μό\ λέγων} \]
I hear-1.SG.IND.PRES.ACT you-2.P.ACC.SG speak-INF.PRES.ACT
'I hear (as gossip) that you speak'\(^7\)

Even further the AcI is documented in Latin with verbs denoting 'cognition' and 'vision' and with the \textit{verba affectus}:

(14) Latin Plautus, Asinaria 438
\[ \text{nam vidi huc ipsum adducere} \]
for I saw-1.SG.IND.PFV.ACT here himself-ACC.SG.M bring-INF.PRES.ACT
\[ \text{trapezitam Exaerambum} \]
money-changer-ACC.SG.M Exaerambus-ACC.SG.M
'For I saw that Exaerambus himself brought the money-changer here'
('Denn ich sah, dass Exaerambus selbst den Wechsler hierher brachte')

(15) Latin Plautus, Mostellaria 796
\[ \text{sed ut maestust sese} \]
but how sad-NOM.SG.M-he is-3.SG.IND.PRES.ACT him-ACC.SG
\[ \text{hase uendisste!} \]
\[ \text{these-ACC.PL.F have sold-IND.PFV.ACT} \]
'but how sad he is that he has sold this (house)!'
('aber wie betrübt er ist, dass er dieses (Haus) verkauft hat!';
Kühner & Stegmann 1955: 691)

The integration of increasingly more verbs into the domain of the AcI-construction bases on common semantic universals as can also be observed in the evolution of constructions in other languages of the world.\(^8\) Greek uses one and the same AcI-verb \textit{έλθω} 'to expect, to hope, to mean' as a verb of 'volition', of 'belief' and of 'opinion'. Furthermore, the fact that 'to mean' can substitute for 'to say' is evident in the meaning of Germ. \textit{meinen}.\(^9\)

If a speaker uses a factual verb of 'speaking' in the 1st person singular he is usually making a statement, if he knows that statement to be valid. Since the

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7. In contrast, the AcP has the sense of 'I hear (from others the fact) that you speak' (Bormann & Risch 1973: 249).
9. The AcI construction in Greek was originally used with the verb 'to say' and then went on to cover more or less unproven statements while 'say' became bound as a factitive verb to the AcP construction or the \textit{that}-clause competing with it.
truth of the statement denoted by the verb complement is presupposed, verbs of 'speaking' + AcI can have an effect on the construction of factual verbs, namely verbs of 'cognition' and 'perception.' The feature [+ factitive] develops to the point in Latin that the verba affectus also produces an AcI. If we also consider the Old Saxon evidence it is visible that the AcI-verbs constitute a uniform semantic group, namely 'to know', 'to see' and 'to hear'. However these verbs are also used with that-clauses.

2.1.3 Participle constructions, constructions with predicative adjectives
Participle constructions are common to all examined languages. Consider the following example from the Anatolian branch, where the accusative of the accusativus-cum-participio (AcP) construction must be extrapolated from the context:

(16) Late Hittite KBo IV 4 III 71f.
\[\text{nu ma-ah-ha-an} \quad \text{URUaz-zi} \quad \text{e-ni-iš-sa-an}\]
now as people-NOM.PL Azzi in such a way-ADV
\[\text{pa-ah-sa}[-\text{nu-wa-an X}] \quad \text{a-ú-e-ir}\]
protected-PRT.PRES.PASS.ACC.SG.C they saw-3.PL.IND.PRET.ACT
'As the people of Azzi saw that [the army] was in such a way
[...] protected ...'
'(Als die Leute von Azzi sahen, dass [das Heer] in solcher Weise
[ge]schützt war ...')

And with the accusative expression:

(17) Late Hittite KUB XIII 35 + III 17
\[\text{am-mu-uk-wa-ra-an} \quad \text{ak-kán-ta-an}\]
me-DAT.SG-SPEECH.PART-him-ACC.SG.C dead/deceased-PRT.PRES.PASS.ACC.SG.C
\[\text{I-Q-BI}\]
he spoke-3.SG.IND. PRET.ACT
'to me he said that it [the horse] (is) dead'
('Mir sagte er, dass es (das Pferd) tot sei')

Whereas the AcP is rather rare in Hittite and only occurs following the verbs 'to see' and 'to say' (Coticelli-Kurras 1995: 98), it is to be found frequently in the oldest phase of Vedic. In particular with verbs of 'vision', of 'hearing', of 'belief', and of 'speaking', in which the subordinated verbal action can be active or passive.

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10. It is commonly assumed that the AcI in the case of the verba affectus is influenced by the pattern of the verbs which express a wish, a hope or an expectation (spemo, desidero) (Hofmann & Szantyr 1965: 358f.)
(18) Old Indian RV 10,59,4

mó sû ŋaḥ soma mṛtyuṣve
not-part part us-acc.pl soma-voc.sg.m death-dat.sg.m
pári dāhi pāṣyema
pfx deliver-2.sg.inj.aor.act we wish to see-1.pl.opt.pres.act
nú svirūṃauccāranton
now sun-acc.sg.m-rising-prt.pres.act.acc.sg.m

'Do not deliver us unto death, o Soma, we wish to see the sun rise again!' ('Gib uns ja nicht dem Tode preis, o Soma; wir möchten noch die Sonne aufgehen sehen!')

(19) Old Indian RV 5,32,12

evā hi tvām rūthā
thus-pfx for you-acc.sg punctually-adv
yātāyantam maghā
remunerating-prt.pres.act.acc.sg.m presents-acc.pl.n
viprebhīya dádatan
skilled with words-dat.pl.m giving-prt.pres.act.acc.sg.m
 śṛṇōmi
I hear-1.sg.ind.pres.act

'For I hear, that you punctually remunerate by giving presents to the skilled with words'
('Denn also höre ich, dass du pünktlich vergiltst, indem du den Redekundigen Geschenke gibst')

(20) Old Indian RV 1,84,17

kō maṃṣate sāntam
who-nom.sg he may think-3.sg.ind.sbjv.med being-prt.pres.act.acc.sg.m
indram kō ánti
Indra-acc.sg.m who-nom.sg present-adv

'Who thinks that Indra is, who thinks he's present?'
('Wer meint wohl, dass Indra ist, dass er gegenwärtig?')

(21) Old Indian RV 10,179,3

śrātām manya
cooked-prt.pret.pass.acc.sg.n I think-1.sg.ind.pres.med
ādhani śrātām agnaū
utter-loc.sg.n cooked-prt.pret.pass.acc.sg.n fire-loc.sg.m
susrātām manye tād
well cooked-prt.pret.pass.acc.sg.n I think-1.sg.ind.pres.med this-acc.sg.n
ṛtām nāviyah
right-acc.sg.n newer-comp.acc.sg.n
'I think she is boiled in the utter, she is cooked on the fire; I think that this newest (sacrifice) is well cooked, properly'
('Ich meine, sie ist im Euter gekocht, sie ist am Feuer gekocht; ich meine, dass diese neueste (Spende) gut gekocht, recht ist')

(22) Old Indian RV 7,33,13
	táto 
		ha  
	mána 
	úd iyáya
from there-ADV PART Māna he came forth-3.SG.IND.PFV.ACT

mádiyáat 
	táto 
	játám
from the midst-ABL.SG.N from there-ADV born-PRT,PRET,PASS.ACC.SG.M

ṝśi 
	āhur 
	váśiṣṭham
Ṛṣi-ACC.SG.M they said-3.PL.IND.PFV.ACT Váśiṣṭha-ACC.SG.M

'From here (from the seed) came Māna, they said that from there Ṛṣi Váśiṣṭha is born'
('Daraus (aus dem Samen) ging Māna hervor; sie sagten, dass daraus der Ṛṣi Váśiṣṭha geboren ist')

The common Indo-European verb 'to see' can be combined with an AcP in all other examined languages, in Avestan, Greek, Latin, and in Old Saxon:

(23) Avestan Yašt 5,68
	yāt 
	spādām 
	pairi 
	auu aauaēnāt 

durāt
as army-ACC.SG.M PFX he saw-3.SG.IND.IPFV.ACT from afar

aitiántam 
	 
	rasmāoīō
advancing-PRT,PRET,ACT,ACC.SG.M in battle formations-DAT.PL.M

'As he saw the army in the distance advancing in battle formation'
('Als er das Heer von fern her in Schlachtordnung anrücken sah')

(24) Old Greek Iliad Θ 278f.
	róv 
	dē 
	idāv
hím-ACC.SG.M PART seeing-PRT, AOR,ACT,NOM.SG.M

γηθίμεν 


ānāξ
he was pleased-3.SG.IND.AOR.ACT lord-NOM.SG.M

ánδρον 
	Аγαμέμνων/ 
	tōdu 
	ápo
men-GEN.PL Agamemnon-NOM.SG.M bow-GEN.SG.N with

krateóu 
	Tρόων 
	delékova
strong-GEN.SG.N Troyans-GEN.PL.M destroying-PRT,PRET,ACT,ACC.SG.M

φάλαγγας
lines of battle-ACC.PL

'He was pleased when he saw him, the lord of men Agamemnon, as he with his strong bow destroyed the battalions of Trojans'
('Da freute sich, als er ihn sah, der Herr der Männer Agamemnon, wie er mit dem starken Bogen vernichtete die Reihen der Troer')
(25) Latin Plautus, Epidicus 435

quam [ego] hic
whom-ACC.SG.M 1-1.P.NOM.SG here
advenientem conspicor?
arriving-ACC.SG.M I see-1.SG.IND.PRES.DEP
‘Whom do I see arriving here?’

