

# Selfless assertions: some empirical evidence

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**Abstract** It is increasingly recognized that knowledge is the norm of assertion. As this view has gained popularity, it has also garnered criticism. One widely discussed criticism involves thought experiments about “selfless assertion.” Selfless assertions are said to be intuitively compelling examples where agents should assert propositions that they don’t even believe and, hence, don’t know. This result is then taken to show that knowledge is not the norm of assertion. This paper reports four experiments demonstrating that “selfless assertors” are viewed as both believing and knowing the propositions they assert: this is the natural and intuitive way of interpreting the case. Thought experiments about selfless assertions do not threaten the knowledge account and they do not motivate weaker alternative accounts. The discussion also highlights a general lesson for philosophers: thought experiments intended to probe for mental state attributions should not conflict with basic principles that guide social cognition.

**Keywords** Assertion · Knowledge · Belief · Norms · Social cognition

## 1 Introduction

We routinely make assertions. It is an ubiquitous and unavoidable part of ordinary human affairs. Our individual and collective well being often depends on it. Unsurprisingly, then, philosophers are keenly interested in the norm of assertion. Over the past decade, considerable work has been done on the norm of assertion.

What is the norm of assertion? According to the knowledge account, you should assert a proposition only if you know that it’s true. A wealth of theoretical and empiri-

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cal evidence supports the knowledge account (see Turri under review for an overview). However, 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. One common strategy is to try to identify cases where, intuitively, assertability is present even though a necessary condition of knowledge is lacking.

Sometimes critics focus on cases of reasonable false assertion. The idea here is that it is sometimes reasonable to believe false propositions, and if it is reasonable for you to believe a false proposition, then intuitively there is no sense in which you should not assert it. But knowledge requires truth, so you can't know any such proposition and, hence, knowledge isn't the norm of assertion. However, this argument fails because the critics have mischaracterized how reasonable false assertions are actually evaluated. As critics themselves note, "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." In short, hypotheses in this area "must face the linguistic data" (Douven 2006, p. 450). And empirical investigation reveals that competent speakers judge that reasonable false assertions should not be made (Turri 2013; Turri and Blouw 2014).

Critics have also focused on cases of "selfless assertion" (Lackey 2007, p. 598 ff.). The idea here is that sometimes people should assert propositions that they don't believe. But knowledge requires belief, so they don't know these propositions and, hence, knowledge isn't the norm of assertion. Of course everyone recognizes that, in some sense of "should," sometimes people should assert things that they don't know. Indeed everyone recognizes that, in some sense of "should," sometimes people should lie by asserting things that they know are false. This could be the "should" of morality, prudence, aesthetics, or legality. But the critics have something more pointed in mind, namely, the "should" associated with assertion *qua* assertion (Lackey 2007).

Perhaps the most widely discussed case of "selfless assertion" features Sebastian, a pediatrician and medical researcher who has extensively studied childhood vaccines (Lackey 2007, p. 599). Sebastian "recognizes and appreciates that all the scientific evidence shows that there is absolutely no connection between vaccines and autism." But Sebastian's own eighteen-month-old daughter was diagnosed with autism shortly after receiving one of her vaccines. The emotional trauma of his daughter's diagnosis causes Sebastian to begin doubting his previous views about vaccines and autism, and he is aware that this is the source of his doubt. Moreover he still recognizes that the evidence shows that there is no link. So when a baby's parents ask Sebastian about the rumors of a link, he tells them, "There is no connection between vaccines and autism."

Critics claim that two things are clear in Sebastian's case. First, he does not believe that there is no link between vaccines and autism. Second, he should tell the parents that there is no link. So Sebastian should assert what he does not believe. Assuming that knowledge requires belief, it follows that Sebastian should assert what he does not know.

