

# Knowledge, Certainty and Assertion\*

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*Abstract:* Researchers have debated whether *knowledge* or *certainty* is a better candidate for the norm of assertion. Should you make an assertion only if you know it's true? Or should you make an assertion only if you're certain it's true? If either knowledge or certainty is a better candidate, then this will likely have detectable behavioral consequences. I report an experiment that tests for relevant behavioral consequences. The results support the view that assertability is more closely linked to knowledge than to certainty. In multiple scenarios, people were much more willing to allow assertability and certainty to come apart than to allow assertability and knowledge to come apart.

*Keywords:* norms; knowledge; certainty; assertion; social cognition

## Introduction

Assertion is an extremely important part of our lives as dependent social beings. We rely on others for most of the information we use everyday to make decisions and plan our lives. Over the past decade, philosophers have intensely debated the question, What is the norm of assertion?

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\* This is the penultimate version of a paper forthcoming in *Philosophical Psychology*. Please cite the final, published version if possible.

Many think that the best answer is *the knowledge account*: knowledge is the norm of assertion. A wealth of theoretical and empirical evidence supports the knowledge account (for a review, see Turri, under review). Some critics charge that the knowledge account is counterintuitive and that it mischaracterizes our ordinary practice of evaluating assertions. To support these charges, critics have tried to produce counterexamples to the knowledge account, and these come in several varieties. The counterexamples are often interpreted as motivating weaker accounts of the norm of assertion, such as a belief account, a justification account, a virtue account, or other more complicated proposals (e.g. Douven, 2006; Lackey, 2007; Hill & Schechter, 2007; Kvanvig, 2009; Wright, 2014; Coffman, 2014). But each sort of counterexample has been carefully studied and, one by one, the charges have all been refuted (see Turri, 2013; Turri, 2015; Turri in press). By this point, the knowledge account's track record of empirical success is extremely impressive.

A different objection to the knowledge account does not proceed by trying to pump intuitions about counterexamples. Instead, it highlights data that the knowledge account might not explain so well. One datum that the knowledge account well explains is the default propriety of many challenges to assertion (Unger, 1975, pp. 263-4, acknowledging Michael Slote for the insight; Williamson, 2000). For instance, when I make an assertion, even if the content of the assertion has nothing to do with me or what I know, it's still normally appropriate to ask, "How do you know that?" If knowledge is the norm of assertion, then we can explain the propriety of this question by pointing out that by making the assertion I represent myself as knowing. However, it also seems appropriate to ask, "Are you certain?" On the plausible fallibilist assumption that knowledge does not require certainty, the knowledge account cannot as simply explain the pro-

priety of this latter challenge. Some take this to motivate the certainty account: you should assert a proposition only if you're certain that it's true (Stanley, 2008).

Some have proposed explanations of the “certainty” challenge that are consistent with the knowledge account. For instance, some have suggested that to be certain is, roughly, to know that you know. The propriety of the “certainty” challenge is then explained as follows: by making an assertion you represent yourself as knowing, and the “certainty” challenge is appropriate because it asks whether you know that you've accurately represented yourself (Turri, 2010).

Alongside this explanation, it has been proposed that data on how we *prompt* assertions favors the knowledge account over the certainty account. For example, we naturally prompt assertion by asking, “What time is it?” Equally naturally, we can prompt assertion by asking, “Do you know what time it is?” Competent speakers respond to these similarly. The knowledge account can explain this on the grounds that we prompt assertion by asking whether you satisfy the norm of assertion, just as we can make a request by asking whether someone is in a position to grant the request (e.g., said to an officious bureaucrat, “Are you authorized to make an exception in this case?”) By contrast, we do not naturally prompt assertion by asking, “Are you certain (about) what time it is?”

Overall, then, the argument is that knowledge is more closely related to assertion because it features in appropriate challenges and prompts, whereas certainty features in appropriate challenges but not prompts. Aside from this, there is a very large amount of observational and experimental data that the knowledge account well explains, but which proponents of the certainty account have yet to address (see Turri, under review).

