

*Penultimate version. Ultimate version appeared in:* Marc A. Moffett and John Bengson (eds).  
2011. *Knowing How*, pp. 244-260. New York: Oxford University Press.

## **Knowing How and Knowing Answers**

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I know how to drive my car. I also know many propositions about how to drive my car: I know, for instance, that I can start my car by turning its key in its ignition, and that I can steer my car right by turning its steering wheel clockwise. My propositional knowledge obviously plays an important role in my knowledge of how to drive my car. Could my knowing how to drive my car simply consist in my knowing propositions?

*Propositionalism* (as I shall use the term) is roughly the view that knowing how to *G* (for any *G*) reduces to propositional knowledge.<sup>1</sup> I present and motivate a particular version of Propositionalism in this paper, thereby following previous advocates of Propositionalism, such as Carl Ginet (1975) and Jason Stanley and Timothy Williams (2001).<sup>2</sup> I then describe how our intuitions about knows-how-to ascriptions vary from context to context. I use this discussion to reply to several objections to my version of Propositionalism.

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<sup>1</sup>Noë 2005, Bengson and Moffett 2007, and Fantl 2008 use ‘Intellectualism’ for what I call ‘Propositionalism’. This use of ‘Intellectualism’ fits well with Ryle’s (1949) use of the phrase ‘intellectualist legend’, but I believe that ‘Intellectualism’ should be reserved for a broader set of views that include Propositionalism.

<sup>2</sup>Snowdon (2004) seems attracted to Propositionalism, though he does not explicitly advocate it. Brown (1970) holds that knows-how-to attributions are multiply ambiguous; he (seemingly) thinks that propositional knowledge is sufficient for at least some of these disambiguations to be true.



## 1. Propositionalism

It is easy to motivate Propositionalism by examples. Imagine that Jones has arrived at the Holiday Inn in downtown Buffalo and that Smith, a Buffalo resident, phones him to arrange a meeting.

1. Smith: “I’m trying to think of a place where we can meet. Do you know how to get to the Anchor Bar from your hotel?”

Jones: “Yes, I do. I turn left when I exit from the front door of my hotel, then right on North Street, then left on Main Street.”

Smith: “Good, you do know how to get there. I’ll meet you there.”

Suppose that Jones knows that he can get to the Anchor Bar by turning left when he exits the front door of his hotel, and so on.<sup>3</sup> Then (it seems) he is correct when he claims to know how to get to the Anchor Bar, and Smith is being reasonable when he concludes that Jones knows how to get to the Anchor Bar. So Jones’s knowing that proposition seems sufficient for his knowing how to get to the Anchor Bar from his hotel.

Other examples suggest that propositional knowledge is necessary for knowing how to *G*. Suppose that Robinson is staying at the same hotel as Jones, but is unaware of the Anchor Bar’s existence, and has no beliefs regarding it or its location. Therefore he has no propositional knowledge regarding its location. So he does not know how to get to the Anchor Bar from his

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<sup>3</sup>Jones has, in fact, given a correct description of a direct route from the Downtown Buffalo Holiday Inn to the Anchor Bar. The Anchor Bar is famous for being the location where Buffalo chicken wings were invented (in 1964). However, it is controversial among Buffalonians whether the Anchor Bar still makes the best chicken wings in Buffalo.

hotel.<sup>4</sup> Suppose McDonald believes that *R* is a route to get to the Anchor Bar from his hotel, but he believes this only because he is a victim of a post-hypnotic suggestion; he has no good reason to think that there is such a thing as the Anchor Bar, or that *R* is a route to get there. Then he does not know that the Anchor Bar exists, or that *R* is a route to get there. So he does not know how to get there (though he does have a *belief* about how to get there). Suppose that (on a whim) he asks the concierge at his hotel about the Anchor Bar, and the concierge confirms his beliefs about its existence and how to get there. He now has justification sufficient to know the propositions that he believes, and he now also knows how to get to the Anchor Bar.

Reflection on other sorts of knowledge supports Propositionalism. A theory of knowing how to *G* should, it seems, parallel theories of knowing where to *G*, knowing when to *G*, knowing what to *G*, and knowing who to *G*. But the latter sorts of knowledge all seem to reduce to propositional knowledge.<sup>5</sup> If Jones knows the propositions that he asserts in the (a) examples below, then the (b) ascriptions seem to be true.

2.    a.    Jones: “I can get good chicken wings at the Anchor Bar.”  
      b.    Jones knows where to get good chicken wings.
3.    a.    Jones: “I should go to the Anchor Bar on Tuesday night.”  
      b.    Jones knows when to go to the Anchor Bar.
4.    a.    Jones: “I should eat chicken wings at the Anchor Bar.”  
      b.    Jones knows what to eat at the Anchor Bar.