Some researchers have responded to cases like Sebastian's by proposing that, on the most natural interpretation of the case, he *does* believe that there is no link (e.g. Turri 2014a; for a different response, see Montminy 2013). But critics disagree. They claim, "the most plausible way to understand this case is that his daughter's recent diagnosis of autism leaves him feeling utterly confused." He neither believes that there is a link, nor believes that there is no link, but instead "withholds" judgment on whether there is a link (Lackey 2007, p. 620, n. 13; see also Pritchard 2014, p. 160; Wright 2014, p. 255). Based on this interpretation, critics conclude that we need an account of assertability that does not require the speaker to believe the proposition asserted.

In order to assess the merit of arguments based on cases of "selfless assertion," we need better evidence on how the case actually is most naturally understood. Do people judge that Sebastian should make the assertion? Do people judge that Sebastian believes the claim in question? Do people judge that Sebastian knows the claim in question? These are, of course, empirical questions that cannot be settled by armchair reflection. This paper reports some simple experiments that answer the questions. The results show that the answer to all three questions is "yes." On the natural way of understanding the case, Sebastian should assert that there is no link, he believes that there is no link, and he knows that there is no link.

## 2 Experiment 1

### 2.1 Method

#### 2.1.1 Participants

Ninety-nine U.S. residents were tested (aged 18–67 years, mean age = 33 years; 94 % reporting English as a native language; 44 female). Participants were recruited and tested online using Amazon Mechanical Turk and Qualtrics and compensated \$0.30 for approximately 2 min of their time. Repeat participation was prevented.

#### 2.1.2 Materials and procedure

Participants were randomly assigned to one of two conditions, Believes and Knows, in a between-subject design. Participants in each condition read the same story about Sebastian.

Sebastian is an extremely well-respected pediatrician and researcher who has done extensive work studying childhood vaccines. He recognizes and appreciates that all the scientific evidence shows that there is absolutely no connection between vaccines and autism. But shortly after his apparently normal 18-month-old daughter received one of her vaccines, she became increasingly withdrawn and was soon diagnosed with autism. Sebastian is aware that signs of autism typically emerge around this age, regardless of whether a child received any vaccines. But the grief and exhaustion brought on by his daughter's recent diagnosis caused him to abandon his previously deeply-held convictions regarding

vaccines. Today, while performing a well-baby checkup on one of his patients, the child's parents ask him about the legitimacy of the rumors surrounding vaccines and autism. Recognizing that the current doubt he has towards vaccines was probably brought about through the emotional trauma of dealing with his daughter's condition, and recognizing that he has an obligation to his patients to present what is most likely to be true, Sebastian replies, "There is no connection between vaccines and autism."

The story is nearly verbatim to the original case that appeared in the literature (Lackey 2007, pp. 598–599). The only changes made were to avoid outright stipulating lack of "belief" in those very terms. So, for instance, participants were not presented with the final independent clause of the originally published version: "It would not be correct to say that Sebastian himself believes or knows this proposition." And instead of reading that Sebastian had given up his "previously deeply-held beliefs," participants read that he gave up his "previously deeply-held convictions." Including such stipulations is inconsistent with the goal of learning how people naturally judge the case.

After reading the story, participants in the Believes condition first rated their agreement with the following statement:

At least on some level, Sebastian believes that there is no connection between vaccines and autism.

Participants in the Knows condition responded to a probe that replaced "believes" with "knows." Then participants went to a new screen and rated their agreement with a second statement:

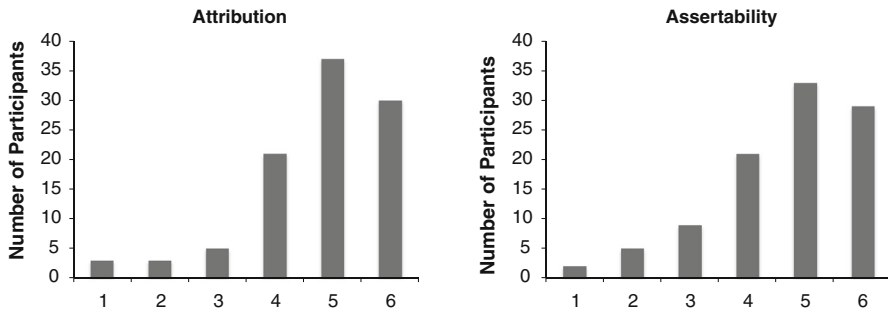
Sebastian should tell the parents that there is no connection between vaccines and autism.

