The Face-Value Theory, Know-*that*, Know-*wh* and Know-*how*

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For attributions in which a 'that'-clause occurs, such as

(1)   Columbus knows that the sea is unpredictable,

there is a *face-value* or *standard theory*[1], according to which attitude predicates occurring in 'that'-attributions designate relations and 'that'-clauses are singular terms denoting propositions as *relata* in such relations. For example, (1) is taken to express the holding of a relation of knowledge between Columbus and the proposition *that the sea is unpredictable*. Much would have to be spelled out before we could say that we are in front of a *theory* – What are singular terms? What are propositions? – but for our purposes we can simply take a singular term as one that aims at denoting one particular object, and assume nothing about propositions. The theory is generally supported by some linguistic data: if (1) is true, there is *something* Columbus knows, *namely* that the sea is unpredictable (Braun 2015: 144; Richard 2013: 146-148; Salmon 1983: 5-6; Schiffer 2003: 12-14). Columbus knows *that*, he knows *it* that the sea is unpredictable, that the sea is unpredictable *is* what Columbus knows, what *is known by* Columbus (Künne 2003: 68-69). We can deny that these data show that the theory is correct, as alternative explanations are available (Harman 2003; Hofweber 2016: 66-77; Prior 1971: 35-39; Pryor 2007; Rosefeldt 2008; Rumfitt 2003), but we should admit that, at face value, there is something appealing in it.

Famously, Prior (1971: 16) raised an objection to the theory: 'that'-clauses cannot be singular terms denoting propositions, because we cannot substitute *salva veritate* singular terms that would have to be co-denotational and then substitutable if the theory were correct. For example, (1) and

(2)   Columbus knows the proposition that the sea is unpredictable

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[1] For these labels and the defence of the thesis that this is the face-value theory, see Bach 1997; Braun 2015; Fara 2013; Moltmann 2003; Recanati 2004; Richard 2013: 146; Rosefeldt 2008; Schiffer 2003: 12-14; Trueman 2018; Wettstein 2004: 165-166.

have different truth-conditions: Columbus might know the proposition while having no clue about whether the sea is unpredictable. But defenders of the face-value theory urged that the objection could be met. They stressed that two co-denotational terms are substitutable *only if this does not change the meaning of other words occurring in the sentence* and this is exactly what happens with (1) and (2). Although 'that the sea is unpredictable' and 'the proposition that the sea is unpredictable' are co-denotational, (1) and (2) have different truth-conditions because the meaning of 'to know' changes: when combined with 'the proposition that' the predicate designates *being familiar with*, while when combined with the 'that'-clause it designates *being in a state of knowledge having as content* (Forbes 2018; King 2007: 154; Künne 2003: 260; Pietroski 2005: 236-241; Stanley 2011: 64-65). The proposition denoted by the description is providing the direct *object* of the attitude, while the proposition denoted by the clause the *content* of the attitude.

Is the theory safe?[2] The aim of this paper is to show that a new problem arises if we consider some clauses other than 'that'-clauses.

1.   The problem

We can reach our new problem in a few steps.

First step. Sentences such as

(3)   Somebody good at conversation knows when the interlocutor wants to talk and that listening is crucial,

(4)   Columbus knows that the sea is unpredictable and how to overcome a crisis at sea,

are grammatical and this is a systematic datum (Boër 1978: 313; Groenendijk & Stokhof 1982: 185; Schaffer 2007: 396): we can coordinate across conjunction when 'to know' is followed by a 'that'-

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[2] For other independent problems with this solution to Prior's objection, see Boër 2009; Hofweber 2006; Felappi 2016; Rosefeldt 2008. For a reply, see Brigham 2017.

clause, a 'wh'-clause such as 'when the interlocutor wants to talk' and an infinitival embedded question such as 'how to overcome a crisis at sea'.[3]

Second step. Given the grammaticality of sentences such as (3) and (4), 'to know' retains the same meaning no matter what kind of clause it is followed by: we can delete an occurrence of 'to know' only because it designates something already designated in the sentence.

Third step. In order to overcome Prior's objection, defenders of the face-value theory maintain that in (1) 'to know' designates *being in a state of knowledge having as content*. Given that (4) is fine, also in

(5)   Columbus knows how to overcome a crisis at sea

'to know' should designate *being in a state of knowledge having as content*.[4]

Fourth step. But this analysis of (5) cannot be correct. For some 'wh'-attributions, it is maybe acceptable to take them to attribute a propositional content. In

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[3] Embedded infinitival questions are standardly taken to be ambiguous (Stanley & Williamson 2017: 715): Columbus knows how to overcome a crisis at sea if he knows that to overcome a crisis one ought to … , or if he is able to overcome a crisis. We are concerned here with the second reading. Also some 'what'-clauses are ambiguous: you know what Columbus discovered if you know that which Columbus discovered, or that Columbus discovered that … (See Schaffer 2009: 488-489 for diagnostics). Here we are concerned with the second reading. Phrases like 'how to overcome a crisis at sea' might be taken to be 'wh'-clauses, but this is neither necessary nor immediate (Carter & Pritchard 2015: 443; Farkas 2016a: 110; Poston 2015: 866-867). We do not need to take a stance on this.

