

2017

## Against Exclusively Motivational Know-How

Stewart Harrison

Pepperdine University, [stewart.harrison@pepperdine.edu](mailto:stewart.harrison@pepperdine.edu)

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### Recommended Citation

Harrison, Stewart (2017) "Against Exclusively Motivational Know-How," *Global Tides*: Vol. 11 , Article 10.  
Available at: <https://digitalcommons.pepperdine.edu/globaltides/vol11/iss1/10>

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Stewart Harrison

## **Against Exclusively Motivational Know-How**

### *Section 1: Introduction*

Contemporary discourse on know-how is primarily concerned with whether know-how reports and other knowledge reports are all ascriptions of the same kind of mental content. Take for example the reports

1. Sam knows *that* penguins live in the Antarctic.
2. Sam knows *how* to cook risotto.

Report (2) describes Sam having some sort of mental content that informs his ability to cook risotto.

Report (1) describes Sam having a mental content that is descriptive of the world; it is propositional and can either be true or false. However, it is contested as to whether the description of Sam's mental content in (2), that it guides action, consists in part of the description of Sam's mental content of (1), that it is propositional. If the description of (2) does not consist in part of the description of (1), then the mental content of Sam in report (2) would not be a propositional attitude and would only ascribe Sam as having a forward looking attitude that informs his ability to cook risotto. If the description of (2) consists in part of the description of (1), then report (2) could ascribe Sam's mental content consisting in a propositional attitude that is descriptive and a forward looking attitude that informs Sam's ability to cook risotto.

The view that Sam's knowing how to  $\phi$  consists in Sam's standing in the knowledge-that relation to a certain relevant proposition [Sam knows that way W is a way to  $\phi$ ] or set of propositions is called factualism. The view that denies these claims is nonfactualism. The nonfactualist accounts addressed in this paper claim that the mental content ascribed by knowledge-how reports is not a propositional attitude, but some other kind of non-propositional attitude. An attitude is a general term for mental content. Propositional attitudes, desires, and beliefs are all attitudes; however, they are all very different. Propositional attitudes are either true or false, whereas desires are not factive; they are neither true nor

false. Contemporary nonfactualist accounts take the mental content of subjects in know-how reports as some non-propositional attitude.

In this paper I will address how Paolo Santorio's *Nonfactual Know-How and the Boundaries of Semantics* (2016) responds to Stanley and Williamson's factualist account. First, I will explain Stanley and Williamson's factualist account. Then I will show how Santorio uses advances in expressivist semantic compositional structures (specifically possible world semantics) to object to Stanley and Williamson's account. After this I will elaborate on how Santorio merges the possible world semantics of Expressivism with a nonfactualist account of know-how to create a revised nonfactualist account. Santorio's revised nonfactualist account ascribes the attitude in know-how reports as a 'directive state'; a non-propositional attitude that is exclusively forward looking. I will object to Santorio's view on the grounds that Santorio's view cannot admit that a subject is required to have relevant knowledge—that in order to have know-how. If know-how is merely a matter of endorsing a set of imperatives—accepting or using a recipe, as it were—then a subject could, for example, know how to cook risotto, without knowing what risotto is, that this is a way to cook risotto, or that risotto requires rice. Although Santorio's theory is unreasonable, I will assess how contemporary theories of know-how must address both propositional aspects of know-how and the action guiding aspects of know-how.

### *Section 2: Stanley and Williamson's Factualism*

Prior to addressing Stanley and Williamson's account, some additional reports and categories must be introduced. Take these reports:

1. Sam knows *that* penguins live in the Antarctic.
2. Sam knows *how* to cook risotto.
3. Sam knows *who* his teacher is.
4. Sam knows *when* class starts.

These different types of knowledge reports can be categorized as such. (1) is a knowledge-that report where the clausal complement is propositional. (2) is a knowledge-how report; its clausal complement is infinitival. (2) (3) and (4) are types of knowledge-wh reports, meaning reports in which the

complement clause is an embedded question (an analysis of embedded questions is given below). It is important to note that (1) is not a kind of knowledge-wh report because it does not have an embedded question. Additionally, (1) might seem to stand apart from the other reports if it is the only report whose clausal complement is propositional ('Penguins live in the Antarctic'). However, Stanley and Williamson show that reports (2-4) still require propositional content in a way that affirms the uniformity of the mental content in all reports. They do this by investigating the role of embedded questions.