Responses were collected on a standard 6-point Likert scale anchored with "Strongly Disagree" (=1), "Disagree," "Somewhat Disagree," "Somewhat Agree," "Agree," and "Strongly Agree" (=6). After testing, participants filled out a brief demographic questionnaire.

## 2.2 Results

Preliminary analysis revealed that neither participant age nor participant gender entered into any main or interaction effects. Accordingly, the analyses that follow collapse across these factors. The same is true for Experiments 2–4 below.

Assignment to condition didn't affect response to the mental state attribution (Believes/ Knows,  $M = 4.72/4.84$ ,  $SD = 1.25/1.16$ ), independent samples t-test,  $t(97) = -0.48$ ,  $p = .631$ , n.s. Similarly, condition didn't affect assertability rating (Believes/Knows,  $M = 4.56/4.78$ ,  $SD = 1.25/1.25$ ), independent samples t-test,  $t(97) = -0.86$ ,  $p = .392$ , n.s. Collapsing across condition, mean agreement with the mental state attribution was significantly above the midpoint ( $M = 4.78$ ,  $SD = 1.2$ ), one sample t-test,  $t(98) = 10.60$ ,  $p < .001$ ,  $MD = 1.28$ , 95 % CI 1.04–1.52,  $d = 1.07$ . Overall, mean agreement with the mental state attribution didn't differ from mean assertability rating ( $M = 4.67$ ,  $SD = 1.25$ ), paired samples t-test,  $t(98) = 1.07$ ,



**Fig. 1** Experiment 1. Distribution of responses to the mental state attribution and the assertability claim, collapsed across condition. 1 Strongly disagree, 2 Disagree, 3 Somewhat disagree, 4 Somewhat agree, 5 Agree, 6 Strongly agree

$p = .285$ , n.s. Mental state attribution and assertability rating were strongly positively correlated, Pearson's correlation,  $r = .646$ ,  $N = 99$ ,  $p < .001$ . Overall, 89 % agreed at least to some extent with the mental state attribution (i.e. answered either "Somewhat Agree," "Agree," or "Strongly Agree"),  $\chi^2(1, 99) = 59.89$ ,  $p < .001$ , as did 84 % with the assertability claim,  $\chi^2(1, 99) = 45.34$ ,  $p < 0.001$ . The mode response was "Agree" (=5) to both the mental state attribution and the assertability claim. (See Fig. 1.)

## 2.3 Discussion

The results show that the selfless assertion in question is definitely viewed as assertable, which corroborates earlier claims made in the literature. The results also show that the "selfless assertor" is overwhelmingly viewed as both believing and knowing the asserted proposition, which completely undermines prior interpretations offered by critics of the knowledge account.

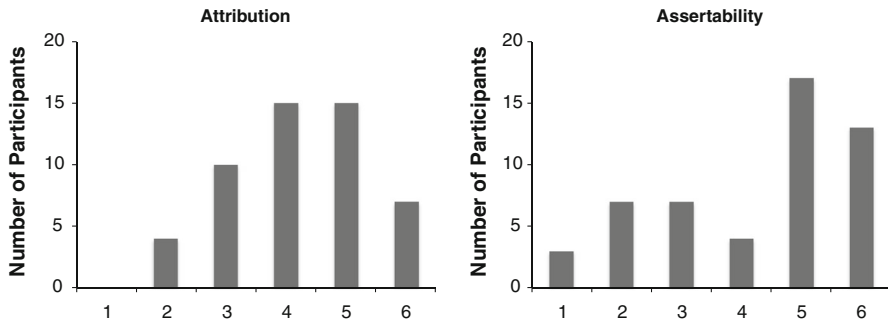
State-of-the-art research on mental state attributions has shown that adding the adverbial phrase "at least on some level" yields response patterns more in keeping with standard theoretical assumptions in philosophy and psychology. This includes the assumption that knowledge entails belief, which the argument from selfless assertion assumes (Buckwalter et al. 2013). This is why I used probes with that phrase. Nevertheless some might suspect that the results were somehow illicitly due to the phrase, so the next experiment tests the same case without the phrase in the probes.