(26) Old Saxon Heliand 4405f.

Hua man
Huon ACC.SG.M he saw-3.SG.INF.PRET.ACT you-ACC.SG man-ACC.SG.M
hino/ bethuungen an
any-NOM.SG.M vanquished-PRT.PRET.PASS.ACC.SG.M in
sulicun theabun?
such-DAT.PL.M such-DAT.PL.F
‘When did anyone see you vanquished by such deficits?’
(‘Wann sah dich irgendjemand vor solchem Mangel bezwungen?’)

And in Greek the ACP occurs with the verb ‘to hear’, but also like in Old Saxon with the verb ‘to know’, whereby Greek can additionally expressively denote antecedent action in the participle:11

(27) Old Greek Iliad H 129

τοιουτοι εις πατρον τον
they-ACC.PL.M now when cowring-PRT.PRES.ACT.ACC.PL.M
υπ’ Ἑκτορον παντας ἀκοσια
below Hector-DAT.SG.M all-ACC.PL.M he hears-3.SG.OPT.AOR.ACT
‘And if he were to hear that these men are all now cowering before Hector’
(‘Wenn er nun hört, wie sich diese alle vor Hektor ducken’)

(28) Old Greek Odyssee η 211f.

οις οινακε υμεις ισοε
those of whom-ACC.PL.M you-NOM.PL you know-2.PL.IND.PRES.ACT
μελετων ἀνθρωπων ἀνθρωπων...
greatest-ACC.SG.F bearing-ACC.PL.M affliction-ACC.SG.F men-GEN.PL.M
‘those of whom you know that they bear the greatest affliction among mankind ...’
(‘solche, von denen ihr wisst, dass sie am meisten Jammer tragen unter den Menschen ...’)

11. Greek also displays the genitivus-cum-participio: Odyssee η 289.

ei δε ΚΕ τεθνησκε ἀνθρωπων
if but but having died-PRT.PPF.ACT.GEN.SG.M you may hear-2.SG.SBJV.PRES.ACT
μηδεν ετε οντοκ...
not no longer living-PRT.PRES.ACT.GEN.SG.M
‘And if you hear he is dead and no longer among the living ...’
(‘Doch wenn du hörst, er sei tot und nicht mehr am Leben ...)
(29) Old Saxon Helian 5729ff.

\[ Hi\;e\;giuæt\;im\;thuo\;fo\;rd \]
he-3.p.nom.sg.m he went-3.sg.ind.pret.act himself-refl then forth

\[ thanan/\;gangan\;te\;them\;galgon, \]
from there to-go-inf to the-art.dat.sg.m gallows-dat.sg.m

\[ thar\;hie\;uuisa \]
where he-3.p.nom.sg.m he knew-3.sg.ind.pret.act

\[ that\;godes\;barn./\;hrėo \]
that-art.acc.sg.n God-gen.sg.m child-acc.sg.n body-acc.sg.n

\[ hangondi\;hēren\;sines \]
hanging-prt.pres.act.acc.sg.n Lord-gen.sg.m his-gen.sg.m

\[ ‘He\;went\;immediately\;forth\;to\;go\;to\;the\;gallows,\;where\;he\;knew\;that\;God’s\;child,\;the\;body\;of\;his\;Lord\;hung’ \]
(‘Er machte sich alsbald auf, um zu dem Galgen zu gehen, wo er wusste, dass das Gotteskind, der Leichnam seines Herrn hing’)

(30) Old Greek Odysseus ω 404ff.

\[ η\;ηδη\;οφα\;οδ\;ε \]
PART already clearly she knows-3.sg.ind.pef.act

\[ πειρίπνω\;Πηρελόπεια/ \]
circumspct-nom.sg.f Penelope-nom.sg.f

\[ νοστηγνια\;οε\;δε‘p’\;... \]
having returned-prt.aor.act.acc.sg.m you-2.p.acc.sg. hither

\[ ‘Does\;circumspct\;Penelope\;already\;know,\;that\;you\;have\;returned\;home\;...’ \]
(‘Weiβ es die umsichtige Penelopeia schon genau, dass du hierher heimgekommen ...’)

Related to the ACP we find the use of different verbs with an accusative in conjunction with a predicative adjective in all the examined languages, because the participle of the verb ‘to be’ can be presumed:

(31) Late Hittite KUB V 9 Vs. 4f.

\[ ti-ti-i-is-ša-al-li-in-wa\;ŠA\;MU \]
child-acc.sg.n-speech.part gen.part year

\[ ša-ak-nu-wa-an-da-an\;IGI-u-en \]
3-det impure-acc.sg.c we have seen-3.pl.ind.pret.act

‘It is a three year old child we have seen soiled’
(‘Ein dreijähriges Kleinkind haben wir unrein gesehen’).\(^{12}\)

(32) Old Indian RV 2,33,4

*bhiśāktamam tvā best doctor-ACC.SG.M you-2.P.ACC.SG
*bhiśājayīṃ śrnuti doctors-GEN.PL.M I hear-1.SG.IND.PRES.ACT

'I hear that you are the best doctor of all doctors'
('Ich höre, dass du der beste Arzt der Ärzte bist')

(33) Old Indian RV 10,86,11

*indraṇām āśū nāriṣu subhāgām
Indraṇi-ACC.SG.F these-LOC.PL.F ladies-LOC.PL.F happy-ACC.SG.F
ahām āśravam/ nāhy āśyā
I-1.P.NOM.SG I heard-1.SG.IND.IPFV.ACT not-for her-3.P.GEN.SG.F
aparām canā jārāsā
in the future part senility-INTR.SG.M
nārāte pātṛr
he dies-3.SG.IND.PRES.MED spouse-NOM.SG.M

'Among these Ladies, I have heard Indraṇī (to be) blessed, because her spouse will not die of old age in the future'

('Unter diesen Herrinnen, so hörte ich, ist Indraṇī die Glückliche, denn nicht wird auch in Zukunft ihr Gemahl an Altersschwäche sterben')

(34) Old Indian RV 8,33,17

*indraś cid gha tād abravīt striyā
Indra even part that-ACC.SG.N he said-3.SG.IND.IPFV.ACT woman-GEN.SG.F
asāṣyām mānāh/
unteachable-ACC.SG.N mind-ACC.SG.N
uṭō ōhā krātum raghām
and certainly insight-ACC.SG.M light-ACC.SG.M

'Even Indra has said that the mind of a woman is impossible to teach and their insight is too light (small)'

('Auch Indra hat das gesagt, dass der Sinn der Frau unbelehrbar, und ihre Einsicht zu leicht (gering) ist')

(35) Avestian Yasna 43,11

*tāt vorziieidiāt hīaṭ mōī
that-ACC.SG.N to do-INF which-ACC.SG.N me-1.P.DAT.SG
mrōaotā vahīstom
you tell-2.PL.IND.PRES.ACT the best-ACC.SG.N

'I want to do that about which you tell me that it is the best'
('ich will das tun, von dem ihr mir sagt, dass es das Beste ist')
(36) Old Indian RV 1.81.8

\[\text{mādhyasva} \quad \text{sūte} \quad \text{sācā} \]
intoxicated-2.SG.IMP.PRES.MED pressed-LOC.SG.M together with
\[\text{sāvase} \quad \text{sūra} \quad \text{rādhase/} \]
power-DAT.SG.N hero-VOC.SG.M generosity-DAT.SG.N
\[\text{vidmā} \quad \text{hi} \quad \text{tvā} \quad \text{purūvāsum} \]
we know-1.PL.IND.PFV.ACT for you-2.P.ACC.SG rich-ACC.SG.M