Stanley and Williamson use Karttunen's semantic theory in their analysis of embedded questions. In Karttunen-style semantics "... the embedded question (4) 'when class starts' denotes the set of true propositions expressed by sentences of the form 'class starts at  $x$ ' (4) is true if and only if, for each proposition  $p$  in that set, Sam knows that  $p$ " (420).<sup>1</sup> If the embedded questions 'when class starts' denotes the true set of propositions 'class starts at  $x$ ', then it seems that Sam must know all the true sets of proposition— [class starts at 10:00 (pottery); class starts at 10:15 (math); class starts at 10:30 (history); etc.]— if there is at least some unspecified class that starts at each time. Due to the absence of specificities such as 'his chemistry class this semester', Sam needs to know when all classes of every kind start in order to have the knowledge of when class starts. However, Stanley and Williamson reject this notion. They explain that extralinguistic context fills in this syntactic gap lessening the requirement for knowledge. For example, if Sam were at a study session made up exclusively of members from his chemistry class, then we can assume that this context is enough to provide grounds for the truth of the statement 'class starts at 10:00 AM' if and only if it is also true that 'Sam's chemistry class this semester is at 10:00AM'. In light of this clarification a revised definition of know-when can be stated.

*Know-when: knowledge when reports are true relative to a context  $c$  if and only if there is some contextually relevant time  $t$  such that  $S$  stands in the knowledge-that relation to the proposition: that  $t$  is a time when class starts, and  $S$  entertains this proposition under a practical mode of presentation.*

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<sup>1</sup> In this quote I have substituted Stanley and Williamson's example of Hannah knowing whom Bill likes with the example I am using.

The caveat that Sam entertains this proposition under a practical mode of presentation is important for the definition of both know-when and know-how; however, an analysis of this caveat will be explained in relation to know-how. Nevertheless, because this definition of know-when requires subjects to stand in a knowledge-that relation in order to have know-when, know-when consists in a propositional attitude.

This analysis of embedded questions in knowledge-when reports can be directly applied to knowledge-how reports because both reports have embedded questions. If all knowledge-wh reports have embedded questions, then all knowledge-wh reports have a uniform compositional semantic function. If there is a uniform compositional semantic function, then the definition of know-how reports should be uniform with the definition of know-when reports. Therefore, we can apply the definition of know-when reports to know-how reports.

*Know-how: knowledge how reports are true relative to a context  $c$  if and only if there is some contextually relevant way  $w$  such that  $S$  stands in the knowledge-that relation to the proposition: that  $w$  is a way for  $S$  to cook risotto, and  $S$  entertains this proposition under a practical mode of presentation.*

The caveat that Sam entertains this proposition under a practical mode of presentation excludes the counter example of a person gaining know-how strictly from watching a detailed cooking show. In this counter example a person who was watching a detailed cooking show should have all the relevant propositions to cook risotto, but it seems that Sam might still not know-how or be able to cook risotto. However, Stanley and Williamson stipulate that there are some attitudes that are a part of know-how which can only be obtained through a practical mode of presentation, like actively trying to make risotto. Nevertheless, their pithy definition gives a clear criterion for determining if a subject has know-how and states that know-how consists in a propositional attitude.

Stanley and Williamson's analysis of embedded questions in knowledge-wh reports provides a key premise (3SW) in their argument which concludes that know-how reports consist in propositional knowledge. This argument is formally stated by Santorio. (Santorio 6)

Stanley and Williamson's Factualist argument:

- 1SW. All knowledge-wh reports have a uniform compositional semantics.
  - 2SW. Knowledge-who reports, knowledge-when reports, and so forth, are ascriptions of propositional knowledge.
  - 3SW. If all knowledge-wh reports have a uniform syntax and semantics, and if other knowledge-wh reports are ascriptions of propositional knowledge, then know-how reports also must be ascriptions of propositional knowledge.
  - 4SW. Know-how reports are ascriptions of propositional knowledge.
  - 5SW. Know-how consists in propositional knowledge.
- Stanley and Williamson's argument affirms uniformity of compositional semantics in knowledge-wh

reports and uniformity of the mental content ascribed by knowledge-wh reports. If knowledge-how reports are knowledge-wh reports, then the mental content ascribed in know-how reports is the same as the content ascribed in know-when reports, know-who reports, and any other knowledge-wh reports. The uniformity of semantic composition to mental content promotes the belief that language is relevant to the nature of mental states; however, Santorio objects to this. Santorio claims that "the type of semantic values in play in attitude reports need not be a guide to the contents of the attitudes ascribed"(11). This is a clear objection to (3SW). Santorio argues for this conclusion by importing Allan Gibbard's compositional semantics of expressivism. Santorio employs Gibbard's compositional semantics not only as an objection to Stanley and Williamson, but also to formulate a new model of know-how that builds off of Gibbard's compositional semantics.