## 3 Experiment 2

### 3.1 Method

#### 3.1.1 Participants

Fifty-one U.S. residents were tested (aged 19–56 years, mean age = 33 years; 98 % reporting English as a native language; 19 female). Participants were recruited and tested the same way as in Experiment 1.



**Fig. 2** Experiment 2. Distribution of responses to the mental state attribution and the assertability claim, collapsed across condition. 1 Strongly disagree, 2 Disagree, 3 Somewhat disagree, 4 Somewhat agree, 5 Agree, 6 Strongly agree

### 3.1.2 Materials and procedure

The materials and procedures were exactly the same as in Experiment 1, except this time the mental state attributions omitted the adverbial phrase “at least on some level.”

### 3.2 Results

Assignment to condition didn’t affect response to the mental state attribution, (Believes/Knows,  $M = 4.12/4.28$ ,  $SD = 1.14/1.17$ ), independent samples t-test,  $t(49) = 0.51$ ,  $p = .614$ , n.s. Similarly, condition didn’t affect assertability rating, (Believes/Knows,  $M = 4.28/4.16$ ,  $SD = 1.17/1.43$ ), independent samples t-test,  $t(49) = 0.41$ ,  $p = .682$ , n.s. Collapsing across condition, mean agreement with the mental state attribution was significantly above the midpoint ( $M = 4.20$ ,  $SD = 1.15$ ), one sample t-test,  $t(50) = 4.33$ ,  $p < .001$ ,  $MD = 0.70$ , 95 % CI 0.37–1.02,  $d = 0.61$ . Overall, mean agreement with the mental state attribution didn’t differ from mean assertability rating ( $M = 4.25$ ,  $SD = 1.6$ ), paired samples t-test,  $t(50) = -0.32$ ,  $p = .754$ , n.s. Mental state attribution and assertability ratings were strongly positively correlated, Pearson’s correlation,  $r = .571$ ,  $n = 51$ ,  $p < .001$ . Overall, 73 % of participants agreed to at least some extent with the mental state attribution,  $\chi^2(1, 51) = 10.37$ ,  $p = 0.001$ , as did 67 % with the assertability claim,  $\chi^2(1, 51) = 5.67$ ,  $p = .017$ . The mode responses were “Somewhat agree” and “Agree” for the mental state attribution and “Agree” for the assertability claim. (See Fig. 2.)

### 3.3 Discussion

The results replicated the main findings from Experiment 1. Once again people rated the selfless assertion as assertable and attributed both belief and knowledge to the selfless assessor. We observed the same basic pattern of findings using a different probe. Consistent with prior work on the psychometrics of mental state attribution,

eliminating the adverbial phrase “on some level” resulted in lower rates of attribution overall.

## 4 Experiment 3

In order to ensure that the basic findings generalize to other examples of selfless assertion, this experiment tests another case widely discussed in the literature. It features a “creationist school teacher.” It also probes for attributions of another belief-like mental state, recognition.

### 4.1 Method

#### 4.1.1 Participants

One hundred fifty U.S. residents were tested (aged 18–64 years, mean age = 31 years; 95 % reporting English as a native language; 60 female). Participants were recruited and tested the same way as in earlier experiments.

#### 4.1.2 Materials and procedure

Participants were randomly assigned to one of three conditions, Believes/Knows/Recognizes, in a between-subject design. Participants in each condition read the same story about Stella, a creationist school teacher. The story is very similar to the original case that appeared in the literature (Lackey 2007, p. 599). Small changes were made to make the story shorter and easier to understand and to avoid stipulating lack of “belief” in those very terms. So, for instance, participants were not presented with the final independent clause of the originally published version: “[Stella] herself neither believes nor knows this proposition.” Here is the text of the story:

Stella is a devoutly religious person employed as a fourth-grade teacher. Her religious views are grounded in a deep faith that she has had since childhood. Part of this faith includes a belief in the truth of creationism and, accordingly, the falsity of evolutionary theory. Despite this, Stella fully recognizes that there is an overwhelming amount of scientific evidence against creationism and in favor of evolutionary theory. Moreover, Stella does not think that religion should be imposed on fourth-grade students. Instead, she regards it as her duty as a teacher to present material that is best supported by the available evidence, which clearly includes the truth of evolutionary theory. As a result, while presenting her biology lesson today, Stella tells her students, “Modern humans evolved from more ape-like ancestors called *hominids*.”

After reading the story, participants in the Believes condition first rated their agreement with the following statement:

At least on some level, Stella believes that modern humans evolved.

Participants in the Knows and Recognizes conditions responded to a probe that replaced “believes” with “knows” or “recognizes.” Then participants went to a new screen and rated their agreement with a second statement:

Stella should tell the students that modern humans evolved.

Responses to these first two statements were collected on a standard 6-point Likert scale anchored with “Strongly Disagree” (=1), “Disagree,” “Somewhat Disagree,” “Somewhat Agree,” “Agree,” and “Strongly Agree” (=6).

Finally, all participants went to a new screen and answered the following question:

In your opinion, morally speaking, how good or bad would it be to not tell schoolchildren that modern humans evolved?

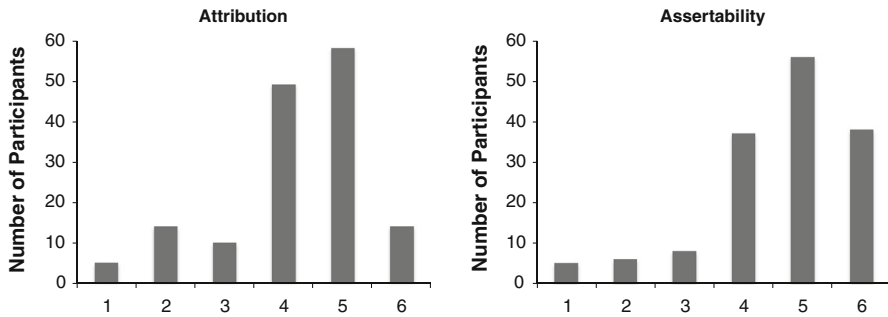
Responses to this question were collected on a standard 6-point Likert scale anchored with “Very bad” (=1), “Bad,” “Somewhat bad,” “Somewhat good,” “Good,” and “Very good” (=6). The point of asking this question was to see how strongly people morally disapproved of not giving children this information. One concern is that Stella’s case is morally charged and could lead people to say, on moral grounds, that Stella “should” make the assertion; this raises the possibility of false positives on the assertability rating. But this concern has not been tested.

## 4.2 Results

Assignment to condition didn’t affect response to the mental state attribution (Believes/Knows/Recognizes,  $M = 4.04/4.40/4.22$ ,  $SD = 1.21/1.07/1.21$ ), one-way analysis of variance,  $F(2, 147) = 1.11$ ,  $p = .332$ , n.s. Similarly, condition didn’t affect assertability rating (Believes/Knows/Recognizes,  $4.58/4.78/4.58$ ,  $SD = 1.21/1.20/1.26$ ), one-way analysis of variance,  $F(2, 147) = 0.44$ ,  $p = .643$ , n.s. Collapsing across condition, mean agreement with the mental state attribution was significantly above the midpoint ( $M = 4.22$ ,  $SD = 1.21$ ), one sample t-test,  $t(149) = 7.30$ ,  $p < .001$ ,  $MD = 0.72$ , 95 % CI  $0.52–0.92$ ,  $d = 0.60$ . Overall, mean agreement with the mental state attribution was lower than mean assertability rating ( $M = 4.65$ ,  $SD = 1.22$ ), paired samples t-test,  $t(149) = -0.43$ ,  $p = .001$ . Mental state attribution and assertability rating were positively correlated, Pearson’s correlation,  $r = .262$ ,  $n = 150$ ,  $p < .001$ . Overall, 81 % of participants agreed to at least some extent with the mental state attribution,  $\chi^2(1, 150) = 56.43$ ,  $p = .001$ , as did 87 % with the assertability claim,  $\chi^2(1, 150) = 83.63$ ,  $p < 0.001$ . The mode response was “Agree” for both the mental state attribution and the assertability claim. (See Fig. 3.)