Researchers investigating the norms of assertion agree that the project is, at least in large

part, empirical. As one prominent contributor puts it, “The project of determining which rule governs the practice of assertion is best conceived not as an *a priori* investigation into the nature of assertion but, rather, as an empirical project.” This implies that “any proposal made in the course of” the investigation is “subject to the exact same standards of evaluation as are employed in the empirical sciences generally” (Douven, 2006, p. 450). In short, an adequate theory “must face the linguistic data” (Douven, 2006, p. 450; see also Unger, 1975; Williamson, 2000; Hawthorne, 2004; Stanley, 2005, 2008; Weiner, 2005; Lackey, 2007; Hawthorne & Stanley, 2008; Kvanvig, 2009; Turri, 2011; Smithies, 2012; Smith, 2012; Turri, 2014a; Reed, 2013; Coffman, 2014; Wright, 2014; Pritchard, 2014). More specifically, researchers aim for accounts that provide charitable and psychologically plausible interpretations of relevant patterns in ordinary thought, talk, and behavior.

The underlying assumption here is that people are implicitly sensitive to the norm of assertion and, consequently, that their normative intuitions are a source of information about the norm’s content (compare Chomsky, 1957; Noveck & Sperber, 2004). This implies if assertion is more closely connected to knowledge than to certainty, then this will have detectable behavioral consequences. In particular, it implies that people will be more willing to *attribute assertability without certainty* than *assertability without knowledge*. In other words, we should be able to empirically demonstrate that assertability is more tightly linked with knowledge than with certainty. This paper reports an experiment that tests this prediction.

# Experiment

## Method

**Participants.** One hundred eighty-two U.S. residents were tested (aged 18–62 years, mean age = 29 years; 95% reporting English as a native language; 52 female). Participants were recruited and tested online using Amazon Mechanical Turk and Qualtrics and compensated \$0.30 for approximately 2 minutes of their time. Repeat participation was prevented.

**Materials and Procedure.** Participants were randomly assigned to one of four conditions in a 2 (Cover Story: Cabin/HR [“Human Resources”]) × 2 (Status: Knowledge/Certainty) between-subject design. Each participant read a single story and answered a single question in order to assess the relationship between attributions of knowledge and assertability (in Knowledge conditions) or attributions of certainty and assertability (in Certainty conditions). I had no expectations as to whether Cover Story would affect response to the test question; I included it merely as a robustness check.

Here is the story for the Cabin conditions:

Angelo is camping with his daughter in a wooden cabin at the edge of the forest. As they settle in to sleep for the night, the daughter has her headphones on and Angelo is reading near the window. Angelo hears two very loud, sharp bangs ring out in the forest behind the cabin. It is deer-hunting season. Angelo’s daughter takes off her headphones and asks, “Dad, what’s going on? Is somebody hunting deer nearby?”

After reading the story, participants were instructed, “Select the option that best describes Angelo

in the story.” Here were the options (Knowledge/Certainty manipulation bracketed and separated by a slash):

1. He [knows/is certain] that someone is hunting nearby, and he should say that someone is hunting nearby.
2. He [knows/is certain] that someone is hunting nearby, and he should not say that someone is hunting nearby.
3. He [does not know/is not certain] that someone is hunting nearby, and he should say that someone is hunting nearby.
4. He [does not know/is not certain] that someone is hunting nearby, and he should not say that someone is hunting nearby.

Here is the story for the HR conditions:

Mario manages human resources for a company with over ten thousand employees. No one can keep track of all their names by memory, so human resources maintains a detailed inventory of them. Mario knows that the inventory isn't perfect, but it is extremely accurate. ¶<sup>1</sup> Today a colleague informed him, “Mario, I just got a call from the immigration office. If we have an employee named Rosanna Winchester, then I need to make an appointment to revise the paperwork we filed, which will take several hours. But if we don't have one, then I don't need to make an appointment. Do we have one?” ¶ Mario consults the inventory. It says that they do have an employee by that name.

After reading the story, participants were instructed, “Select the option that best describes Mario

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<sup>1</sup> Indicates a paragraph break on the participant's screen.

in the story.” Here were the options (Knowledge/Certainty manipulation bracketed and separated by a slash):

1. He [knows/is certain] that they have one, and he should say that they have one.
2. He [knows/is certain] that they have one, and he should not say that they have one.
3. He [does not know/is not certain] that they have one, and he should say that they have one.
4. He [does not know/is not certain] that they have one, and he should not say that they have one.