### *Section 3: Santorio's Nonfactualism.*

Allan Gibbard's expressivist strategy claims that the standard compositional semantics for normative language are compatible with remaining neutral about what mental contents are ascribed by normative claims. Santorio's aim is to show how Gibbard's expressivist semantics theory affirms uniformity in semantic compositional structure yet denies the uniformity of the mental content. Santorio attempts to allow a treatment of know-how reports that are similar. Santorio argues that standard compositional semantics for know-how reports are compatible with denying uniformity of the mental contents ascribed by know-how reports.

Expressivism is a metaethical belief, which denies that normative claims express beliefs. Instead,

Expressivism affirms that normative claims express endorsements of normative standards, also defined as an ‘acceptance’. Expressivist strategies are guided by two concerns. The metaphysical claim that there are no normative facts, and the motivational role of normative attitudes. However, if a Karttunen-style semantic is applied to the following reports, then both reports ascribe Sam as having a mental content that is propositional.

1. Sam believes that cannibalism is wrong.
2. Sam believes that cannibalism is widespread in New Jersey.

The expressivist cannot affirm this due to their denial of normative facts. In light of these concerns, Santorio admits that expressivists need to show how their view can “yield a plausible semantics for normative language” (9). To do this, Gibbard rejects a Karttunen-style semantics and implements possible world semantics. With possible world semantics Gibbard can assign a uniform compositional semantics of normative reports and propositional reports without affirming uniformity of mental content. In possible world semantics “... all clauses denote sets of pairs of a world and a system of norms to a truth value. Systems of norms are fully specified normative standards: they determine, for every possible act, whether it is forbidden, permitted, or mandated”. (10) The change from Karttunen-style semantics to possible world semantics is the key move for allowing a uniform compositional semantic, yet denying uniformity of mental content. Additionally, the attitude that is being ascribed by normative reports in possible world semantics is non-propositional and has a motivational role. Santorio highlights these attributes of this attitude in normative reports and builds a model of the attitude ascribed in know-how reports that shares these attributes.

Santorio claims that the function of know-how does not represent how the world is, but is exclusively motivational. His basic suggestion is that “knowing how to  $\phi$  consists in being in a mental state that reliably guides one to successful completion of a task. The content of this mental state is directive; it can be modeled as an instruction, or a set of instructions, for completion of the task” (16). Santorio’s goal is not to provide a full metaphysical analysis of these attitudes but simply a model of these attitudes.

However, he makes a clear metaphysical claim about the model of this attitude by affirming that knowing-how to  $\phi$  consists in being in a mental state wherein its content is directive. He calls this model a performance plan. A performance plan has the same functional role of know-how but differs in that it doesn't require success in performance. A performance plan is a list of instructions set to goals and these instructions can be thought of as imperatives linked to goals [ $\phi!$  In order to satisfy goal G].

Santorio gives a formal definition of a performance plan.

Performance plan: Subject S has a performance plan to  $\phi$  in way W iff, for every (MPP= $m$ ) compatible with S's plans, according to  $m$  acting in way W brings about  $\phi$ -ing.

MPP and  $m$  refer to a maximal performance plan. A maximal performance plan is an exhaustive mapping of all possible sequences of actions performed by the subject to the goal. So if the subject's performance plan is the same as one of the plans in the MPP, then the subject will have a way W to  $\phi$ . Santorio models a unique attitude that is necessary for having know-how, but not sufficient for having know-how. To bridge this gap, Santorio needs to explain what additional property is needed by a performance plan to be know-how. Santorio cannot claim that if a performance plan is factive then it is know-how, for this would promote factualism. Instead, Santorio claims that a performance plan needs to be reliably successful to be counted as know-how.

Know-how: S knows how to  $\phi$  in way W in context  $c$  iff, in  $c$ , S has a plan to  $\phi$  in way W and this plan is reliably successful across circumstances C.

Santorio's definition of know-how vindicates a "contrast between a kind of knowledge that represents facts and a kind of knowledge that guides subjects in action". (2) Santorio makes a good point about acknowledging the forward looking aspect of know-how; however, the absence of a backward looking or propositional attitude in know-how constrains Santorio's view. I object to Santorio's view, stating that it excludes knowledge from know-how.