'Intoxicate yourself with pressed soma, O hero, with power and generosity, for we know that you are very wealthy'

('Berausche dich bei dem ausgepresssten Soma, o Held, zur Kraft, zur Freiebigkeit, denn wir wissen, dass du güterreich bist')

(37) Avestian Yasna 28,10

\[\text{at} \quad \text{yōng} \quad \text{aśāačā} \]
but-PART those of which-ACC.PL.M with truth-ABL.SG.N
\[\text{vōistā} \quad \text{vanēhūsčā} \quad \text{daḥyng} \]
you know-2.SG.IND.PFV.ACT good-GEN.SG.N-and harmonizing-ACC.PL.M
\[\text{mananḥō/} \quad \text{aroḍhōn} \]
thought-GEN.SG.N righteous-ACC.PL.M

'For those of which you know that they agree with the truth and the good thought (and) are righteous'

('Für die von denen du weißt, dass sie übereinstimmen mit der Wahrheit und dem guten Gedanken (und) rechtschaffen sind')

2.1.4 that-clause
We are now approaching the finite end of the inflection scale. The structures corresponding to that-clauses with inflected verbs deserve our attention. They are to be found in late Hittite:

(38) Late Hittite KUB XXI 38 Rs. 13f.13

\[\text{[ki-nu-uŋ/G1]M-ya} \quad \text{I-DI} \quad \text{ku-it-za} \]
[now/as soon as]-and he knows-3.SG.IND.PRET.ACT that-REFL.PART
\[\text{KUR[U1]Mi-iz-ri} \quad \text{KUR[U1]Ha-at-ti-ya} \quad \text{1EN} \quad \text{KUR[TIM]} \]
country-DAT-Egypt country Hatti one country
\[\text{ki-ša-ri} \quad \text{it becomes-3.G.IND.PRES.MED} \]

'And [now/as soon as] I know that the country Egypt and the country Hatti will become one (single) country ...'

('Und [jetzt/sobald] ich weiß, dass das Land Ägypten und das Land Hatti ein (einziges) Land werden ...')

13. Some of the following examples are from Cotticelli-Kuris (1995: 87ff.).
Late Hittite KBo IV 4 IV 28f.

ma-ah-ha-an-ma [U³]MEŠ UURU Az-zi a-ú-e-ir
as-but-PART people-NOM.PL. DET-Azzi they saw-3.PL.IND.PRET.ACT
URU[ỈDIL.HIA BAD-kân ku-it za-ah-hi ya-az kat-ta
cities-PL. fortification-PART that battle-ABL.SG.C PFX
da-ã-ki-u-wa-an te-eh-hu-un
subdue-SUPINE I began-1.SG.IND.PRET.ACT

‘however as the people of Azzi saw that I began to take the fortified cities in battle …’
(‘als aber die Leute von Azzi sahen, dass ich feste Städte im Kampf einzunehmen begann …’)

In contrast to Vedic there are real that-clauses in Old Avestan. This is evident in the Old Avestan conjunction hiiat, which differentiates itself from later Avestan yat, and Vedic yād by its initial h-. It is apparently the result of the correlative unit Avest. ho yo ’the one which’ (Vedic sā yāḥ).

Avestan Yasna 46,15

haçaçasp-voç.sg.m vaxšiá vā
Haçaçaspas-VOC.SG.M I will tell-1.SG.IND.FUT.ACT you-DAT.PL
spitamañtò hiiat dařšing vicaíaltā
Spitamas-VOC.PL.M that just-ACC.PL.M you may separate-2.PLSBJV.AOR.ACT
adâššcā.
unjust-ACC.PL.M

‘O Haçaçaspas, I will tell you, o Spitamas, that you must decide between the just and the unjust’
(‘O Haçaçaspas, ich werde euch sagen, o Spitamas, dass ihr zwischen Gerechten und Ungerechten unterscheiden sollt’)

that-clauses are also common to Old Persian. The conjunction is taya, a contraction of correlating ta ya ‘that which’ (Vedic tād yād).15

Old Persian DB § 13

mātayamām xšnāšatiy, taya
not-that-me-1.P.ACC.SG he may discover-3.SG_SBIV.PRES.ACT that
adam naiy Bārdiya amīy
1-1.P.NOM.SG not Smerdis I am-1.SG.IND.PRES.ACT

‘that they not discover, that I am not Smerdis’
(‘damit sie nicht erfahren, dass ich nicht Smerdis bin’)

---

In Greek *that*-clauses occur with verbs of ‘vision’, ‘cognition’, ‘knowledge’ and ‘speaking’, whereas Latin implements the AcI and the AcP with verbs of ‘vision’, as mentioned above.

(42) Old Greek Iliad H 448f.

οὐχ ὤρας
not you see

δὲι δῆ αὖτε κάρῃ
that again heads

κομὸντες Ἀχαιοῖς
long haired-Achaeans

τεῖχος
wall

ἐτειχοσάντο
they built-

νεῖὼν ὅπερ
ships-because of

‘Don’t you see that the heads of long haired Achaeans have once again walled up a wall to protect the ships…”

(‘Siehst du nicht, dass nun wieder die am Haupte langhaarten Achaier eine Mauer gemauert haben zum Schutz der Schiffe…”)

(43) Old Greek Iliad A 408

οἶδα
I know

γὰρ δς κἀκοὶ
for bad ones

μὲν
part

ἀπολείφονται
they leave-

πολέμοιο
fight-gen.

‘I know well that only the bad avoid the fight’

(‘Weiß ich doch, dass nur Schlechte aus dem Kampfe weichen’)

(44) Old Greek Iliad P 655

εἰσεῖν δς ρᾶ οὐ
say-inf that much

πολύ φιλτατος
perished-loved

ὡλθῆ ἕταὑρος
he perished-comrade

‘In order to tell (Achilles) that the companion far dearest to him is slain’

(‘um zu sagen, dass ihm der weit liebste Gefährte zugrundegegangen ist’)

Old Saxon displays the normal construction for *that*-clauses with all the mentioned verbs, so that examples are superfluous.

2.1.5 Main clauses

The end of the scale of inflection is constituted by subordinated main clauses. Subordination can be marked by special words, as is the case with the so-called “quotative constructions”. Thus, in Vedic we have structures in the function of a sentential object delimited with a postpositional adverb *iti ‘so’*:
(45) Old Indian RV 10,146.4

vāṣann aranyāṇyāṃ sāyāṃ
being-PRT,PRES.ACT,NOM,SG,M wilderness-LOC,SG,F in the evening
ākruṣṣad iti manyate
he screamed-3.SG.IND,AOB.ACT QUOT he thinks-3.SG.IND,PRES.MED

‘Who ever is in the woods in the evening, thinks someone screamed (for help)’
(Wer des Abends im Walde weilt, meint, es habe einer (um Hilfe) geschrien)
This usage is very common in later times.

(46) Old Indian Brhadāraṇyaka-Upaniṣad 1.2.5

sā aikṣata: yādi va
de-NOM,SG,M thought to himself-3.SG.IND,IPFV.MED when indeed
imāṃ abhimarṣe, kāntyō
this one-ACC,SG,M he will pursue-3.SG.FUT.MED less-ACC,SG,N
‘nmāṃ karisyā itī,
food-ACC,SG,N he will get-3.SG.FUT.MED QUOT

‘He thought to himself, that were he to kill this one, not to have enough food’
(‘Er dachte bei sich, dass er, wenn er diesen tötete, an Speise zu kurz kommen würde’)

(47) Old Indian Brhadāraṇyaka-Upaniṣad 1.3.2

tē ha devā ucyur:
these-NOM,PL,M part gods-NOM,PL,M they said-3.PL.IND,PFV.ACT
hāntusurān yaśīṇā
part-Asuras-ACC,PL,M sacrifice-LOC,SG,M
udgīthānātyayāmēttī
Udgītha-INSTR,SG-M-let us outdo-PFX,1.PL.SBJV,PRES.ACT-QUOT

‘The gods said: ‘Let us outdo the Asuras at the sacrifice by means of Udgītha’
(‘Die Götter sagten: ‘Lasst uns die Asuras beim Opfer durch den Udgītha übertreffen.’)