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<sup>4</sup>This example and the next resemble examples from Snowdon 2004.

<sup>5</sup>Brown (1970), Ginet (1975), Feldman (2001), Stanley and Williamson (2001), and Snowdon (2004) note the parallels. Stanley and Williamson use them to argue for Propositionalism.

5. a. Jones: “I can ask Smith for directions to the Anchor Bar.”
- b. Jones knows who to ask for directions to the Anchor Bar.

Moreover, if Robinson has never heard of chicken wings, then he knows no propositions about them, and so does not know where to get good chicken wings. If he has never heard of the Anchor Bar, then he does not know when to go there or what to eat there or who to ask for directions to there. Similarly, McDonald may have beliefs about these matters, but if he has insufficient justification, then he does not know where to get good chicken wings, when to go to the Anchor Bar, what to eat at the Anchor Bar, or who to ask for directions to it.

Therefore, we have good reason to think that knowing how to *G* reduces to propositional knowledge. But what sorts of propositions must one know in order to know how to get to the Anchor Bar from Jones’s hotel?

## 2. The Answer Theory

We can get some help by turning to a seemingly related topic, namely knowledge of questions, or *interrogative knowledge*, as I shall call it. Consider the following dialogue.

6. a. Smith: “Who went with Chang to the Anchor Bar on Tuesday?”
- b. Jones: “Able and Baker, and no one else, went with Chang to the Anchor Bar on Tuesday.”
- c. Jones knows who went with Chang to the Anchor Bar on Tuesday.

The proposition that Jones asserts is an answer to the question that Smith asks. If Jones knows that proposition, then (6c) is true. This suggests that knowing a proposition that answers the question of who went with Chang to the Anchor Bar on Tuesday is sufficient for knowing who

went with Chang to the Anchor Bar on Tuesday. Moreover, if Jones does not know a proposition that answers the question that Smith poses, then (plausibly) he does not know who went with Chang to the Anchor Bar on Tuesday. Parallel remarks go for the questions, propositions, and interrogative knowledge ascriptions expressed by the sentences in (7)-(10). In each, the sentence in (b) expresses a proposition that answers the question expressed by (a), and if Jones knows the (b) proposition, then (c) is true.

7.    a.     Smith: “What did Chang eat at the Anchor Bar on Tuesday?”  
      b.     Jones: “Chang ate chicken wings at the Anchor Bar on Tuesday.”  
      c.     Jones know what Chang ate at the Anchor Bar on Tuesday.
8.    a.     Smith: “Where did Chang go on Tuesday?”  
      b.     Jones: “Chang went to the Anchor Bar on Tuesday.”  
      c.     Jones knows where Chang went on Tuesday.
9.    a.     Smith: “When did Chang go to the Anchor Bar?”  
      b.     Jones: “Chang went to the Anchor Bar on Tuesday.”  
      c.     Jones knows when Chang went to the Anchor Bar.
10.   a.     Smith: “How did Chang get to the Anchor Bar on Tuesday?”  
      b.     Jones: “Chang got to the Anchor Bar on Tuesday by driving.”  
      c.     Jones knows how Chang got to the Anchor Bar on Tuesday.

Furthermore, it seems that there are many answers to each of the (a) questions. For instance, one answer to the question asked by Smith in (9a) is ‘Chang went to the Anchor Bar at 6:00 pm on May 28, 2009’. If Jones knows the proposition that this expresses, then (9c) is true. These

observations make the analysis of interrogative knowledge in (11) plausible.<sup>6</sup>

11. *The Knowing-An-Answer Theory of Interrogative Knowledge*

For all  $X$ , and all questions  $Q$ , necessarily,  $X$  knows  $Q$  iff  $X$  knows a proposition that answers  $Q$ .

Let us now return to our previous examples to find a more informative description of the sorts of propositions that are necessary and sufficient for knowing how to get to the Anchor Bar from Jones's hotel.

Jones knows a proposition about how to get to the Anchor Bar from his hotel (namely the proposition that he can get to the Anchor Bar by exiting his hotel and turning left, and so on), and his knowing this proposition is sufficient for his knowing how to get to the Anchor Bar. Moreover, the proposition that Jones knows seems (roughly speaking) to be an *answer* to the *question* of how to get to the Anchor Bar from his hotel. There may be propositions that are *about* how to get to the Anchor Bar that are not *answers* to the question of how to get there: one example may be the proposition that there is some way to get to the Anchor Bar from Jones's hotel. If there are such propositions, then knowing them is not sufficient for knowing how to get to the Anchor Bar. There are many other propositions that specify routes from the hotel to the Anchor Bar, and all (or many) of these answer the question of how to get to the Anchor Bar, and if Jones knows any of these alternative propositions, then he knows how to get to the Anchor Bar from his hotel. There may be yet other propositions concerning manners of getting to the Anchor Bar which do not concern routes for getting there, and yet count as answers to the

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<sup>6</sup>Schaffer (2008) has criticized a theory of interrogative knowledge similar to this. I believe that his arguments are flawed, for reasons I cannot take space to discuss here.

question of how to get there, and knowing these is also sufficient for knowing how to get there. For instance, Jones may know how to get to the Anchor Bar because he knows that he can get there by hailing a taxi. All of this suggests that knowing *an* answer to the question is sufficient for knowing how to get there.

