The Distinctive "Should" of Assertability*

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Abstract: Recent work has assumed that the normativity associated with assertion differs from the normativity of morality, practical rationality, etiquette, and legality. That is, whether an assertion "should" be made is not merely a function of these other familiar sorts of normativity and is especially connected to truth. Some researchers have challenged this assumption of distinctive normativity. In this paper I report two experiments that test the assumption. Participants read a brief story, judged whether an assertion should be made, and rated several other qualities of the assertion, including its truth value, morality, rationality, etiquette, legality, and folly. Of all these qualities, truth value most strongly predicted assertability. The findings support the assumption of distinctive normativity and provide further evidence that the norm of our social practice of assertion is factive (i.e. it makes truth essential to assertability).

Keywords: assertion; truth; norms; social cognition

Introduction

Assertion is central to human social life. A large amount of critical information that we rely on every day is communicated via assertion. Philosophers and cognitive scientists have recently investigated the rules of our social practice of assertion (for reviews, see Benton 2014; Pagin 2014;

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

Benton unpublished ms; Turri 2016a). Results from several recent studies support the hypothesis that assertion has a *factive* norm: you should make an assertion only if it is true (Turri 2013; Turri 2015; Turri 2016b; Turri & Buckwalter in press; Lassiter unpublished ms). In most of these studies, researchers probed for assertability attributions by asking whether assertions "should" be made. In keeping with prior theoretical work on assertion, researchers also assumed that the norm of assertion differs from other familiar forms of normativity, such as morality, practical rationality, etiquette, and legality (see Turri 2013). That is, the "should" of assertability differs from the morality, rationality, politeness, or legality of an assertion. Call this *the assumption of distinctive normativity*.

To illustrate this assumption with an analogy, consider a chess match. The goal of chess is to checkmate your opponent. The rules of chess allow rooks to move along an unobstructed vertical or horizontal path. If you can checkmate an opponent by moving a rook along an unobstructed vertical path, then there is a clear sense in which you should make that move. But if your opponent is a child who would be utterly devastated by the defeat or a violent mobster who will react violently to a loss, then there is also a clear sense in which you should not make the move. In these ways, the normativity distinctive of chess differs from the normativity of morality or practical rationality. Similarly, prior research on assertion has assumed that there is a "should" of assertability that differs from the "should" of morality, practical rationality, and other familiar sources of normativity.

The assumption of distinctive normativity has been only partially tested, though it has been questioned by some theorists (e.g. Kvanvig 2011, Pagin 2015). One study compared assertability

attributions in situations in which more or less was at stake (Turri 2013, Experiment 2). Assertability attributions were strongly affected by the assertion's truth value but unaffected by how much was at stake, suggesting that the "should" of assertability differs from practical rationality. But this conclusion is limited by the fact that it relies on the researcher's interpretation of the independent variable; participants did not rate how serious the situation was for the speaker. Neither did participants rate other qualities of the assertion, such as its morality, etiquette, or legality, so researchers could not statistically analyze whether these judgments, rather than the assertion's truth value, predicted assertability attributions.

The present research was designed to better test the assumption of distinctive normativity. More specifically, it was designed to test whether assertability attributions are predicted by assessment of truth value, over and above assessments of morality, rationality, etiquette, and legality. I tested participants using the same basic stimuli from previous research, manipulating both the assertion's truth value and how potentially serious the situation is for the agent. In addition to collecting assertability attributions, I asked participants to rate the situation's seriousness and I collected judgments of the assertion's truth value, morality, rationality, politeness, and legality. I also used more sensitive measures than previous research used (7-point Likert scales instead of dichotomous response options). I used multiple linear regression to determine whether, and to what extent, assertability attributions were based on assessments of truth value and the other qualities.

If the assumption of distinctive normativity is true, then assessments of truth value will make a unique, statistically significant contribution to predicting assertability attributions. The

greater this contribution, the stronger it supports the assumption. By contrast, if assessments of truth value do not make such a contribution, then it will undermine the assumption. Importantly, the assumption of distinctive normativity does *not* predict that other factors will be irrelevant to assertability attributions. To the contrary, it is expected that other considerations can affect judgements about whether an assertion should be made. (Indeed, this is why it seems important to test the assumption to begin with.) Again, the key question is whether assessments of truth value make a unique contribution to predicting assertability attributions.

Experiment 1

Two hundred participants were tested (aged 18-63, mean age = 34 years; 86 female; 96% reporting English as a native language). Participants were U.S. residents, recruited and tested online using Amazon Mechanical Turk (AMT) and Qualtrics, and compensated $0.40 for approximately 2 minutes of their time. Repeat participation was prevented (by AMT worker ID).

Participants were randomly assigned to one of four conditions in a 2 (stakes: lower, higher) × 2 (truth value: false, true) between-subjects design. All participants read a simple story about Maria the watch collector (taken verbatim from Turri 2013, Experiment 2). In lower stakes versions of the story, Maria's neighbor asks out of idle curiosity whether she owns a certain watch. In higher stakes versions, a federal prosecutor asks Maria the same question. In all versions of the story, Maria consults her highly reliable but fallible watch inventory, which says that she does own the watch. In false versions of the story, the inventory is incorrect (she does not own the

watch). In true versions, the inventory is correct (she does own the watch).

After reading the story, participants rated an assertability attribution:

Maria should say that she has a 1990 Rolex Submariner in her collection.