Assignment to condition didn’t affect moral evaluation of not telling the children that modern humans evolved (Believes/Knows/Recognizes,  $M = 2.48/2.40/2.44$ ,  $SD = 1.22/ 1.26/1.36$ ), one-way analysis of variance,  $F(2, 147) = 0.05$ ,  $p = .952$ , n.s. Collapsing across condition, mean moral evaluation ( $M = 2.44$ ,  $SD = 1.27$ ) was significantly below the theoretical neutral midpoint (=3.5),  $t(149) = -10.21$ ,  $p < .001$ ,  $MD = -1.06$ , 95 % CI for  $MD = -1.27$  to  $-0.85$ ,  $d = 0.83$ . The mode response was “Very Bad.” Overall, 82 % of participants rated not telling the students as morally bad to some degree (i.e. “Very bad,” “Bad,” or “Somewhat bad),  $\chi^2(1, 150) = 61.44$ ,  $p < .001$ . Assertability rating was strongly negatively correlated with the moral evaluation: the more immoral participants rated not telling the students, the more strongly they agreed that Stella should tell the students, Pearson’s correlation,  $r = -.617$ ,  $n = 150$ ,





**Fig. 3** Experiment 3. Distribution of responses to the mental state attribution and the assertability claim, collapsed across condition. 1 Strongly disagree, 2 Disagree, 3 Somewhat disagree, 4 Somewhat agree, 5 Agree, 6 Strongly agree

$p < .001$ . Mental state attribution was not significantly correlated with the moral evaluation,  $p = .143$ , n.s.

#### 4.3 Discussion

The results replicate the main findings from the earlier experiments. Once again an overwhelming majority attributed belief and knowledge to the selfless assertor. We observed these findings using a different well known example of selfless assertion from the literature. We also observed a similar pattern when probing for a different belief-like state, recognition. Mean assertability rating was slightly higher than mean agreement with the mental state attribution, but this was likely due to the fact that people strongly morally disapproved of not making the assertion.

### 5 Experiment 4

The first three experiments demonstrate that people naturally conclude that a selfless assertor believes and should assert the proposition in question. As mentioned earlier, the stimuli did not stipulate lack of belief because doing so might easily interfere with discovering how people naturally interpret the case, which is my primary goal. Now that it's clear that people naturally interpret the case as involving belief, several concerns arise about stipulating lack of belief. It might simply confuse people, in which case their responses would not be informative. It might lead people to mistrust or even reject the narrative more generally, in which case their responses become difficult to interpret. Or, finally, it might impose task demand, whereby people simply treat the dependent measure as a comprehension question to be answered by looking for keywords in the text, rather than as an opportunity to express their view of the case. By contrast, it's also possible that people will simply ignore stipulations to the contrary and instead trust their own assessment of the case. The present study investigates how people view the case when lack of belief is explicitly stipulated.

## 5.1 Method

### 5.1.1 Participants

Fifty U.S. residents were tested (aged 18–60 years, mean age = 32 years; 96 % reporting English as a native language; 15 female). Participants were recruited and tested the same way as in earlier experiments.