Robinson and McDonald do not know any answers to the question of how to get to the Anchor Bar. They also fail to know how to get there from their hotel. So we can reasonably conclude that knowing an answer to the question is also necessary for knowing how to get there.

Generalizing on these thoughts, we arrive at a more informative analysis of knowing how to *G*.<sup>7</sup>

12. *The Knowing-An-Answer Theory of Knowing How to G*

For all *X* and all *G*, necessarily, *X* knows how to *G* iff *X* knows a proposition that answers the question of how to *G*.

At this point, we can reasonably extend the Knowing-An-Answer Theory to knowing when, where, what, and who to *G*.

13. *The Knowing-An-Answer Theory of Knowing When/Where/What/Who to G*

For all *X* and all *G*, necessarily, *X* knows when/where/what/who to *G* iff *X* knows a proposition that is an answer to the question of when/where/what/who to *G*.

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<sup>7</sup>For many purposes, we can take the variable ‘*G*’ to range over properties. But strictly speaking, it ranges over *structured semantic contents*, for I use ‘*G*’ to quantify into embedded interrogative phrases that refer to questions (‘how to *G*’), and questions are more “fine-grained” than properties. Suppose, for instance, that the property of being a tiger is identical with the property of being an animal with DNA T. Nevertheless, the question of how to catch a tiger by the toe is distinct from the question of how to catch an animal with DNA T by the toe, for an agent could wonder how to catch a tiger by the toe without wondering how to catch an animal with DNA T by the toe. Therefore, ‘*G*’ ranges over structured contents appropriate for the contents of verb phrases. These contents, however, determine properties.



In fact, we can subsume both (12) and (13) under the Knowing-An-Answer Theory of Interrogative Knowledge in (11). Therefore, knowing how to *G* is a type of interrogative knowledge, and propositional knowledge is necessary and sufficient for all such interrogative knowledge. Let us call the version of Propositionalism expressed by (12) *the Answer theory*, for short.

If I could, I would at this point discuss the nature of the question of how to *G*, and how it differs from questions expressed by unembedded tensed interrogative sentences with explicit subjects (such as ‘How can Jones get to the Anchor Bar?’). I would also consider whether there is such a thing as *the* question of how to *G*, and whether the phrases ‘how to *G*’ and ‘the question of how to *G*’ are ambiguous. But space does not permit this, so I shall move on to other matters.<sup>8</sup>

### 3. Answers

The Answer theory relies on the notion of a propositional answer to a question. Philosophers who accept the Answer theory may disagree over which propositions answer which questions. They may also disagree on these matters with theorists who reject the Answer theory. To illustrate, let us consider an unembedded tensed interrogative sentence with an explicit subject, such as (14), and consider some candidate answers to it, such as the sentences in (15).

14. How can Jones get to the Anchor Bar from his hotel?

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<sup>8</sup>Stanley and Williamson (2001) hold that phrases of the form [‘how to *VP*’] are ambiguous, because they contain occurrences of the pronominal expression ‘PRO’ and because their infinitival verb phrases are ambiguous. I am agnostic about whether ‘PRO’ exists and introduces ambiguity. I seriously doubt that infinitival verb phrases are ambiguous in the way that Stanley and Williamson claim. (See Haegeman 1991 and Radford 2004 for mainline

15.
  - a. Jones can get to the Anchor Bar from his hotel by exiting his hotel, walking 1/4 mile north on Delaware, 1/2 mile east on North St, and 1/4 mile north on Main St.
  - b. Jones can get to the Anchor Bar from his hotel by walking north on Delaware, east on North, and north on Main.
  - c. Jones can get to the Anchor Bar from his hotel by asking his concierge how to get there and following her directions.
  - d. Jones can get to the Anchor Bar from his hotel by walking there.
  - e. Jones can get to the Anchor Bar from his hotel by leaving his hotel.

I suspect that most philosophers would concede that the proposition expressed by (15a) answers the question expressed by (14). But some would deny that (15e) answers (14), whereas I would say that it does.