Response options were rotated randomly and participants never saw them numbered or otherwise labelled. Participants filled out a brief demographic questionnaire after testing.

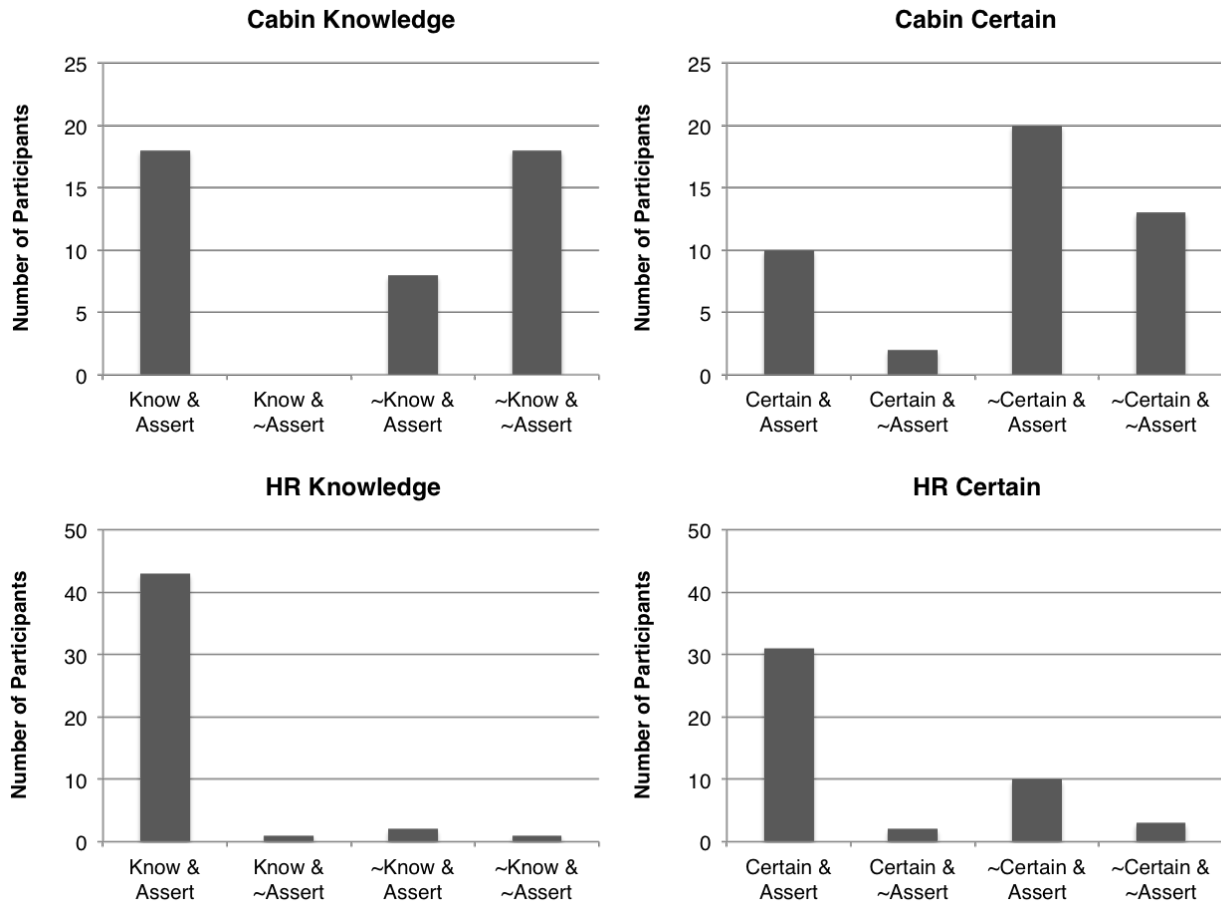
## Results

A preliminary multinomial logistic regression revealed that neither participant age nor participant gender affected response to the test question, so the analyses that follow collapse across these factors. Both independent variables affected response, so I analyze the results for each Cover Story separately. (See Fig. 1.) We’re primarily interested in how frequently participants unlink knowledge and assertability, on the one hand, and certainty and assertability, on the other. A *unified response* keeps the epistemic status and assertability together. For the Knowledge conditions, a unified response either attributes both knowledge and assertability, or denies both knowledge and assertability. For the Certainty conditions, a unified response either attributes both certainty and assertability, or denies both certainty and assertability. A *disunified response* is simply the opposite of a unified one.