*Section 4: Objections to Santorio's Nonfactualism*

Throughout his paper Santorio gives a few examples of know-how in action, primarily Sam knowing how to cook risotto. In each example a human agent is used. All human agents have both attitudes that represent facts and attitudes that are action guiding. However, Santorio's definition of know-how is exclusively action guiding. If know-how is exclusively action guiding, then Santorio's definition of know-how must be applicable to something that only has attitudes that are action guiding, specifically a subject whose 'attitude' is the same as Santorio's performance plan. So, Santorio's definition of know-how must be applicable to a subject that only has a performance plan that is action guiding. Modern computers and robots fulfill Santorio's definition of having a performance plan. Computers run on programs that are a list of instructions. In fact, a computer could have a program that was a list of instructions similar to Santorio's definition [ $\phi!$  In order to G]. Take for example a robot that screws caps onto toothpaste bottles. This robot will have a very detailed list of instructions that will take the form [ $\phi!$  In order to screw cap onto bottle]. Although it is clear that robots do not have mental content, their list of instructions still fit the model that Santorio has claimed is an attitude. So, if a robot has a plan to screw a cap onto a bottle and this plan is reliably successful across circumstances, then the robot knows how to screw a cap onto a bottle. However, it is a disservice to many conceptions of knowledge to credit any robot as having knowledge of how to do something.

The use of a robot may be far too worrisome for some readers. Robots do not have attitudes of any kind, so its ascription as an agent having know-how in my counterexample is problematic. However, this counterexample can be formulated in a similar way to John Searle's Chinese room, which uses a human agent. Sam is in a small room with a grid of unmarked buttons in front of him and a book with a list of instructions linked to goals. The instructions in this book cite the row and column for each button. Additionally, each list of instruction would require multiple buttons to be pressed in sequence to achieve its goal. Sam is given a note under the door in the room which states a specific goal [Pizza] that he must bring about by following the instructions. This goal will be achieved by a master chief located a few

blocks down the road from Sam's room who will only know what to cook once Sam presses the proper buttons. This thought experiment may not seem problematic if a note is slid under the door that says [Pizza] or [Chow Mein] of which Sam has at least some knowledge. However, if the note said [Haggis] and additionally Sam knows nothing about what haggis is, then a problem arises. Sam would find the set of instructions that achieve the goal of making haggis and input these instructions accurately. Then, once Sam has entered the instructions he can be driven down the road to see his meal prepared. In front of him would be pizza, chow mein, and haggis amongst all the other foods he has made. However, if we were to ask Sam to try some haggis he might try chow mein or some other food item he is not familiar with. If Sam has no knowledge about haggis, then Sam cannot tell me anything about the ingredients, what it looks like, or be able to identify it any way. However, under Santorio's theory Sam knows how to make haggis, and maybe, Sam even knows how to cook risotto. Santorio's theory of know-how is conflicting with intuitions elicited from my objections because it does not affirm that some necessary aspects of knowledge are a part of know-how.

One aspect of knowledge that is not accounted for in Santorio's definition of know-how is that beliefs can be inferred from knowledge. If some bit of knowledge is either true or false and if a belief stands in the proper logical relationship to this knowledge, meaning that the belief is justified from that knowledge, then the belief will be shown to be true or false depending on the truth value of the knowledge. However, the type of know-how that Santorio describes does not lend itself to have a content from which other beliefs can be inferred. The content is a list of imperatives, and imperatives are not factive; they are neither true nor false. If they cannot be either true or false, then they cannot be shown to be true or false. If they cannot be shown to be true or false, then other beliefs cannot be shown to be true or false through their relationship to an imperative. So if no beliefs can be shown to be true or false through their relationship to an imperative, then beliefs cannot be inferred from Santorio's description of know-how; a reliably successful list of imperatives.

In addition to excluding knowledge from know-how in his model, Santorio's description of the model