Now suppose that the Answer theory is true. Then if (15e) answers the question of how to get to the Anchor Bar, and Jones knows the proposition expressed by (15e), then the Answer Theory entails that (16) is true.

16. Jones knows how to get to the Anchor Bar from his hotel.

Some philosophers who accept the Answer theory would find this consequence acceptable (I do), while others would not. Thus disputes over whether a given proposition answers a given question can introduce controversies even among those who accept the Answer theory. We should keep this in mind when considering objections to the Answer theory, for objections to the theory typically make assumptions about which propositions answer which questions, and these

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theories of 'PRO', and Culicover and Jackendoff 2006 for criticisms.)

assumptions may be incorrect or debatable.

#### 4. Contextual Variation in Judgments

There is another complication that we should keep in mind when evaluating the Answer theory and objections to it: our judgments about whether a given agent knows how to *G* vary from context to context. Consider again the sentences in (15), and the ascription of interrogative knowledge in (17).

17. Jones knows how he can get to the Anchor Bar from his hotel.

Notice that (17) is *not* an ascription of knowledge-how-*to*. Suppose that Jones knows the proposition expressed by (15c), but does not know any more detailed proposition about how he can get to the Anchor Bar. Speakers' intuitions about whether (17) is true in such circumstances vary from context to context. In some contexts, typical speakers will take (17) to be true if Jones knows the proposition expressed by (15c). But in other contexts, those same speakers will think that (17) is true only if Jones knows a proposition that gives more detailed directions, such as proposition (15b).

This is much the same phenomenon that many have noted with 'knows who' ascriptions, such as 'Jones knows who Mark Twain is'. Some speakers in some contexts think that this ascription is true if Jones knows that Twain is an author, whereas in other contexts those same speakers may take that ascription to be true only if Jones knows that Twain wrote *Huckleberry Finn*. (See Boër and Lycan 1986.)

Similar points hold for 'knows how to' ascriptions like those described in the Answer theory. In some contexts, typical speakers will take (16) to be true if Jones knows the

proposition expressed by (15c). But in other contexts, typical speakers will take (16) to be true only if Jones knows the proposition expressed by (15b).

There are two views one can take of these contextual variations in intuition.

*Contextualism* says that these knowledge ascriptions really do vary in truth value from context to context, because they semantically express different propositions in different contexts. A given ascription varies in its semantic content from context to context because of differences in the interests of the speakers in those contexts. For instance, ‘Jones knows who Twain is’ semantically expresses different propositions in different contexts. In some contexts, it is true as long as Jones knows that Twain is an author; in others, it is true only if he knows that Twain wrote *Huckleberry Finn*. This variation occurs because (roughly) speakers in different contexts are interested in different sorts of answers to the question of who Twain is. The context-sensitivity of ‘John knows who Twain is’ can be traced to the context-sensitivity of ‘who Twain is’ and ultimately traced to ‘who’.<sup>9</sup>

Similarly for ascriptions (16) and (17), on Contextualist theories: they express different propositions in different contexts, and so can vary in truth value from context to context.<sup>10</sup> The differences in proposition expressed occur because, roughly, the speakers in some contexts are interested in certain sorts of answers to the question of how to get to the Anchor Bar, whereas the speakers in other contexts are interested in other sorts of answers. Presumably the context-sensitivity of (16) and (17) can be traced to the context-sensitivity of ‘how Jones can get to the

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<sup>9</sup>There is another type of view, which I call ‘ternarism’ in Braun 2006, on which ‘Jones knows who Twain is’ varies in semantic content from context to context, but ‘who Twain is’ is *not* context-sensitive. I count such views as Contextualist here.

<sup>10</sup>The alleged context-sensitivity of (16) that I describe above is supposed to hold over

Anchor Bar’ and ‘how to get to the Anchor Bar’, and ultimately can be traced to the context-sensitivity of ‘how’.

On the alternative view that I prefer, *Invariantism*, the sorts of answers that speakers are interested in changes from context to context, but this variation does *not* result in changes in the semantic content of ascriptions from context to context. Therefore, the preceding ascriptions do not change in truth value from context to context. Jones knows who Twain is as long as he knows an answer to the question of who Twain is; what counts as an answer to the question does not vary from context to context. However, in many contexts, the speakers are primarily interested in whether Jones knows certain particular answers to that question. If Jones does not know those answers, then the speakers of those contexts will not judge that Jones knows who Twain is, and will not mislead others in the context by saying that Jones knows who Twain is. Similarly, for (16) and (17): these do not vary in content and truth value from context to context. But speakers’ interests in particular answers to the relevant questions do vary. Speakers who are interested in whether Jones knows certain answers to the question of how to get to the Anchor Bar will tend not to (misleadingly) ascribe knowledge of how to get there to him if he does not know those answers. But the content and truth value of (16) does not vary from context to context. (See Braun 2006 for more on Invariantism.)