For the Cabin story, a disunified response was significantly more likely for certainty than for knowledge, binary logistic regression,  $p = .003$ . The odds ratio was 4.3 (95% CI = 1.64 to 11.28), meaning that people were 430% more likely to offer a disunified response for certainty than for knowledge. For the HR story, the same test again revealed that a disunified response was more likely for certainty than for knowledge,  $p = .032$ . The odds ratio was 3.80 (95% CI = 1.13 to 12.82), meaning that people were 380% more likely to offer a disunified response for certainty than for knowledge.

Participants offered disunified responses at rates significantly below chance in Cabin Knowledge (18%),  $\chi^2(1, 44) = 17.82, p < .001$ , HR Knowledge (8%),  $\chi^2(1, 47) = 32.36, p < .001$ , and HR Certain (26%),  $\chi^2(1, 46) = 10.52, p = .001$ . However, participants offered a disunified response in Cabin Certain almost half the time (49%),  $\chi^2(1, 45) = .02, p = .881$ . In Cabin Certain, 45% of participants denied certainty and attributed assertability, which exceeds chance rates, binomial test,  $p = .007$ , test proportion = .25.





**Fig. 1.** Distribution of responses to the test question across the four conditions. For each chart, the two outside columns are “unified” responses and the two inside columns are “disunified.”

## Conclusion

Researchers have debated whether *knowledge* or *certainty* is a better candidate for the norm of assertion. If either knowledge or certainty is a better candidate, then this should have detectable behavioral consequences, on the assumption that competent speakers are implicitly sensitive to the norm. This paper reported an experiment designed to test for relevant behavioral consequences. The results support the view that assertability is more closely linked to knowledge than

to certainty. In multiple scenarios, people were much more willing to allow assertability and certainty to come apart than to allow assertability and knowledge to come apart.

Philosophers have said and assumed many things about the relationship between knowledge and certainty (see especially Descartes, 1641; Unger, 1975; see also Wittgenstein, 1975; Moore, 1959; Klein, 1981; Chisholm, 1989). But very little is known about how these categories are related in people's ordinary social cognition. Nowadays there seems to be wide agreement among professional philosophers that knowledge doesn't require certainty. But much recent empirical work has shown that professional philosophers often have, or at least report having, idiosyncratic and often highly stylized intuitions about knowledge and related matters. Moreover, philosophers often seem unaware that their intuitions and assumptions deviate substantially from deep patterns in commonsense epistemology and the ordinary concept of knowledge (for relevant results, see Beebe & Buckwalter, 2010; Starmans & Friedman, 2012; Myers-Schulz & Schwitzgebel, 2013; Turri, 2014). Future work could profitably investigate the varieties of knowledge and certainty in commonsense epistemology, how they're related, and when they come apart. This could, in turn, inform theorizing about the norms of assertion. In particular, it could reveal a form of certainty that is equivalent to knowledge, ordinarily understood. I would not be surprised if that turned out to be true. If it does, then the knowledge and certainty accounts are not necessarily competitors after all.

*Acknowledgments* — For helpful feedback, I thank Angelo Turri and two anonymous referees for *Philosophical Psychology*. This research was supported by the Social Sciences and Humanities Research Council of Canada and an Early Researcher Award from the Ontario Ministry of Eco-

conomic Development and Innovation.