[4] Many who worked on 'wh'-clauses from a proposition-friendly perspective maintained that they denote propositions or sets of propositions (Groenendijk & Stokhof 1982; Hamblin 1958; Higginbotham 1996; Hintikka 1975; Kartunnen 1977). In our argument we do not need to assume anything about 'wh'-clauses, not even that they are denotational devices or syntactic units. It should be noted, though, that the same linguistic data that made defenders of the face-value theory hold that 'that'-clauses are singular terms are available for 'wh'-clauses and infinitival embedded questions.

(6)   Columbus knows when Isabella I of Castile was born

(7)   Columbus knows where to go for Portuguese food,

for example, maybe, as traditionally maintained by the friends of the face-value theory (Schaffer 2007: 385-386 and references there), we can take the contents to be, respectively, the proposition *that Isabella I of Castile was born on the 22nd of April 1451* and a proposition along the lines of *that one can go to x (y, z, …) for Portuguese food.* It is not clear that this analysis of (6) and (7) is successful, but we can concede this to the face-value theorist.[5] For even if (6) and (7) could be accounted for as suggested by the face-value theorists, still such an analysis could not be extended to all 'wh'-attributions: there are attributions that cannot be accounted for in terms of content, for example those that are usually taken to attribute skills, knacks, propensities and abilities. We do not need here to understand whether 'wh'-attributions should all be treated homogeneously, what exactly the attributions that attribute skills are, or what exactly skills are. The point is that the face-value theory cannot account for (5) successfully. In order to see why, we only need to rely on a characteristic of skills, knacks, propensities and abilities recognized by all parties in the debate, i.e. what Aristotle in the *Nicomachean Ethics* puts as follows: they

> do not fall under any art or precept but the agents themselves must in each case consider what is appropriate to the occasion, as happens also in the art of medicine or of navigation (II, 2) … What sort of things are to be chosen, and in return for what, it is not easy to state; for there are many differences in the particular cases (III, 1).

Skills, knacks, propensities and abilities have a *generic, open character*, they adjust to novel situations (Farkas 2016b: 114; Pavese 2016: 657; Stanley & Williamson 2016: 717). If (5) is true, then Columbus, confronted with all, or the majority of, new situations he could not even dream about, knows how to intervene *in the new situation*. Somebody is not a skilful sailor if she can only mention a general rule about how to dominate the sea (this is something I can do!), or if she has intervened correctly in the

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[5] Thanks to an anonymous referee for suggesting to discuss sentences such as (6) and (7). For a line of worries concerning this propositionalist analysis of (7), see George 2013.

past. It does not matter for our purposes whether, when confronted with the new case, Columbus develops some propositional knowledge. Even if *in each new situation* the kind of knowledge he acquires is propositional, it is not the case that Columbus, in *now* knowing how to overcome a crisis at sea, is *now* in a state of knowledge having a certain content. He is not in such a state, for example, because he lacks the relevant conceptual resources (Farkas 2016a: 114; Friedman 2013: 161). Columbus knows how to overcome a crisis at sea exactly because, when confronted with a dugong, something completely novel to him, he will understand immediately what is to be done. But we cannot say that he has now a piece of knowledge with what to do with dugongs as content, as at the moment he does not even have a concept for dugongs.

The argument consists of four steps. The first is a systematic, widely recognised, unquestionable datum about English and then we are left with three debatable steps. Let's see how each can be resisted in turn.

2.   The second step

According to the second step, coordination across conjunction proves that 'to know' retains the same meaning no matter what kind of clause it is followed by.

A defender of the face-value theory might urge that we should not rush to the conclusion that 'to know' is univocal because sentences such as (3)-(4) are grammatical, and stress that there are famous issues with taking coordination as a test for univocity.