Though I prefer the Invariantist version of the Answer theory, I will try to remain neutral here about the conflict between it and the Contextualist version. In much of what follows, it will be simpler to speak as if Invariantism is true. I will mention the Contextualist version when it makes a difference.

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and above any of the alleged ambiguities that I mentioned in note 8.

Invariantists and Contextualists agree that our intuitions about the truth of a single ‘knows how to’ ascription can vary from context to context. In my opinion, some who reject Propositionalism and the Answer theory fail to take this variability into account. It is easy to create contexts in which speakers will tend to judge that  $X$  knows how to  $G$  only if  $X$  knows the sorts of propositions about  $G$  that (typically) are known only by those who are able to  $G$ . In such contexts, it is easy to judge that being able to  $G$  is necessary for knowing how to  $G$ . Judgments of this sort may seem to conflict with the Answer theory. More about this later.

If Contextualism is correct, then the sentence I used to formulate the Answer theory in (12) is also context-sensitive, and so expresses different propositions in different contexts. That is obviously undesirable. To correct this problem, we can introduce some new terminology that allows us to reformulate the Answer theory without using the allegedly context-sensitive phrase ‘how to  $G$ ’. Consider all of the interrogative entities to which ‘how to  $G$ ’ refers with respect to some context, under some assignment. Call all such entities ‘timeless manner questions’.<sup>11</sup> Now reformulate the Answer theory as in (18).

18. *The Knowing-An-Answer Theory of Knowing How to  $F$ , Reformulated*

For all  $X$  and all timeless manner questions  $Q$ , necessarily,  $X$  knows  $Q$  iff  $X$  knows a proposition that answers  $Q$ .

Both Contextualist and Invariantist theorists can accept this formulation.

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<sup>11</sup>I use the term ‘timeless manner question’ because the infinitival phrase ‘how to  $G$ ’ is tenseless and (I assume) the question-like entities that it denotes lack temporal features possessed by the questions that tensed embedded interrogative sentences denote.

## 5. Objections to the Answer Theory, and Some Replies

I shall now defend the Answer theory from several objections, some of which were originally aimed at Stanley and Williamson's (2001) theory. I reformulate them as objections to the Answer theory.

### 5.1. *Objection #1: Propositional Knowledge Is Not Necessary*

The Answer theory entails that knowing a propositional answer to the question of how to *G* is necessary for knowing how to *G*. Here are three examples meant to show this is not so. Andrew is a skilled pianist. He knows how to play the piano. But if you were to ask him 'How do you play the piano?', he would not be able to answer. So Andrew does not know a proposition that answers the question of how to play the piano. Suzie is a young girl who can ski, and so she knows how to ski, but she does not know a proposition that answers the question of how to ski (Feldman 2001). Clyde can accurately judge the sex of young chicks, so he knows how to sex chicks. But he cannot say how he does so, and therefore he does not know an answer to the question of how to sex chicks (Schiffer 2003).

In reply, I say (as have others) that the objection overlooks various relevant propositions that the agents know (see Ginet 1975, Stanley and Williamson 2001, Snowdon 2004). As Stanley and Williamson point out (2001) in similar examples, when Suzie skis, she can know the proposition that she grasps by thinking "I am skiing by doing *this*" (as she mentally demonstrates the way in which she skis). Going beyond Stanley and Williamson now, if Suzie remembers previous times that she skied, she can think 'I skied like *that* back then'. So she later knows an answer to the question of how to ski. Andrew knows analogous propositions about how he plays

the piano, propositions that he would express using demonstratives. Similarly for Clyde as he sexes chicks (“*This* is how I sex chicks”) or as he remembers sexing chicks. So they do know propositions that answer the relevant questions.

This reply is enough to disarm the preceding objection to the Answer theory. But I think that it would be misleading to stop there, for Andrew, Clyde, and Suzie know other propositions that they can assert without using demonstratives, and their knowledge of those propositions is also sufficient for them to know how to play piano, ski, and sex chicks. For instance, Clyde knows that he can sex chicks by looking under their tails and looking for features similar to those of other male chicks. Suzie knows that she skis by standing up on her skis, holding her poles in her hands, bending her knees, and moving down a slope covered with snow. Andrew knows that he can play the piano by sitting in front of a piano keyboard, pressing the keys hard if he wants a loud sound, pressing the keys softly if he wants a soft sound, pressing on the right-hand pedal if he wants to sustain a sound after he lifts his finger from a key, and so on. These propositions are answers to the questions of how to sex chicks, how to ski, and how to play piano. Their knowing these propositions is sufficient for them to know how to do these things. They can express these propositions without using demonstratives.