Similarly the comparable structure in Avestan with utī:

(48) Avestan Yašt 19,53

uṣṭa ahnāi nairē maināiiā/
as desired-ADV this-DAT,SG,M man-DAT,SG,M I think-1.SG.IND,PRES.MED
utī mraot ahūro mazdā/
QUOT he spoke-3.SG.AOR.INJ.ACT Ahura-NOM,SG,M Mazda-NOM,SG,M
āī aśām zarathustrā
o-INTERJ ašālik-VOG,SG,M Zarathustra-VOG,SG,M
'Good for the man, I think, thus spoke Ahura Mazda, o asalike Zarathustra' ('Wohl dem Manne, denke ich, so sprach Ahura Mazda, o asahfter Zarathustra')

In Anatolian, Greek and Latin we find 'quotative constructions' combined with verbs of 'speaking': wa(r), ġ and inquit, inquam. For instance in Greek:

(49) Old Greek Iliad A 215ff.

\[
\begin{align*}
\text{ποδάς} & \quad \text{ὥς} \\
\text{φη-3.sg. ind. ipfv. act} & \quad \text{quick-nom.sg.m} \\
\text{Ἀχιλλεὺς/} & \quad \text{χρῆ} \\
\text{Achilles-nom.sg.m} & \quad \text{μὲν} \\
& \quad \text{σφωτερόν} \\
\text{it is necessary} & \quad \text{part} & \quad \text{both of you} & \quad \text{adj.nom.sg.n} \\
\text{γε} & \quad \text{θεὰ} \\
\text{part} & \quad \text{εἴρυσαιθαῖ/} & \quad \text{respect-inf.aor.med} \\
\text{goddess-voc.sg.f} & \quad \text{word-nom.sg.n} \\
\text{καὶ} & \quad \text{μᾶλα} & \quad \text{κεραλωμένον} & \quad \text{and very part} & \quad \text{heart-dat.sg.m} \\
\text{for} & \quad \text{being angry-prt.prf.med.acc.sg.m} \\
\text{ sophistic} & \quad \text{γάρ} & \quad \text{ἄμενον/} & \quad \text{δὲς} & \quad \text{part} & \quad \text{gods-dat.pl} \\
\text{so} & \quad \text{who-nom.sg.m} \\
\text{ἐπισεῖθησα} & \quad \text{μᾶλα} & \quad \text{τ’} & \quad \text{ἐκλειν} \\
\text{pf-3.sg.sbjv.pres.med} & \quad \text{gladly so they heard-3.pl.ind.aor.act} \\
\text{him-gen.sg.m} & \quad \text{he spoke-3.sg.ind.aor.act} & \quad \text{and} \\
\text{... quick Achilles spoke, 'Both of your statements, o goddess, must be obeyed,} \\
\text{... even when angry at heart, for it is better, who ever obeys the gods, they are the} \\
\text{ones the gods tend to hear,' he spoke and ...'} \\
\text{... sprach der schnelle Achilles: 'Euer beider Worte, o Göttin, muss man gehorchen,} \\
\text{... wenn auch sehr im Herzen erzürnt; denn so ist es besser; wer den Götern gehorcht,} \\
\text{... sprach und ...'; Hock 1982: 62ff.}.
\end{align*}
\]

Such constructions need not be further pursued here, however, because they are of no consequence for the question of whether the above competitors for the object clause function reflect underlying Indo-European syntax. They are far to diverse that a common Proto-Indo-European structure could possibly be deduced from them. It is also not justified to assume that the deverbal abstract formation in Hittite comes from Proto-Indo-European, because it only turns up in the Anatolian languages. The productive deverbal formation of abstract nouns is a process which can crop up in languages at any time, as can be seen in the case of Armenian (Lühr 1999).

---

And the other way around we are prevented from assuming an infinitive object clause as a basic Indo-European element because it is missing in the Anatolian evidence. The only piece of Proto-Indo-European syntax available is a participle construction or a construction with a predicative adjective. These constructions can be found in all the older Indo-European languages we have treated.

2.2 The prototypical that-clause competitors

2.2.1 *The accusativus-cum-participio/adjectivo construction*

Assuming that the AcP represents a basic Indo-European *that*-clause competitor in the function of a grammatical object, what does that tell us about the syntactic structure of Proto-Indo-European? What kind of assertion is denoted by the AcP in the old Indo-European languages we are considering? Before these questions can be dealt with in greater detail, a brief word about the status of Anatolian with respect to the rest of the Indo-European languages: recent research indicates that Anatolian did indeed diverge from the rest earlier, but not extremely long before the other languages. It would not be considered a 'sister' of Proto-Indo-European but rather the 'eldest daughter' (Zeißfelder 2001). In this case the meaning of individual grammatical categories in Anatolian can very well represent the more ancient linguistic data. With respect to the AcP this suggests that the functional meaning of the single participle in Hittite, which is formed with the suffix -ant, may well be old. For transitive verbs it is passive, for intransitive verbs it is active-intransitive (Friedrich 1960: 144). In the case that a passive participle with the meaning 'protected,' 'deceased' exists in an AcP construction, as indicated by the case of participles formed with -ant in the Hittite examples or the case of passive participles with the meaning 'cooked' and 'born' form with -tâ- in the Old Indian examples or the case of the passive participle with the meaning 'vanquished' formed with -an in the Old Saxon example, then not only events like the 'rising of the sun' or transitory states like 'hanging from a gallows' can be denoted, permanent states like 'being deceased/dead' can also. AcP constructions can therefore contain stage-level or individual-level predicates.\footnote{Cf. Carlson (1980); Lühr (2002a, 2005). Modern English behaves differently since no individual-level predicates are permitted in participial complements. i.e., *John was being tall* compared with *John was being obnoxious* (Felser 1998: 362).} In contrast only permanent, inherent properties are denoted by the "accusative + predicative adjective" construction, because the participle of the verb 'to be' can be understood.

Differentiating the AcP constructions as to whether they contain stage-level or individual-level predicates results in a dichotomy. Those constructions with
individual-level predicates belong to the class of examples in which the main verb is one of ‘speaking’, ‘opinion’ or ‘belief’ and in Old Saxon of ‘vision’. The AcP generally involves a passive participle, as evident in the Hittite example (17): “to me he called him deceased” (“mir hat er ihn als gestorben bezeichnet”), or in the reformulation of the Old Indian examples (21) “I think that this newest (sacrifice) is a well cooked one” (“Ich halte diese neueste (Spende) für eine gut gekochte”) and (22) “they said that from there (from the seed) Rṣi Vasiṣṭh is born” (“sie bezeichneten den Rṣi Vasiṣṭh als einen daraus [aus dem Samen] Geborenen”). Or in the translation of the Old Saxon example (26): “When did anyone see you vanquished by such deficits?” (“Wann sah dich irgend jemand von solchem Mangel bezwungen?”). Participles of intransitive verbs are also quite possible: the Old Indian example (20) “Who thinks that Indra is, that he be present?” (“Wer meint wohl, dass Indra ist, dass er gegenwärtig?”).

The verbs of ‘vision’ and ‘hearing’ on the other hand display stage-level predicates if the participle is active. Consider the Old Indian examples (18), (19): “we wish to see the sun rise again” (“wir möchten noch die Sonne aufgehen sehen”); and “For I hear, that you punctually remunerate …” (“Denn … ich höre dich pünktlich vergelten …”). In such constructions the so called ‘simultaneity condition’ applies. This means “the event or situation depicted by the participial complement must be interpreted as occurring simultaneously with the act of perceiving”, Felser (1998: 352).

The classification evidence for the AcP with the main verb ‘to know’ varies. Greek exhibits an individual-level predicate – cf. (28) “those of whom you know that they bear the greatest affliction among mankind …” (“von denen ihr wisst, dass sie am meisten Jammer tragen unter den Menschen”). Old Saxon, however, has a stage-level predicate; cf. (29) “… where he knew that God’s child, the body of his Lord hung” (“… wo [am Galgen] er wusste, dass das Gotteskind, der Leichnam seines Herrn hing”). But for the most part one can delineate the two AcP construction alternatives by the semantics of their predicates. The individual-level predicate type belongs to the so called ‘small clauses’ (Staudinger 1997: 70) and the stage-level predicate type belongs to the ‘perception complements’.

---

18. The construction of ‘to know’ with AcI is a new development in Homer in any case, as proven by the fact that of the numerous occurrences of εἰδεναι only five are constructed this way (Chantraine 1963: 327). Starting from the factual verb ‘to know’, the Greek AcP went on to include further factual verbs, such as verbs of ‘reference’, of ‘narration’ and on to ποιεῖν in the sense of poetic presentation.