First, for example,

(8)   Rose's dissertation is thought provoking and yellowed with age

is odd, so that 'dissertation' seems ambiguous. But

(9)   Rose's dissertation is *still* thought provoking *although* yellowed with age

is acceptable (Lewandowska-Tomaszczyk 2007: 143), and then coordination tells us that 'dissertation' is univocal too. We should note, though, that with sentences such as (3) and (4) small changes are

unable to affect acceptability. Some changes in acceptability might occur in more complex constructions where 'to know' coordinate three or more clauses. For example, out of

(10) Columbus knows when to set sail, that the sea is unpredictable and how to overcome a crisis at sea

(11) Columbus knows when to set sail, how to overcome a crisis at sea and that the sea is unpredictable

(12) Columbus knows that the sea is unpredictable, when to set sail and how to overcome a crisis at sea,

(11) and (12) sound remarkably better than (10). This datum can hardly be taken to show something about the semantics of 'to know', though, since a straightforward syntactic explanation is available. (10) is worse because in it conjuncts of the same syntactic category are not grouped together. It is well-known that the so called *Law of the Coordination of Likes* is false, i.e. we can coordinate when the elements are of different syntactic categories (Goodall, 2017), as in

(13) Columbus spoke quickly and in Portuguese,

and as in our (3) and (4). Nonetheless, it is still true that we tend to put elements of the same category together. For example, out of

(14) Columbus spoke quickly, loudly and in Portuguese

(15) Columbus spoke quickly, in Portuguese and loudly

(15) might sound worse than (14). Just as we do not take this fact to show something about the meaning of 'to speak', so we should not take the fact that (10) sounds worse than (11) and (12) to show something about the meaning of 'to know'. [6]

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[6] Thanks to an anonymous referee for raising this point. Besides the datum discussed, it also seems that (11) sounds better than (12) to some ears. This datum should not be taken to show something

Secondly, acceptability is influenced by relevance (van Inwagen 2009: 487). In sentences such as (3) and (4) there is an obvious connection between the two clauses, and this may be the reason for acceptability. In fact,

(16) Mia knows what time it is and that two plus two is four

sounds a bit odd. Also

(17) Mia knows that she ate cheese yesterday and that two plus two is four

though, sounds a bit odd and in (17) the predicate surely retains the same meaning since it is followed only by 'that'-clauses. Yet, it sounds fine if we think about a rather unusual context in which we are listing all Mia knows. In that context, crucially, (16) becomes fine too and this seems genuinely due to the univocity of the predicate, since there is no connection between the clauses.

Finally, coordination is taken as a test for univocity because it would otherwise become unclear why we can delete an occurrence of the predicate if that occurrence provides new meaning. But in fact in English we do have deletion with different meanings (Boër 2009: 553): in

(18) David drank and smashed the bottle,

'bottle' is polysemous between the container and its content. We should note, though, that with (18) we immediately understand that what David drank is not exactly what he smashed and a pedantic speaker might correct us if we utter (18) (Textor 2011: 79-80). With sentences such as (3) and (4) not even the most pedantic of the speakers would correct us.

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about the meaning of 'to know', either. Just as the idiomatic 'Columbus and I went to Portugal' shows, in some constructions we tend to prefer the first personal pronoun to go second. As we do not take this to show anything about the meaning of 'to go' so we should not take the fact that in some constructions we might prefer 'wh'-clauses to go first to show something about the meaning of 'to know'.

Thus, although coordination somehow works in mysterious ways, none of those mysteries that impinge on meaning present themselves with our sentences. If they reject the second step, defenders of the face-value theory owe us a story about the counter-intuitive thesis that 'to know' is ambiguous but we can still coordinate, a story moreover that cannot rely on the usual well-known mysteries.[7]

3. The third step

According to the third step in our argument, defenders of the face-value theory need to maintain that in (4) 'to know' designates *being in a state of knowledge having as content*. But, as we saw in the fourth step, it does not seem that Columbus, in knowing how to overcome a crisis at sea, is in a state of knowledge with a certain content.

Defenders of the face-value theory can try to solve the issue by modifying the relation designated by 'to know'. Stanley & Williamson, in recognising that a skill cannot be a state of propositional knowledge, urge that we do not need to go too far from propositions and maintain that skills are *dispositions* to acquire propositional knowledge (Stanley & Williamson 2017: 717-718) i.e. disposition to be in a state of knowledge having a certain content. Defenders of the face-value theory can then try to maintain that sentences such as (4) show that 'to know' designates not *being in a state of knowledge having as content*, but rather *being, or being disposed to be, in a state of knowledge having as content*.

This proposal immediately incurs a problem. It is not obvious how to account for dispositions, in particular for dispositions to know, and Stanley & Williamson in fact prefer not to analyze them or assume that they are analyzable (2017: 716). But the idea should be that if everything is in place and the relevant circumstance presents itself, we acquire the relevant piece of knowledge. Suppose that I am now at a sport match which is about to start and that I am fully attentive, I see perfectly, etc. The details are negotiable and the example changeable to taste. What matters is that,

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[7] For other considerations in support of the univocity of the predicates, see Masto 2010: 402; Schaffer 2007: 396. While considerations on translation are always tricky, it is suggestive that 'to know' is translated homogeneously when it is followed by 'that'- and 'wh'-clauses even in languages such as German, French and Italian, where 'to know' followed by 'the proposition that' would be rendered with a predicate different from the predicate used with 'that'-clauses.

intuitively, I now have the disposition to know what the result of the match is. But if 'to know' designates *being, or being disposed to be, in a state of knowledge having as content*, since I am now disposed to be in a state of knowledge having as content the result of the match*, then

(19) I know what the result of the match is

is true *now*. This is incorrect.