*word count:* 2150

## References

- Beebe, J. R., & Buckwalter, W. (2010). The epistemic side-effect effect. *Mind & Language*, 25(4), 1–25.
- Chisholm, R. (1989). *Theory of Knowledge* (3rd ed.). Englewood Cliffs, NJ: Prentice Hall.
- Chomsky, N. (1957). *Syntactic structures*. The Hague: Mouton.
- Descartes, R. (2006). Meditations on first philosophy. In R. Ariew & D. Cress (Ed. & Trans.), *Meditations, objections, and replies*. Indianapolis: Hackett.
- Douven, I. (2006). Assertion, Knowledge, and Rational Credibility. *Philosophical Review*, 115(4), 449–485. doi:10.1215/00318108-2006-010
- Garson, G. D. (2012). *Logistic regression: binary and multinomial*. Asheboro, NC: Statistical Associates Publishers.
- Hawthorne, J. (2004). *Knowledge and lotteries*. Oxford: Oxford University Press.
- Hawthorne, J., & Stanley, J. (2008). Knowledge and action. *Journal of Philosophy*, 105(10), 571.
- Hill, C., & Schechter, J. (2007). Hawthorne's lottery puzzle and the nature of belief. *Philosophical Issues*, 17, 102–122.
- Klein, P. (1981). *Certainty: a refutation of scepticism*. Minneapolis: University of Minnesota Press.
- Kvanvig, J. (2009). Assertion, knowledge, and lotteries. In D. Pritchard & P. Greenough (Eds.),

- Williamson on knowledge* (pp. 140–160). Oxford: Oxford University Press.
- Lackey, J. (2007). Norms of assertion. *Nous*, 41(4), 594–626.
- Moore, G. E. (1959). *Philosophical papers*. New York: Collier Books.
- Myers-Schulz, B., & Schwitzgebel, E. (2013). Knowing that P without believing that P. *Nous*, 47(2), 371–384.
- Noveck, I. A., & Sperber, D. (2004). *Experimental Pragmatics*. Palgrave Macmillan.
- Pritchard, D. (2014). Epistemic luck, safety, and assertion. In C. Littlejohn & J. Turri (Eds.), *Epistemic norms: new essays on action, belief and assertion*. Oxford: Oxford University Press.
- Smith, M. (2012). Some Thoughts on the JK–Rule. *Nous*, 46(4), 791–802.
- Smithies, D. (2012). The Normative Role of Knowledge. *Nous*, 46(2), 265–288.  
doi:10.1111/j.1468-0068.2010.00787.x
- Stanley, J. (2005). *Knowledge and Practical Interests*. Oxford University Press.
- Stanley, J. (2008). Knowledge and certainty. *Philosophical Issues*, 18, 35–58.
- Starmans, C., & Friedman, O. (2012). The folk conception of knowledge. *Cognition*, 124(3), 272–283. doi:10.1016/j.cognition.2012.05.017
- Turri, J. (2010). Prompting challenges. *Analysis*, 70(3), 456–462. doi:10.1093/analys/anq027
- Turri, J. (2011). The Express Knowledge Account of Assertion. *Australasian Journal of Philosophy*, 89(1), 37–45. doi:10.1080/00048401003660333
- Turri, J. (2013). The test of truth: An experimental investigation of the norm of assertion. *Cognition*, 129(2), 279–291. doi:10.1016/j.cognition.2013.06.012
- Turri, J. (2014a). Knowledge and suberogatory assertion. *Philosophical Studies*, 167(3), 557–

567. doi:10.1007/s11098-013-0112-z

Turri, J. (2014b). Skeptical appeal: the source-content bias. *Cognitive Science*.

Turri, J. (2015). Knowledge and the norm of assertion: a simple test. *Synthese*, 192(2), 385–392.

doi:10.1007/s11229-014-0573-4

Turri, J. (in press). Selfless assertions: some empirical evidence. *Synthese*. doi:10.1007/s11229-014-0621-0

Turri, J. (under review). *Knowledge and the norm of assertion: an essay in philosophical science*.

Unger, P. (1975). *Ignorance: a case for skepticism*. Oxford: Oxford University Press.

Weiner, M. (2005). Must we know what we say? *Philosophical Review*, 114(2), 227–251.

Williamson, T. (2000). *Knowledge and its limits*. Oxford: Oxford University Press.

Wittgenstein, L. (1975). *On certainty*. (D. Paul & G. Anscombe, Trans., G. Anscombe & G. H. V. Wright, Eds.). Malden, MA: Blackwell.

Wright, S. (2014). The dual-aspect norms of belief and assertion. In C. Littlejohn & J. Turri (Eds.), *Epistemic norms: new essays on action, belief and assertion* (pp. 239–258). Oxford University Press.