The objection plays on the contextual variability in our judgments of knowing-how-to. Insofar as the critic’s objection is initially plausible, it is because the critic (implicitly) creates a context in which we become interested in whether Andrew, Clyde, and Suzie know very detailed answers to the relevant questions, namely answers knowledge of which is sufficient to enable one to play piano, ski, and sex chicks. These are answers that they can express only by using demonstratives. But in other contexts, speakers might be interested in whether Andrew, Clyde,



and Suzie know less detailed answers. Imagine, for instance, that Paul has seen a picture of a piano, but is otherwise quite ignorant of them and how they work. Suppose he asks Andrew how to play a piano. If Andrew answers that one can play a piano by pressing on its black and white keys, then Paul would be justified in saying that Andrew knows how to play a piano, even if Paul does not know whether Andrew has limbs that allow him to play piano, or whether Andrew has demonstrative knowledge of piano-playing of the sort I described above. Detailed knowledge of the sort that Andrew would express by using demonstratives is not necessary for knowing how to play piano. Parallel points hold for knowing how to ski and knowing how to sex chicks. Many people who are unable to ski, play piano, and sex chicks know (relatively undetailed) answers to the questions of how to ski, play piano, and sex chicks, and therefore also know how to ski, play piano, and sex chicks.

I spoke as an Invariantist in the previous paragraph. A Contextualist should hold that there is no context in which (19) is true and (20) is false.

19. Suzie knows how to ski

20. Suzie knows an answer to the question of how to ski.

In some contexts, Suzie's knowledge of rather undetailed propositions concerning skiing is sufficient for both sentences to be true. In nearly all contexts, Suzie's demonstrative knowledge is sufficient to make both true. There are unusual contexts in which (20) is false, despite Suzie's demonstrative knowledge; in some of these unusual contexts, (20) is true only if Suzie knows a highly detailed proposition about skiing that she can express in *non*-demonstrative terms (in the way that good coaches can). But in such contexts (19) is also false, even though Suzie is able to ski. In these unusual contexts, the sentence 'Suzie is able to ski, but she doesn't know how to

ski' is true. (Note that it is possible for a thing to be able to *G* without knowing how to *G*: my car is able to burn gasoline, but does not know how to do so.) Speakers have the intuition that (19) is true and (20) is false only when there is a shift in contexts between their two judgments.

## 5.2. Objection #2: Knowing Answers While Lacking Abilities

I have considered an objection that claims that propositional knowledge is not necessary for knowing how to *G*. The next two objections claim (at least in effect) that propositional knowledge is not sufficient.

John Koethe's (2002) objection to Stanley and Williamson's theory uses a distinction between *basic* and *non-basic* actions. A non-basic action is an action that one performs *by* performing another action. Opening a safe *by* turning its knob is a relatively clear example. A basic action is one that is not non-basic: it is an act that one performs, not by performing another act, but *directly*. For me, moving my hand is a type of basic action. (See Goldman 1970 for more on basic actions.) Koethe suggests that if *G*-ing is a basic action, then being able to *G* is necessary for knowing how to *G*. Furthermore, Koethe says that ear-wiggling is a basic action, and so he claims that anyone who is unable to wiggle his ears does not know how to wiggle his ears.<sup>12</sup>

Thus far, we do not have an objection to the Answer theory. But we can use Koethe's claims about ear-wiggling, and one of his examples, to formulate an objection, as follows.

Suppose that John has seen Tom wiggle his ears, and suppose that John knows that *that* way of

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<sup>12</sup>The claim that ear-wiggling is a basic type of action is dubious. The same type of action may be basic for one person and non-basic for another. (See Goldman 1970.) But this claim will play no substantive role in the following objection to the Answer theory.

ear-wiggling [pointing at Tom] is a way for him (John) to wiggle his ears. If John knows this latter proposition, then he knows an answer to the question of how to wiggle his ears. So if the Answer theory is correct, then John knows how to wiggle his ears. But John is unable to wiggle his ears, and anyone who is unable to wiggle his ears does not know how to wiggle his ears. Therefore, the objection concludes, the Answer theory is incorrect.

The objection relies on the general principle that anyone who is unable to wiggle his ears does not know how to wiggle his ears. This is incorrect. Wally was a virtuoso ear-wiggler until recently, when he suffered an injury to his scalp muscles that deprived him of his ability to wiggle his ears. He knows how to wiggle his ears, but is unable to do so. (See Ginet 1975 and Stanley and Williamson 2001 for similar examples.) In view of this, I will consider a slightly reformulated objection that replaces the above general principle with the singular claim that if John is unable to wiggle his ears, then he does not know how to wiggle his ears. This singular claim has some initial plausibility, even apart from the general principle.