One might reply that different clauses should select one of the meanings: clauses about the result of the match should select *being in a state*, while others, such as the one about how to deal with a crisis at sea, should select *being disposed to be in a state*.

But how is this selection supposed to work? This question is particularly pressing considering that no appeal to syntactic categories seems possible (Stanley & Williamson 2017: 716). In our (3), for example, the first clause requires *being disposed to be in a state*, but it belongs to the same syntactic category as 'what the result of the match is', which instead requires *being in a state*.

Thus, if defenders of the face-value theory want to modify their solution to Prior's objection by modifying the relation designated by 'to know' so as not to fall victim to our problem, they then owe us an explanation as to when such a relation holds, or when the clause allegedly selects one relation rather than another; and, as just seen, such an explanation looks prima-facie quite tricky to find.

4.   The fourth step

According to the fourth and last step, in (5) 'to know' cannot designate *being in a state of knowledge having as content* because it is part of Columbus' knowing how to overcome a crisis at sea that he will know how to behave when confronted with dugongs. But he does not have the concept of dugongs, so his knowledge cannot be tantamount to being in a state of knowledge having a content, as that content would require Columbus to have a concept for dugongs.

In order to resist this step, defenders of the face-value theory have various options in the logical space. The first is to hold that Columbus does not know how to overcome a crisis at sea if he does not have a concept for dugongs. This amounts to rejecting skills, abilities, knacks and propensities

altogether because we can never know how to overcome a crisis, as something novel can always come about. If they go this way, defenders of the face-value theory are then committed to an error theory concerning skills. As with any other error theory, we need arguments in its support to believe it is true and these arguments are not going to be easy to find, because otherwise it would not be the case that we are all in error.

A second option is to hold that Columbus does indeed have the concept of dugongs, and all other concepts somehow related to a crisis at sea. In this way, defenders of the face-value theory commit themselves to a certain view of concept acquisition, probably the view that they are innate. But, first, it is not clear why a theory in semantics should reveal to us how we acquire concepts. Moreover, if defenders of the face-value theory go this way to save their account, they surely owe us a defence of the thesis that, despite appearances to the contrary, Columbus does have a concept for dugongs, and this notoriously opens quite a nasty can of worms (Stich 1975).

Finally, the third option is to insist that Columbus, in knowing how to overcome a crisis, is indeed in a state of knowledge. In the most famous manifesto of the face-value theory, i.e. *On Sense and Reference*, Frege seems to maintain that 'wh'-clauses denote questions, as he speaks of 'dependent clauses expressing questions and beginning, with "who", "what", "where", "when", "how"' (1892: 167). Similarly, Bach (2005), Braun (2006: 31) and Masto (2010) maintain that 'wh'-clauses occurring in 'wh'-attributions of knowledge should be taken to denote questions. Defenders of the face-value theory can try to hold that despite the fact that Columbus is not now related to contents about dugongs, he is indeed now related to the very question *how is a crisis at sea to be overcome?* There are obvious issues with this proposal. Although it might be true that when you know what time it is, for example, you are somehow related to a question, this suggestion does not seem compatible with solving Prior's objection, as such relation cannot be, at first sight, the relation *being in a state of knowledge having as content*. This is something that also Bach, Braun and Masto themselves recognize, in that they hold that you are in a knowledge relation to a question if you know an answer to such a question, i.e. the content is not the question.[8] It is not clear what it would mean to have a piece of knowledge whose

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[8] This would not solve the dugong issue, but one can maintain that you know a question iff you have an ability to generate answers to the question on the various particular occasions, as recently suggested by Habgood-Coote (2018).

content is a question, for example because pieces of knowledge which do have content have true contents, as knowledge is factive, while intuitively questions are neither true nor false. Maybe defenders of the face-value theory can cook a story and explain what it means to have as content of knowledge a question and then claim either that not all contents of knowledge are true, or that questions are true. But it is clear that if face-value theorists opt for this way out of our problem, explanations are indeed in order.

Conclusion

We now saw all the steps that defenders of the face-value theory can work on in trying to defend their view. No matter what step they try to resist, they owe us an explanation and one moreover that looks quite tricky to find. In introducing the face-value theory, Schiffer maintains that 'it is the default theory that must be defeated if it's not to be accepted' (2003: 11). But in going just a bit beyond the face value, one seems entitled to hold that it is a theory that must be defended and supplied with tricky to find explanations, if it is not to be simply rejected.

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