### 5.1.2 Materials and procedure

Participants read a single story and responded to three test statements. The story was almost identical to the one used in Experiment 1 except that it included explicit stipulations that the agent, Sebastian, does not believe the proposition in question. Here is the text of the story (added stipulations are italicized for ease of reference; participants did not see this formatting):

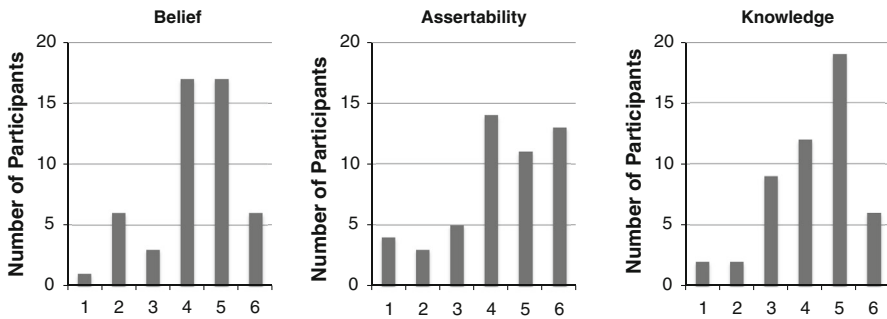
Sebastian is an extremely well-respected pediatrician and researcher who has done extensive work studying childhood vaccines. He recognizes and appreciates that all the scientific evidence shows that there is absolutely no connection between vaccines and autism. But shortly after his apparently normal 18-month-old daughter received one of her vaccines, she became increasingly withdrawn and was soon diagnosed with autism. Sebastian is aware that signs of autism typically emerge around this age, regardless of whether a child received any vaccines. But the grief and exhaustion brought on by his daughter's recent diagnosis caused him to *abandon his previously deeply-held belief* regarding vaccines. Today, while performing a well-baby checkup on one of his patients, the child's parents ask him about the legitimacy of the rumors surrounding vaccines and autism. *Sebastian does not believe that there is no connection.* Still, he recognizes that the current doubt he has towards vaccines was probably brought about through the emotional trauma of dealing with his daughter's condition. And he recognizes that he has an obligation to his patients to present what is most likely to be true. So Sebastian replies, "There is no connection between vaccines and autism."

Participants then used the same 6-point Likert scale from Experiment 1 to rate their agreement with three test statements, each appearing on a separate screen while the story remained on top:

1. At least on some level, Sebastian believes that there is no connection.
2. Sebastian should tell the parents that there is no connection.
3. At least on some level, Sebastian knows that there is no connection.

## 5.2 Results

Mean response was above the neutral midpoint (= 3.5) for belief attribution ( $M = 4.22$ ,  $SD = 1.23$ ), one sample t-test,  $t(49) = 4.13$ ,  $p < .001$ ,  $MD = 0.72$ , 95 % CI 0.37–1.07, for assertability rating ( $M = 4.28$ ,  $SD = 1.41$ ),  $t(49) = 3.65$ ,  $p < .001$ ,



**Fig. 4** Experiment 4. Distribution of responses to the belief, assertability, and knowledge attributions. 1 Strongly disagree, 2 Disagree, 3 Somewhat disagree, 4 Somewhat agree, 5 Agree, 6 Strongly agree

MD = 0.78, 95 % CI 0.35–1.21, and for knowledge attribution ( $M = 4.24$ ,  $SD = 1.24$ ),  $t(49) = 4.23$ ,  $p < .001$ , MD = 0.74, 95 % CI 0.39–1.09. Overall, 80 % of people agreed at least to some extent with the belief attribution,  $\chi^2(1, 50) = 18.00$ ,  $p < .001$ ; 76 % agreed with the assertability claim,  $\chi^2(1, 50) = 13.52$ ,  $p < .001$ ; and 74 % agreed with the knowledge attribution,  $\chi^2(1, 50) = 11.52$ ,  $p < .001$ . The mode response for the belief attribution was “Somewhat agree” and “Agree”; for the assertability claim it was “Somewhat agree”; and for the knowledge attribution it was “Agree.” (See Fig. 4).

### 5.3 Discussion

These results replicate the earlier findings and further demonstrate their robustness. Even when lack of belief is explicitly stipulated, in light of the other information contained in the case, people are strongly inclined to attribute belief, assertability, and knowledge.