In reply to this last objection, an Answer theorist should *either* say that John *does* know how to wiggle his ears (even though he is unable to do so) *or* he should say that John does not know an answer to the question of how to wiggle his ears. I favor the first reply. But which reply an Answer theorist prefers should depend on her view of answers, and perhaps on whether she takes ‘knows how to’ ascriptions to be context-sensitive.

John is unable to wiggle his ears, and knows little about ear-wiggling, yet we can think of contexts in which it would be natural to say that he does know how to wiggle his ears. Imagine that John is taking lessons from Ken on ear-wiggling.

21. Ken: “If you want to wiggle your ears, it helps to be able to pick out examples

of how you should do it. Which of these videos show how you should wiggle yours ears?" [Ken shows John several doctored videos in which someone moves his ears in physiologically impossible ways, and an undoctored video of Tom wiggling his ears by contracting his scalp muscles in the usual way.]

John: "That is the way I should wiggle my ears." [demonstrating the video of Tom].

Ken: "Good, you know how to wiggle your ears".

In this context, Ken's attribution seems correct, simply because John knows the proposition that *that* is a way that John should wiggle his ears (demonstrating the way that Tom wiggles his ears). We can imagine other contexts in which it would be natural to say 'John knows how to wiggle his ears' if John merely knows that he should wiggle his ears without touching them, or that he should wiggle his ears by moving them back and forth, rather than by flapping their tips up and down.<sup>13</sup> But it has to be admitted that there are also conversational contexts in which a typical speaker would judge that 'John knows how to wiggle his ears' is true only if John is currently able to wiggle his ears or was at one time able to wiggle his ears.

On the Invariantist theory that I prefer, the proposition that John knows (namely, that Tom's way of ear-wiggling is a way he should do it) is an answer to the question of how to wiggle John's ears. In some contexts we are interested in whether John knows this answer (or answers like it), whereas in other contexts we are uninterested in whether he knows this answer

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<sup>13</sup>In the above dialogue, Ken and John focus on how John *should* wiggle his ears. We can imagine another conversation in which Ken shows the same sequence of videos and asks John to pick out the way in which he *can* wiggle his ears.

(or answers like it). Our willingness to say and judge that John knows how to wiggle his ears changes as our interests change, but 'John knows how to wiggle his ears' semantically expresses a true proposition in all of these contexts. Therefore, in reply to the last objection to Koethe, I say that John does know how to wiggle his ears, because he knows an answer to the question of how to wiggle his ears. But Koethe has created a context in which we are uninterested in the answer that John happens to know.

A Contextualist Answer theorist should say that 'John knows how to wiggle his ears' is true in a context like the one I created by telling the video story, but false in a context like the one that Koethe created by telling his (minimal) story. My story created a context in which one needs to know very little about ear-wiggling in order to know an answer to the question denoted by 'how to wiggle John's ear' in that context; Koethe's story creates a (more standard) context in which one needs to know a rather substantive proposition in order to know an answer to the question denoted by 'how to wiggle John's ears' in that context (these are propositions that people who can, or could, wiggle their ears might express with demonstratives). But the Contextualist Answer theorist should say that there is no context in which 'John knows an answer to the question of how to wiggle his ears' is true and yet 'John knows how to wiggle his ears' is false. If speakers judge that the first sentence is true and the second false, they are shifting contexts, perhaps in subtle ways.

### 5.3. Objection #3: Knowing Answers While Being Confused

John Bengson and Marc Moffett (2007) criticize Stanley and Williamson's (2001) theory of knowing-how by arguing (roughly) that knowing an answer to the question of how to *G* is not always sufficient for knowing how to *G*. If successful, it would also show that the Answer theory is incorrect.

Irina's ice-skating coach has told her that one way in which she can do a salchow is to take off from the back inside edge of her skate, jump in the air, spin, and land on the back outside edge of her skate. What the coach says is true, and Irina is justified in believing it. Therefore, Irina knows this proposition. Moreover, this proposition is an answer to the question of how to do a salchow. Therefore, if the Answer theory is true, then Irina knows how to do a salchow. However, Irina is confused. She thinks that her skate's front outside edge is its back inside edge, and that her skate's front inside edge is its back outside edge.<sup>14</sup> As a result, she makes mistakes when she judges whether other skaters are doing salchows, and she gives bad advice to other skaters about, for instance, which way to lean on their skates when they try to do salchows. As Bengson and Moffett say in a parenthetical remark, ". . . in applying her knowledge—e.g., in teaching someone else how to do a salchow—Irina would consistently make substantive errors, errors which would render an attribution of know-how unacceptable." Therefore, Bengson and Moffett claim, Irina does not know how to do a salchow. So the Answer theory is untrue.<sup>15</sup>