19. The conclusion that small clauses and related structures were used as complements in Indo-European is already reached by Miller (2002) on the basis of partly complementary data.
No matter how these two types are to be differentiated within the framework of Chomsky’s ‘minimality concept’ (Felser 1998: 351ff.), they do have one thing in common. Just like the Acl constructions, they belong to those constructions for which one assumes exceptional case marking (ECM). That is, the case marking is provided by the main verb whereas the θ-role is supplied by the embedded predicate. In any case categories like “complementizer” (C) and INFL are missing, so that small clauses and perception complements must be considered “bare verb phrases” (VPs).

2.2.2 The explicative clause

Until now we have shown that one of the characteristics of the Indo-European source language is that it has ECM-constructions and distinguishes itself by this feature from the contemporary Balkan languages, for example, which have replaced the Acl,\(^\text{21}\) compare:

\((50)\) Modern Greek

tóλω, νατροκ

‘I want you to come’

d versus

\((7)\) Latin Plautus, Amphitruo 980

\textit{volo deidili illunc}

‘I want that he be ridiculed’

(‘ich will, dass jener verspottet wird’)

And there is yet another syntactic curiosity. There were indeed that-clauses in the function of object complements in the Indo-European source language. Such subordinate clauses however carry a reference element, either a noun or a pronoun, so that they are actually attributive clauses. Consider the examples from the Vedic, Avestan and Greek with a noun as reference element:\(^\text{22}\)

\((51)\) Old Indian RV 5,31,6

\begin{verbatim}
prá te púrvāni káranāni vocan
\end{verbatim}

\begin{verbatim}
<table>
<thead>
<tr>
<th>PFX</th>
<th>Gen.Sg.</th>
<th>Acc.PL.N</th>
<th>Ind.J.A.O.R.ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>prá</td>
<td>VOUN</td>
<td>YÁ</td>
<td>bounteous one-VOC.SG</td>
</tr>
<tr>
<td>nátkānā</td>
<td>maghavan</td>
<td>yá</td>
<td>which-ACC.PL.N</td>
</tr>
</tbody>
</table>

20. According to Felser (1998: 366), standard ECM complements differ from perception constructions in English in that they lack passive counterparts:

\textit{It was seen snowing} versus \textit{John was expected to draw a circle}

21. Compare Greek τέλος, να φάνες; serb. želim, da jedem literally “I wish that I eat.”

cakārtha/  śāktiva  yād
you have done-2.sg.ind.pfv.act  mighty-voc.sg  that
viṃhāra  rōdaśi  ubhē
you divided-2.sg.sbjv.pres.act  world.acc.pl.n  both.acc.dual.n.
'I want to tell your early deeds, the newest that you, talented one, have done,
that you, mighty one, divided the hemispheres'
(‘Deine früheren Taten will ich verkünden, deine neuesten, die du Gabenreicher
getan hast, dass du Mächtiger beide Welthälften trenntest’)

(52)  Old Indian RV 1,131,4
vidūś  ā́śā  vrīyāsvyu
they know-3.pl.ind.pfv.act  of you-gen.sg  this-gen.sg.n  deed-gen.sg.n
pūravah / pūro  yād  indra  śāradir
Purus-nom.pl.m.  castle-acc.pl.f  that Indra-voc.sg  autumnal-acc.pl.f
avātirah
you destroyed-2.sg.ind.pfv.act
'The Pūruş’s know this deed of yours that you, Indra, destroyed the autumn
castles'
(‘Die Pürus kennen diese Heldentat von dir, dass du, Indra, die herbstlichen
Burgen niederwarfst’)

(53)  Avestan Yaś 15,12
auusat  aitiapəm  dazdi  mē...  yat
this.acc.sg.n  success-acc.sg.n  grant-2.sg.imp.pres.act  me-1.p.dat.sg  that
bāuunī  aiši  vamiīā  vispe
I become-1.sg.sbjv.pres.act over victor-nom.sg.m  all-acc.pl.m
dāvusat  maθiāca
Daevas-acc.pl.m  humans-acc.pl.m
‘grant me this success, that I become victor over all Daëvas and humans’
(schenke mir diesen Erfolg, dass ich Sieger werde über alle Daëvas und Menschen’)

(54)  Old Greek Iliad A 411f.
γνὸ  δὲ  καὶ  Ἀτρείδῆς...
he may know-3.sg.sbjv.aor.act  part  and  son of Atreus-nom.sg
ἡν  ἀτην,  δ  τ’άρμοτον
one’s own-acc.sg.f  blindness-acc.sg.f  that best-superl.acc.sg.m
Ἀχαϊῶν  οὐδὲν  ἔτειος
Achaeans-gen.pl.m  not  he honoured-3.sg.ind.aor.act

23. The subjunctive refers to events in the past (Hoffmann 1967: 244).
'and (that) the son of Atreus may know his own error, and (the fact) that he in no way honoured the best of the Achaeans'
('und es erkenne auch der Atride ... seine Verblendung, dass er den besten der Achaier für nichts geachtet hat')
And with a pronominal reference element:

(55) Old Indian RV 1,116,5

*anārambhāṇē*  
 ancient  

*taēd avirayethāṃ*

having no support-LOC.SG.M that you accomplished-2.DUAL.IND.PVF.ACT

*anāsthāṇē*  
 ancient  

*aṅrabhaṇē*

bottomless-LOC.SG.M having nothing which can be grasped-LOC.SG.M

*saṃuvrē/ yād aśvinā uḥāṭhur*

sea-LOC.SG.M that Āśvins-VOC.PL you led-2.DUAL.IND.PVF.ACT

*bhujyāṃ*  
 ancient  

āstaṃ* Bhujyā-ACC.SG.M home*

'You accomplished that (deed) in the sea, that has no hold, no solid bottom, without handle, that you led Āśvins the Bhujyā home'  
('Das vollbracht ihr als Heldentaten im Meer, das ohne Anhalt, ohne festen Grund, ohne Handhabe ist, dass ihr Āśvins den Bhujyā nach Hause fuhret')

This construction is not restricted to the function of an object clause. It also occurs in the function of a subject clause. Consider the Hittite, Old Indian and Latin examples:

(56) Hittite KBo IV 8 ll 12ff.

*am-me-ēl ka-a-aš-pāt*  
 ancient  

*1-aš*  
 of me-GEN.SG this-NOM.SG.C-PART only-NOM.SG.C

*dam-me-ēs-ha-aś*  
 ancient  

*ki-ya-an*  
 reproach-NOM.SG.C this-ACC.SG.N-her-3.P.ACC.SG.C only-ACC.SG.C

*IŠ-TU É.GAL1IM.pāt-kān*  
 I punished-1.SG.PRET.ACT from palace-PART.PART that

*kat-ta u-i-ya-nu-un*  
 forth I send-1.SG.PRET

'this (is) my only reproach, with this alone have I corrected her, that I sent her forth from the palace'

('eben dies (ist) meine einzige Maßregelung, damit allein habe ich sie gemäßregelt, dass ich sie eben aus dem Palast fortgeschickt habe')

(57) Old Indian RV 1,93,4

*āgnišomā*  
 ancient  

*cēti*  
 Agni-Soma-VOC.DU.M and-thus

*tād viryaṃ*  
 ancient  

And thus that heroic deed-NOM.SG.N
vam / yad amusgitan avasam
of you-gen.dual that you stole-2.dual.ind.pfv.act food-acc.sg.n
panim gah
Paṇi-acc.sg.m cows-acc.pl.f
'Agni and Soma, your heroic deed is famed, that you stole the food from Paṇi, his cows'
('Agni und Soma, bekannt ist diese Heldentat von euch, (nämlich) dass ihr dem Paṇi seine Nahrung, die Kühe raubtet')

(58) Old Indian RV 5.47,5
idam vapur nivacaanan janasa
caranti
they wander-3.pl.ind.pres.act that river-nom.pl they stand-3.pl.ind.pfv.act
apah / deva yad in
water-nom.pl.f two-nom.dual.f that part-him
bibhrta matar anye /
they carry-3.dual.ind.pres.act mother-abl.sg.f other-nom.dual.f
iheha jate yamyara
here-here born-nom.dual.f twins-nom.dual.f
sabandha
being of the same stem-nom.dual.f
'That is a miracle, a mystery, you people, that the rivers wander, the waters stand still, that not his mother but two others carry him, born here and there and yet twins of the same tribe'
('Das ist ein Wunder, ein Geheimwort, ihr Leute, dass die Flüsse gehen, die Wasser stehen; dass ihn zwei andere als die Mutter tragen, die hier und dort geboren doch Zwillinge und von gleicher Sippe sind')