## 6 Conclusion

Researchers investigating the norm of assertion agree that their project is, at least in large part, empirical. An adequate theory “must face the linguistic data” (Douven 2006, p. 45). Critics of the knowledge account claim that it mischaracterizes our actual practice of evaluating assertions and that it clashes with the intuitively correct verdict in particular cases, including cases of reasonable false assertions and “selfless assertions.” Prior empirical work has shown that critics are wrong about the ordinary way of evaluating reasonable false assertions. This paper investigated whether the critics fared any better when it comes to cases of selfless assertion.

A selfless assertion is an assertion that supposedly has two crucial features. First, intuitively the agent should make it. Second, we naturally interpret the agent as neither believing nor, as a result, knowing the proposition asserted. Based on these two features, critics conclude that the knowledge account faces a “fundamental difficulty” (Pritchard 2014, p. 160). But when I tested paradigm cases of selfless assertion, they turned out to have only one of the two crucial features. While the assertion is naturally

viewed as proper, the agent is equally naturally viewed as both believing and knowing the proposition asserted. Therefore such cases cannot play the destructive role that critics have assigned them. Instead they end up providing further confirmation of the knowledge account.

Critics have offered other examples of selfless assertion. But they are ill suited to test intuitions about assertability. They involve provocative, even incendiary, subject matter that can potentially interfere with people's judgment. For instance, one case involves a "racist juror" sitting in judgment of an innocent black man accused of interracial sexual assault. In the experiments reported here, I focused on less provocative but still emotionally and morally charged examples. The examples of Sebastian and Stella involve socially controversial issues: the safety of vaccines and the antagonism between creationism and evolutionary theory. The stories also raise the prospect of harming innocent babies and children by threatening their physical health or intellectual well being. It is not mere speculation that all this will trigger strong moral feelings; participants said it would be highly immoral for Stella to not make the relevant assertion. Moreover religious belief has a privileged social status in Western culture, so many people might feel uncomfortable explicitly attributing beliefs that conflict with someone's avowed religious faith.

Aside from involving highly emotionally charged themes, all the cases critics have discussed are long, complicated, and confusing. They are confusing because they send mixed signals about the agent's state of mind. For example, the agent is described as "fully recognizing" that there is an "overwhelming amount of scientific" evidence in favor of a certain proposition, but in the same paragraph it is explicitly stipulated that the agent doesn't believe the proposition. In other cases the agent is described as experiencing a cognitive roller-coaster, first knowing, then doubting, then "recognizing" that the doubt was irrational, followed by asserting the proposition in question.

In general, theoretical debate is poorly served by focusing on complicated, confusing, and provocative cases. They introduce irrelevant factors that could easily cause performance errors or otherwise degrade social cognition. And yet, despite all that, when tested these cases produced results fully consistent with the knowledge account.

But the defects of particular cases are not the fundamental issue here. Previous work on social cognition shows that assertion is a powerful cue to belief attribution. Indeed assertion can sometimes be a stronger cue to belief attribution than even a robust and consistent profile of non-verbal behavior (Rose et al. 2014). And work in developmental psychology shows that even very young children operate with a strong default assumption that people believe what they say (Roth and Leslie 1991; see also Nichols and Stich 2003). Even if critics devise simpler, coherent, more mundane cases of selfless assertion, we cannot simply vanquish, by stipulation, our tendency to interpret people as believing what they say. Thought experiments intended to probe for mental state attributions should not conflict with basic principles guiding social cognition.

Cases of selfless assertion were said to not only undermine the knowledge account of assertion, but also to motivate weaker alternative accounts of the norm of assertion that don't require believing the proposition asserted (e.g. Lackey 2007; Pritchard 2014). Such cases are basically the only distinctive motivation offered for such weaker views. But it turns out that intuitions about these cases support the knowledge account, leaving

the alternative “non-doxastic” accounts entirely unmotivated. Combine this with the fact that the knowledge account is supported by a wealth of other theoretical and empirical evidence (Turri 2013, 2014b, c, in press; Buckwalter and Turri 2014; Turri and Buckwalter under review), and I can see no reason to pursue the alternatives any further. Instead, further progress in this area will come by trying to better understand the precise sense in which knowledge is the norm of assertion and, ultimately, why knowledge specifically plays this role.

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