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<sup>14</sup>This should be understood *de re*: her skate's front outside edge is such that she believes that *it* is her skate's back inside edge, and her skate's front inside edge is such that she believes that *it* is her skate's back outside edge

<sup>15</sup>Benson and Moffett also add the following detail to their story, which is inessential to

In reply, I say that Irina does know how to do a salchow. But intuitions about whether she knows how to do a salchow vary from context to context, depending on the interests of the speakers in those contexts. Bengson and Moffett have created a context in which we are interested in whether she knows certain propositions concerning how to do a salchow, and Irina is ignorant of these particular propositions. This may lead some readers to think incorrectly that she does not know how to do a salchow. I shall explain.

Irina knows that to do a salchow, she needs to take off from the back inside edge of her skate. But she does not know that  $B_1$  is the back inside edge of her left skate (where  $B_1$  is, in fact, that back inside edge). In some contexts, we might be particularly interested in whether she knows this proposition, for instance, if we are interested in whether Irina will give useful advice to skilled skaters who wish to do a salchow. Bengson and Moffett emphasize (in their parenthetical remark) that, because of Irina's confusion, she is likely to give bad advice to other skaters. The context that Bengson and Moffett create for their readers is a context in which her previous ignorance is likely to lead us to judge that she does not know how to do a salchow. But in other contexts, we would be willing to say that she does know how to do a salchow, despite this ignorance, because of her knowledge of other propositions concerning salchows. One such context is the following.

22. Alex: "I just read a book in which someone did a salchow, but the book did not say much about how to do them. How do you do a salchow?"

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the preceding argument against the Answer theory. Irina has a neurological deficit. Whenever she tries to take off from her front outer edge, she in fact takes off from her back inside edge, and whenever she tries to land on her front inside edge, she lands on her back outside edge. So whenever she attempts to do a salchow in the way that she (falsely) believes it should be done, she ends up doing a genuine salchow.

Ben: “You do a somersault on ice.”

Cal: “No, you do a cartwheel on ice.”

David: “No, you ski backwards down an ice-covered slope.”

Irina: “No, a salchow is an ice-skating trick. To do it you jump and spin in mid-air in a certain way.”

Eve: “Alex, I’ve watched many Winter Olympics on TV. Don’t pay attention to Ben, Cal, and David: they don’t know how to do a salchow. But Irina does.”

Despite her confusion about inside edges, Irina clearly does know that one can do a salchow by jumping and spinning in mid-air in a certain way while skating. (She also knows that she can do a salchow in this way.) In the above context, her knowledge of this proposition seems sufficient for her to know how to do a salchow.

Given this contextual variation in our intuitions, what should we say about whether Irina knows how to do a salchow? On the Invariantist theory that I prefer, we should say that she does know how to do a salchow. In some contexts, the speakers are interested in whether she knows relatively undetailed answers to the question of how to do a salchow. In those contexts, the speakers are inclined to say (and think) that she knows how to do a salchow. Their judgments in these contexts are correct. In contexts in which the speakers are primarily interested in whether she knows more detailed answers, all of which partly concern the inside edges of skates, the speakers might be inclined to say that she does not. But these latter ascriptions are mistaken, even though they may correctly convey the true information that (a) she does not know the detailed propositions concerning skate-edges in which the speakers and hearers of the context are



interested, and (b) she may give bad advice to novice skaters.

On a Contextualist version of the Answer theory, the sentence ‘Irina knows how to do a salchow’ genuinely varies in content and truth value from context to context. In one of the contexts that Bengson and Moffett create, the ascription is false. In the context that I set up in my preceding example, it is true. The only worry that Bengson and Moffett raise for the Contextualist version of the Answer theory is that their argument may lead us first to judge that ‘Irina knows an answer to the question of how to do a salchow’ is true and then to judge that ‘Irina knows how to do a salchow’ is false. On the Contextualist version of the Answer theory, there is no context in which these sentences differ in truth value. In reply to this problem, the Contextualist should maintain that Bengson and Moffett subtly shift contexts in the middle of their argument. In the context created by the beginning and middle of their argument, ‘Irina knows an answer to the question of how to do a salchow’ is true, and so is the sentence ‘Irina knows how to do a salchow’, though this sentence is not uttered in this context. But Bengson and Moffett change the context when they make their parenthetical remark about her giving bad advice to other skaters. In this context, both sentences are false. But in no context is ‘Irina knows an answer to the question of how to do a salchow’ true and ‘Irina knows how to do a salchow’ false.

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