(59) Latin Plautus, Mercator 396
id illi vitium
that-nom.sg.n him-3.p.dat.sg.m deficit-nom.sg.n
maxust, quod nimis tardus
greatest-superl.nom.sg.n superl that too sluggish nom.sg.m
est
is-3.sg.ind.pres.act
'that is his greatest deficit, that he is too sluggish'
('das ist sein grösster Fehler, dass er zu träge ist')

To sum up so far, the apparently very modern construction principles - they are quite common in contemporary German - are certainly inherited from the Indo-European source language. In their function as object or subject clauses that-clauses must have a noun or pronoun as a referential element. In the case
of the object function those verbs that semantically permit *that*-clauses must be specified with the feature [+ NP] in the lexicon. If however no explicative clause is chosen in the oldest Indo-European languages, the expressive content involved can be formulated as a coordinated clause or as a relative clause with reference to a marker of a person (noun or pronoun) counterpart in the main clause:

(60) Old Indian RV 1.117,6

\[
\begin{align*}
tād & \text{ váñ} & \text{ nara} & \text{ śamsyam} \\
\text{ this-ACC.SG.N} & \text{ of you-2.P.GEN.DUAL} & \text{ lords-VOC.PL.M} & \text{ to be told-ACC.SG.N} \\
pajrīyēna & \text{ kaksīvatā} & \text{ nāsatyā} \\
Pajrīya-INSTR.SG.M & \text{ Kaksīvat-INSTR.SG.M} & \text{ Nāsatyas-VOC.PL.M} \\
pārijmān/ & \text{ saphād} & \text{ āśvasya} \\
during his trip-LOC.SG.M & \text{ hoof-ABL.SG.M} & \text{ horse-GEN.SG.M} \\
vājīna & \text{ jānāya} & \text{ satām} \\
prize winning-GEN.SG.M & \text{ people-DAT.SG.M} & \text{ hundred} \\
kumbhān & \text{ asiṅcatam} & \text{ mádhūnām} \\
jugs-ACC.PL.M & \text{ you poured-2.DUAL.IND.IPV.ACT} & \text{ sweet drinks-GEN.PL.N} \\
\end{align*}
\]

'Kaksīvat Pajrīya must tell this (deed) of yours during his trip, you lords of Nāsatyas: You have poured one hundred jugs of the sweet drink from the hoof of the prize horse for his people'

('Diese (Tat) von euch muss Kaksīvat Pajrīya laut verkünden auf seiner Fahrt, ihr Herren Nāsatyas: Aus dem Hufe des preisgewinnenden Rosses schenkt ihr seinen Leuten hundert Krüge der süßen Getränke ein')

(61) Old Indian RV 5.85,5

\[
\begin{align*}
imām & \text{ ā} & \text{ ṣv} & \text{ āsurasya} & \text{ śrutasya} \\
\text{ this-ACC.SG.F} & \text{ part well-PART} & \text{ Asurian-GEN.SG.M} & \text{ famous-GEN.SG.M} \\
mahīm & \text{ māyā} & \text{ varūnasya} & \text{ prā vocam/} \\
great-ACC.SG.F & \text{ feat-ACC.SG.F} & \text{ Varuṇa-GEN.SG.M} & \text{ PPC I declare-1.SG.INJ.AOR.ACT} \\
māneneva & \text{ tathivāṁ} & \text{ antārikṣe} & \text{ vi} \\
yardstick-INSTR.SG.N-like & \text{ standing-PRT.PFY.ACT.NOM.SG.M} & \text{ air-LOC.SG.N} & \text{ PPC} \\
yā & \text{ manē} & \text{ prthiviṁ} & \text{ who-NOM.SG.M} \\
\text{ he has measured-3.SG.IND.PFY.MED} & \text{ earth-ACC.SG.F} \\
sūryena & \text{ sun-INSTR.SG.M} \\
\end{align*}
\]

'I want to declare this great artistic feat of the famous Asurian Varuṇa, who measured the earth with the sun by standing in the air like with a yardstick'

('Dieses große Kunststück des berühmten asurischen Varuṇa will ich fein verkünden, der in der Luft stehend wie mit dem Messstabe die Erde mit der Sonne abgemessen hat')
Compare the evidence in the following table:

Table 1. The distribution of *that*-clause-competitors in the Indo-European languages

<table>
<thead>
<tr>
<th></th>
<th>Early Hittite</th>
<th>Late Hittite</th>
<th>Old Vedic</th>
<th>Later Vedic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract de-verbal nouns</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Acl: with verbs of ‘volition’</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Acl: with verbs of ‘cognition’, ‘vision’, <em>verba affectus</em></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>AcP: with verbs of ‘vision’</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>AcP: with verbs of ‘vision’, ‘speaking’</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
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<tr>
<td>AcP: with verbs of ‘hearing’, ‘knowledge’</td>
<td></td>
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<tr>
<td>AcP&lt;sub&gt;way&lt;/sub&gt;: with verbs of ‘hearing’, ‘knowledge’</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>AcP: with verbs of ‘vision’, ‘hearing’, ‘belief’, ‘speaking’</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>AcADV: with verbs of ‘vision’</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td>✓</td>
<td></td>
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<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>explicative clause</td>
<td><em>ktš + kuit</em></td>
<td>noun + *yd, *ūd/ *idām + <em>yd</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>demonstrative + main clause/relative clause</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td><em>that</em>-clause: with verbs of ‘knowledge’, ‘vision’</td>
<td></td>
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<td><em>that</em>-clause: with verbs of ‘vision’, ‘cognition’, ‘knowledge’, ‘speaking’</td>
<td></td>
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</tr>
<tr>
<td>Quotative construction</td>
<td><em>wār</em></td>
<td><em>wār</em></td>
<td><em>iti</em></td>
<td><em>iti</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Old</th>
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<th>Persian</th>
<th>Greek</th>
<th>Latin</th>
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</table>

(Continued)
Table 1. Continued

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<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>✓</td>
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</tr>
<tr>
<td>AcPpast: with verbs of 'hearing,' 'knowledge'</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<td>AcP: with verbs of 'vision,' 'hearing,' 'belief,' 'speaking'</td>
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<td>AcAdj: with verbs of 'vision'</td>
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<td>✓</td>
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</tr>
</tbody>
</table>

Explicative clause: *noun + yat* | *noun + ö* | *id + quod*

Demonstrative + main clause:relative clause

*that-clause:* with verbs of 'knowledge,' 'vision' | ✓ | ✓ |

*that-clause:* with verbs of 'knowledge,' 'speaking'? | *hiat* | *taya* |

*that-clause:* with verbs of 'vision,' 'cognition,' 'knowledge,' 'speaking'? | ✓ | *öti* |

Quotative construction: *uτi* | *ŋ* | *inquit,* *inquam*

The table shows the amount of syntactic variation; Vedic, Greek and Latin are the languages which have the most *that-clause*-competitors. But while Greek and Latin have real *that*-clauses, this sentence type does not arise before late Vedic.

2.3 The change in meaning from 'what' to 'that'

Now the question is whether the explicative complex "reference element + *that-clause" can be brought into harmony with the other constructions that exhibit a
formal correspondent to the conjunction *that*. To this end let us examine the Vedic and Hittite data. Beside the obvious relative clauses Vedic displays subordinate clauses which must be considered adverbial clauses introduced by the conjunction *yād*. The conjunction has completely different meanings: 'as', 'when', 'although', 'in order to', 'for' and 'because'. As in the case of the explicative clauses they can contain an element referring to the main clause: *tād, àdha, áthā, ád, átra, átas, tátas.*24 Because among these reference elements *tād* (the demonstrative counterpart to the relative component *yād*) also appears, it has been assumed that those Vedic adverbial clauses introduced by *yād* are derived from relative clauses.25 An explanation for the origin of 'causal', 'intentional', and 'concessive' adverbial meaning is basically to be found in the temporal accusative function (*accusativus temporis*) of *tād* 'at that time' (Abraham 1976: 41) which is picked up in the relative clause by *yād*. However, because TIME-clauses, as seen in many languages, do not necessarily require a reference element and may then retain an empty HEAD,26 *yād* can be used on its own temporally in the sense 'at which time', 'when'.27 The same thing is the case with PLACE-clauses so that *yād* can also be used in the sense 'at which place', 'where'. With respect to the temporal and positional use of accusative singular neuter pronouns consider Old Indian *idām* 'now', 'here'. If, however, a subordinate clause is introduced by a word which may have the meaning 'where', then the dependent clause can be a conditional one. Consider the following:

(62)  
*Wo gehobelt wird, (da) fallen Späne.*  
*Wenn gehobelt wird, (dann) fallen Späne.*  
(Zaefferer 1991: 81)

The fact that such a change in meaning must be assumed for Vedic *yād*-clauses in adverbial function explains their distribution. For the majority of *yād*-clauses the introductory element can be translated as 'when' (Hettrich 1988: 346ff.). Assuming that the Vedic *yād*-clauses in adverbial function were originally TIME- and also PLACE-clauses, we must check to see if it is also valid for Hittite *kuit*. This word can not only be used like Old Indian *yād* in the meaning 'that' (*dass*). As the accusative singular neuter of the relative pronoun *kuit* also serves as the introductory element of clauses possibly considered adverbial. Thus *kuit* does appear in Hittite


26. Thompson & Longacre (1985: 178ff.). Concerning the use of nominal reference words as conjunctions consider Turc. *zaman* 'when (past) < *zaman* 'time', Irish *nuaire* 'when < *an uair* 'the hour', Irish (*s*) *ann ait* 'where' < *sa an ait* 'at the place', Welsh *lle* 'where' < *lle* 'place'.

27. The assumption that *yād* originally took reference to a neuter noun like *āhar* 'day' (Delbrück (1900: 323); Lühr (1989: 162)) is not absolutely necessary.
in the meaning ‘when’ (‘in the past’) and ‘since’, but most frequently in the meaning ‘because’. But because of the overwhelming preponderance of because-clauses we may not assume the adverbial TIME- or PLACE-clauses to be the source of the change in meaning from ‘what’, to ‘because’. On the contrary, we must rather assume the meaning ‘what’, as is the case in Latin quod.

(63) a. Hittite

ŠA ÊRINMES- ma-mu ku-it...
gen.part troops-pl-but-part-me-dat.sg because of what
ha-at-ra-a-es you have written-2.sg.pret.act

‘Because of what you have written to me about the troops...’

b. Hittite Mšt. 75/112 Vs 17

ki-is-la-an-ma-mu ku-it
in the following way-but-part-me-dat.sg because of what
ha-at-ra-a-es you have written-2.sg.pret.act

‘Because of what you have written to me in the following way’
(‘Weil/was du mir folgendermaßen geschrieben hast’)


29. A correlative element is rather seldom; compare:

Orakel KUB V 24+ I 29ft.

(29) nu-za-kăn  mKur DINGIRUM ma ku-it ka-ru-ü KASKAL-ši
and-refl.part det-Kur God-nom.sg-but because earlier time-adv
t-ta-at A-NA MUNUS.LUGAL
he appeared-3.sg.ind.pret.act to queen

(30) kii-an me-ma-an har-ta nu
so spoken-part.pres.pass.acc.sg.n he had-3.sg.ind.pret.act and
A-NA DINGIRUM ku-it za-an-ki-la-tar U-U/I.
to God-dat.sg because penance-nom.sg not

(31) nu DINGIRUM A-NA MUNUS.LUGAL a-pi-iz
and God-nom.sg to queen therefore
kar-pi-iš-ta
he is angry-3.sg.ind.pres.med

‘Because Kur, the God, already presented himself before (and) had spoken the queen and because the penance was not [paid] to the God, the God is therefore angered at the queen’
In summary, the meaning of the introductory conjunctions for adverbial clauses in both Vedic and in Hittite yād and kuit can be derived by a mechanism already known for relative pronouns. Now we must consider how a relative pronoun can assume the meaning ‘that’. It is in fact rather common, as seen in the following examples.

(64)  

a.  

_It croit que trop de gens sont venus_  

‘He believed that many people have come’  

(‘Er glaubte, dass viele Leute gekommen sind’)

b.  

_Igor skazal čto na stole ne bylo knigi_  

‘Igor said that on the table there were no books’  

(‘Igor sagte, dass keine Bücher auf dem Tisch waren’)

But is it really possible to presume a relative pronoun in the change of meaning from ‘what’ to ‘that’ in Hittite? In contrast to Vedic yād the Hittite form is kuit and as such obviously identical to the inherited interrogative pronoun kuit, which also survives in Latin quid. The point is that in many languages in comparable contexts interrogative pronouns and relative pronouns are used in exactly the same way. It is therefore possible to generalize one of the two forms. One would expect an interrogative pronoun in indirect questions and expect the relative pronoun to be in the subordinated clause for a verb of ‘speaking’ in the main clause, as in the case of Greek.

(65)  

a.  

_Συμβουλευόμεθα_  

σοι,  

τί  

we ask advice-1.pl.ind.pres.med  

you-2.p.dat.sg  

what-acc.sg.n  

χρή  

ποιεῖν  

it is necessary  

do-inf.pres.act  

‘We ask advice what to do’  

(‘Wir fragen dich um Rat, was zu tun ist’; Bornemann & Risch 1973: 285)

b.  

_Απόφηγμαναι_  

δότιοι  

σοι  

δοκεῖ  

tell-2.imp.aor.med  

what  

you-dat.sg  

it seems-3.sg.ind.pres.act  

‘Tell what seems right to you’  

(‘Tue kund, was dir richtig erscheint’)

(‘Weil Kur, die Gottheit, aber schon früher einmal erschienen ist (und) zur Königin so gesprochen hatte, (und) weil an die Gottheit die Sühne nicht geleistet war, ist die Gottheit der Königin deswegen böse’).

30.  

δότι is the neuter of the pronoun δότις. It functions as a generalizing relative pronoun ‘who so ever’ and as indirect interrogative pronoun. But δο- is the stem of the old relative pronoun Indo-European *jo-*. 
However, the relative pronoun in Old Indian can be used with interrogative verbs:

(66) Old Indian RV 1,145,2

tam ú prchanti ná simó
him-ACC.SG.M PART they ask-3.PL.IND.PRES.ACT not he himself-NOM.SG.M
vi prchati svéneva dhíro
PFX he asks-3.SG.IND.PRES.ACT own-INSTR.SG.N-like a wise one-NOM.SG
mánasā yád ágrābhīt
understanding-INSTR.SG.N what he comprehended-3.SG.IND.IPPV.ACT
‘Him they ask, not he himself, what he comprehended on his own
like a wise one’
(‘Ihn fragen sie; er selbst erfragt nicht, was er wie ein Weiser mit eigenem
Verstand erfasst hat!’)

(67) Old Indian RV 1,164,34

prchámi tvā páram
I ask-1.SG.IND.PRES.ACT you-2.P.ACC.SG extreme-ACC.SG.M
ántam prthivyāḥ prchámi yātra
boundary-ACC.SG.M earth-GEN.SG.F I ask-1.SG.IND.PRES.ACT where
bhúvanasya nábhīth
world-GEN.SG navel-NOM.SG
‘I ask you about the extreme boundaries of the earth, I ask you where
the navel of the world is?’
(‘Ich frage dich nach der äußersten Grenze der Erde, ich frage dich,
wo der Nabel der Welt ist?’)

Compare that to the case with interrogative pronouns:

(68) Old Indian RV 4,18,6

etā vi prcha kím idám
they-NOM.PL.F PFX ask-2.SG.IMP.PRES.ACT what here
bhantí kám ápo átrim
they say-3.PL.IND.PRES.ACT what waters-NOM.PL cliff-ACC.SG
parihiṃ rujantí
weir-ACC.SG they break-3.PL.IND.PRES.ACT
‘Ask them [the waters], what they say, which cliff the waters break through?’
(‘Frage sic [die Gewässer] aus, was sic da reden, welchen Felswall die Gewässer
durchbrechen?’)
The opposite is the case with verbs of 'speaking' which exhibit derivations from the root of the interrogative pronoun, i.e.,

(69) Old Indian RV 10,129,6

\[ \begin{align*}
\text{kó} & \quad \text{addhá} & \text{veda} & \quad \text{ká} \\
\text{who-nom.sg.m} & \quad \text{certainly} & \text{he knows-3.sg.ind.pfv.act} & \quad \text{who-nom.sg.m} \\
\text{ihā} & \quad \text{pré} & \text{vocat} & \quad \text{kúta} \\
\text{here} & \quad \text{px} & \text{he declares-3.sg.inj.aor.act} & \quad \text{where} \\
\text{ājáta} & \quad \text{kúta} & \text{iyaṃ} & \text{visthit} \\
\text{both-prt.pret.pass.nom.sg.f} & \quad \text{this-nom.sg.f} & \text{creation-nom.sg.f} \\
\text{'Who knows certainly, who can declare, where it came from, where this creation originated?'} \\
(\text{'Wer weiß es gewiss, wer kann es hier verkünden, woher sie entstanden, woher diese Schöpfung kam?'})
\end{align*} \]