of know-how poses a metaphysical divide between subjects and MPPs. Santorio states that “MPPs are formal tools that the theorist uses to model subjects’ mental states and are not supposed to be psychologically real. The same point applies to worlds in possible world semantics”. (23) Because of Santorio’s insistence on modeling the mental content of know-how and not analyzing the mental content, it is unclear as to whether he attributes subjects as knowing that their performance plan is compatible with a MPP. I assume that Santorio would admit that subjects do not need to know that their plan is compatible with a MPP, or even attend to any MPP, however, this creates tension with his explanation of learning. His explanation continues with the example of Sam learning to cook risotto and states that “... when a subject learns proposition  $p$ , the set of worlds that are compatible with their belief state is shrunk by ruling out all worlds that are not compatible with  $p$ ”. (24) Santorio is correct in asserting that when a new proposition is learned by a subject there would be less MPPs compatible with their plan. However, he does not account for how a subject can rule out all the worlds that are not compatible with  $p$ . If Sam realized some proposition  $p$  and this proposition was inconsistent with some ways of making risotto, then Sam would need to know the instructions in each MPP that is inconsistent with  $p$ . If Sam did not know these instructions of the MPPs that are inconsistent with  $p$ , then he would not know that a MPP is inconsistent with  $p$ . If Sam cannot know that a MPP is inconsistent with  $p$ , then Sam cannot rule out all of the worlds that are not compatible with  $p$ . If Sam cannot do this, then Sam cannot learn. Santorio can reform his explanation of MPPs and affirm that subjects can attend to MPPs when determining whether their plan is consistent with MPPs, but this would impede upon his formal definition of know-how. If the subject attends to the MPPs, then the subject knows that their plan is compatible with an MPP. If a subject knows that their plan is compatible with an MPP, then the subject stands in a knowledge-that relationship in know-how. This objection strengthens my robot objection. If a subject does not have to stand in the knowledge-that relationship to a proposition to have know-how, then a robot, which does not stand in the knowledge-that relationship to any proposition, would not need to know that their plan was reliably successful or have any knowledge-that to have know-how.

*Section 5: For Further Discourse*

Santorio states that his "... theory exploits a primitive notion, that of following an instruction, which seems no more intuitive than the notion of know-how itself" (16). However, following instructions is relevantly different from know-how. Following instructions may be as intuitive as doing something, or having a way to do something, but following instructions does not account for fundamental attributes of knowledge. Know-how must ascribe a subject as having knowledge. Santorio's definition of know-how does not address these necessary aspects of knowledge; however, Santorio's theory does hone in on an interesting motivational aspect of know-how. If know-how is relevantly different than knowledge itself, specifically in its action guiding capabilities, then any account of know-how should ascribe a motivational attitude to the subject. It is not clear that accounts of know-how need to ascribe a motivational attitude to subjects, but it can seem odd if it does not. If know-how does not consist in any motivational aspect, then a subject that only has propositional attitudes and no action guiding attitudes can have know-how. If a subject only has propositional attitudes, then that subject would not be able to have intentions to act. However, is not having the intention to act upon knowledge a fundamental part of know-how? Stanley and Williamson's account does not thoroughly address these motivational aspects. So if intention is a part of know-how, then a retreat to their theory would be problematic. However, I claim that if an account of know-how must address both the propositional role of know-how and the motivational role, then we cannot ascribe both of these roles to the same attitude. If this is the case, then a better account of know-how will be one that ascribes know-how as an accumulation of both a propositional attitude and a motivational attitude. This opens up the possibility of allowing a treatment of Santorio's view with revisions from Stanley and Williamson. On a semantic approach, this framework would use a Karttunen-style composition and affirm that all know-how reports have embedded questions, which denote sets of true propositions. These propositions that are learned would eliminate plans or other false propositions about ways to  $\phi$ . As these ways are eliminated, the subject will have more accurate ways to  $\phi$ . These ways could still hold the imperative form [ $\phi$  in order to  $g$ ] and be modeled as list of instruction.

*Section 6: Conclusion*

Know-how cannot be exclusively motivational because it cannot ascribe a subject as having knowledge. I have argued for this conclusion by first overviewing the contemporary discourse on know-how by explaining Stanley and Williamson's factualist account and by showing how Paolo Santorio uses advances in expressivist semantic compositions to reject factualism. Then I addressed Santorio's revised nonfactualist account and posed some objections. The first objection focused on how Santorio's model of know-how is applicable to robots and a human subject with no knowledge of its goal. This application is troublesome because we should not attribute robots nor agents without knowledge of their goals as having know-how. I also posed an objection to the metaphysical relationships between subjects and MPPs. This objection posed the disjunction that either subjects cannot attend to the MPPs and therefore not able to learn, or that subjects can attend to the MPPs and would therefore be in a knowledge-that attitude during know-how. Either conclusion of the disjunction would prove problematic for Santorio's theory. Finally, I have assessed that although Santorio's theory is unreasonable, he focuses on an interesting action guiding aspect of know-how. It is not clear that know-how must consist in part of a motivational attitude, but contemporary discourse on know-how should address motivational attitudes and how propositional knowledge is related to intentions. Stanley and Williamson's theory does not address these motivational aspects. I briefly attempted to formulate a revised theory that does address how know-how is an accumulation of both propositional attitudes and motivational attitudes.

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