Because interrogative pronouns and relative pronouns can substitute for one another in the surroundings of interrogative verbs and verbs of 'speaking', it is quite possible that in Anatolian languages the inherited relative pronoun may have been replaced by an interrogative pronoun. A direct comparison in this case can be drawn to Latin, with the exception that there the interrogative pronoun, used as a relative pronoun in the function of nominative/accusative singular neuter is modified to *quod* following a demonstrative pronoun *tōd* (cf. Old Latin *topper* < *tōd-per*) in the main clause (Leumann 1977: 470, 482). We can resultantly work with the presumption of a relative pronoun in the change of meaning from 'what' to 'that' in the Anatolian languages, just like in Latin although independent of it. What is left to explain is the context in which such a change of meaning is possible. It may have taken place in the direct neighborhood of verbs that because of their own meaning permit subordinate *that*-clauses as well as *what*-clauses. Those are the verbs of 'vision,' 'hearing,' 'cognition,' 'saying,' but also of 'deliberation.' The detailed semantic analysis of such verbs with respect to their complements is extremely complicated (Bauerle & Zimmermann 1991: 346ff.). But there is also an intuitive interdependence between *that*-clauses and *what*-clauses because for instance with the verb 'to say' the *what*-clause actually presupposes the content of the *that*-clause referring to the past, while in the *that*-clause this presupposition is no longer affirmed. Thus a reanalysis must be assumed; the mechanism depends upon surface ambiguity. The underlying structure of a syntactic pattern is changed without involving any immediate or intrinsic modification of its surface manifestation (Harris & Campbell 1995: 3, 61).

The next step in its evolution to a genuine *that*-clause in the function of an object is the possibility of eliminating the reference word. This phenomenon is
some sort of standardization, compare also Cuzzolin (1994). One of two homophonous words is eliminated, which is documented in later Vedic.

(70) Old Indian Chandogya-Upaṇiṣad 4,10,5

\[ \text{viṣṇām} \quad \text{aham,} \quad \text{yat} \quad \text{prāṇo} \]

I understand -1.SG.IND.PRES.ACT 1-L.IND.NOM.SG that breath - NOM.SG.M

brahma

Brahman - NOM.SG.N

'I understand, that the Brahman is the breath'

('ich verstehe, dass das Brahman der Hauch ist'; Debrunner 1948: 123)

But it is already to be found once in the Rig-Veda:

(71) Old Indian RV 1,132,4

\[ \text{nū} \quad \text{te} \quad \text{pūrvaṁ} \quad \text{ca} \]

now - JUST-PART of you - GEN.SG like earlier - ADV and

\[ \text{pravṛcyaṁ} \quad \text{yād} \quad \text{āṅgirobhyo} \]

is to be proclaimed - NOM.SG.N that Aṅgiras - DAT.PL

\[ \text{vṛto} \quad \text{āpa} \quad \text{vrajām} \]

you uncovered - 3.SG.IND.1PEFV.ACT PFX fenced in herd - ACC.SG

('Now just as it was earlier it must be proclaimed of you, that you uncovered the fenced in herd for the Aṅgiras, O Indra'

('Jetzt ebenso wie auch früher ist von dir zu verkünden, dass du für die Aṅgiras die eingehelgte Herde aufgedeckt hast')

The technically accurate description of the change from the relative pronoun 'which' to the conjunction 'that' looks like this:

(72) \([\text{phrase} + \text{wh-operator}] \rightarrow [\text{head} - \text{wh-complementizer}]\)

The wh-phrase originally occupies the XP-position and therefore the specifier-position of a CP. Following the disappearance of the wh-feature, the original relative pronoun would then occupy the previously empty complementizer-position and so become the head of the CP.\(^{32}\) The evolution of the relative pronoun 'which' into the

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32. Cf.

Jenny asked \([\text{wh}, \text{which of her rabbits}, \text{[\text{, she should bring}] with} \]

Jan vertelde \([\text{, waar}, \text{[\text{, hij, naar toe gaat verhuizen}]}}\];

and with 'double filled comp':

I wouf in, wam daß da Sepp oomonka is (Bayer 1983/1984: 212ff.; Rizzi 1990: 54ff.).
conjunction 'that' must be considered part of the Proto-Indo-European language because of the many explicative clauses documented in older Indo-European languages. By the way it is possible that Germanic dass-clauses are the descendants of primary relative clauses, too. The widely accepted theory is that of transposing clause boundaries as follows:

(73) Old High German Otfrid II,2,8
    joh gizälta in sar thaz, thiu sälida untar in was (Müller & Frings 1959: 12)

But this approach is improbable in the face of the numerous nominal and pronominal reference elements in the main clause, as seen in Old Saxon:

(74) Old Saxon Helian d 4976f.
    endi starkan ed sudlico gesuór, that he thes gesōdes ni uuári.
    'and he swore a solemn oath, that he did not belong to that mob'
    ('und er schwur deutlich einen schweren Eid, dass er nicht zu jener Schar gehöre'; compare Lühr 1999a).

Such constructions can very well represent the original complex of 'reference element + relative pronoun'. The fact that Germanic that not only serves as demonstrative pronoun but also as a relative pronoun is easily seen:

(75) Old High German Otfrid II,9,87
    Firnim ..., that thir zīlta ... (Erdmann 1874: 77).

In this case a syntactic change took place which is caused by pragmatics. In a first utterance a speaker presupposes something, using a verb of 'saying' combined with a referential element and a that-clause in the meaning of a what/which-clause.

(76) a. I say that that (= which) he knows.
    b. I say that (= what) he knows.
       He continues speaking by making clear what the person knows.
    c. I say that that (= which) he knows that you want ...

Then one of the two homophones words is dropped. We recapitulate: Only explicative sentences are possible New High German that-clause precursors. On the contrary, AcP-constructions are out of the question because they lack complementizers. They do not have a bounding node such as IPs, for the verb of the main clause subcategorizes here for VP. The explicative sentence, however, lost one of the two homophous that’s in the combination that, that ..., that, what, and in sentences like (76) that 'what' is reinterpreted as 'that'. For a presupposition was no longer asserted a pragmatic change occurred.
3. Conclusion

Only two of all the that-clause competitors in the function of objects found in the older Indo-European languages can be considered part of the basic Proto-Indo-European language. The possibilities were deverbal abstract nouns, the Acl, the AcP and the related construction with a predicative adjective, the that-clause with and without a reference element in the main clause and the coordinated clause as a 'quotative construction'. One of these two is the accusativus-cum-participio adjetivo construction, differentiated according to individual-level or stage-level predicates – the verb of the main clause subcategorizes here for VP. The other one is the that-clause containing a relational element, that is the explicative clause. Because the introductory word of the explicative clause is identical to the relative pronoun, it was possible to show, how the relative pronoun 'which' could develop into the complementizer 'that', whereby reanalysis changes an underlying structure. If however the construction 'nominal or pronominal reference element + that-clause' occurs in the range of verbs that permit object clauses, then the consequences for the subcategorization frame of these verbs is that they subcategorize for NP's but not for CP's. This means that that-clauses in Proto-Indo-European, just like adverbial clauses, were adjoined and not embedded. In both cases they were apparently originally relative clauses connected to a reference word. The subcategorization frame of a verb requiring an object can change in the course of language development, if the reference word in the main clause is dropped, as is documented among the oldest Indo-European languages in late Hittite and even once in the Rig-Veda. This process has already been accurately described by Hermann Paul (1920: 145): "Ein wichtiger Schritt zur Erzeugung komplizierter Gebilde war, dass das Objektverhältnis auf einen Satz übertragen wurde". But the question is whether the term kompliziert is appropriate here. For in Proto-Indo-European the accusativus-cum-participio/adjetivo construction and the adjoined explicative clauses in the function of objects simply represent a different syntactic type than modern German for instance. Last but not least a pragmatical change is responsible for the development into modern that-clauses, after dropping one of the two homophonous that's. If a speaker no longer maintains a presupposition the meaning 'what' in a declarative sentence can develop into 'that'.

References