Responses were collected on a standard 7-point Likert scale, 1 (“strongly disagree”) – 7 (“strongly agree”), left-to-right on the participant’s screen. Participants then went to a new screen and rated five qualities of an assertion:

If Maria says that she has a 1990 Rolex Submariner in her collection, then her statement will be:

Immediately below was a matrix table listing five qualities (order randomized): false, immoral, irrational, impolite, illegal. The qualities were rated using the same 7-point Likert scale described above. Finally, participants then went to a new screen and rated the seriousness of the situation (a check on the effectiveness of the stakes manipulation):

The situation is potentially very serious for Maria.

Responses were collected using the same 7-point Likert scale. The story remained atop the screen throughout testing. After testing, participants completed a short demographic survey.

The stakes and truth value manipulations were extremely effective, with evaluations of truth value and seriousness varying appropriately across conditions. (See Appendix, Table 3.) Analyses of variance also revealed a main effect of truth value on participant ratings of immorality, irrationality, impoliteness, and illegality. (See Figure 1 and Appendix, Table 4.) Ratings of these four qualities were intercorrelated and formed a reliable scale (Cronbach’s $\alpha = .916$). So in order to avoid problems connected to multicollinearity in a multiple regression analysis, I created a

composite measure for each participant that was the mean of their ratings of immorality, irrationality, impoliteness, and illegality. Then I conducted a linear regression analysis predicting assertability attributions. (See Table 1.) Because the independent variables of truth value and stakes were extremely effective, I did not include them as predictors in the regression analysis; instead, I included participants' own ratings of falsehood and seriousness, which is a more direct reflection of their interpretation of the situation. Thus the predictors were evaluation of falsehood, evaluation of seriousness, the composite measure, participant gender, and participant age. The model was significant and explained most of the variance in assertability attributions ($R^2 = .718$). Evaluation of falsehood was the strongest predictor ($\beta = -.555$). Assertability attributions were also significantly predicted by the composite measure ($\beta = -.366$) but not by evaluations of seriousness, gender, or age.

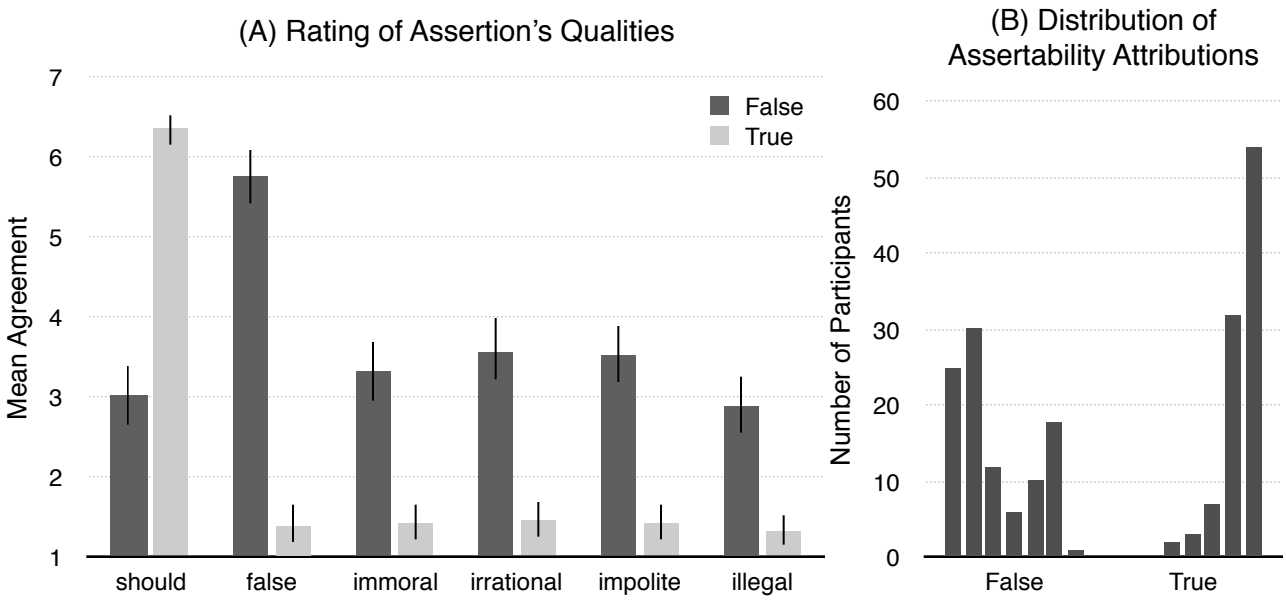

Figure 1. Experiment 1. Panel A: mean ratings of six qualities of the assertion in the two truth value conditions: whether the assertion should be made and whether it would be false, immoral, irrational, impolite, and illegal. Panel B: distribution of responses to the assertion attribution (i.e. "should" from panel A). All scales ran 1 (strongly disagree) - 7 (strongly agree). Error bars represent 95% confidence intervals. Results collapse across stakes (lower/higher).

Table 1. Experiment 1. Multiple linear regression predicting assertability attributions.

Predictor	B	SE (B)	β	t	p
Constant	6.792	0.439		15.48	<.001
false	-0.479	0.049	-0.555	-9.77	<.001
serious	0.079	0.046	0.072	1.73	.086
composite	-0.506	0.081	-0.366	-6.26	<.001
gender	0.125	0.174	0.028	0.72	.472
age	0.011	0.009	0.049	1.22	.225

Note. $F(5, 194) = 98.91$, $p < .001$, $R^2 = .718$. Reference class for gender: female.

The results support the assumption of distinctive normativity. The next experiment tests whether similar results occur in a different narrative context.

Experiment 2

One hundred four new participants were tested (aged 18-72, mean age = 33 years; 47 female; 95% reporting English as a native language). The same recruitment and compensation procedures as in Experiment 1 were used.

Participants were randomly assigned to one of two conditions (false, true) in a between-subjects design. Because participant ratings of seriousness did not predict assertability attributions in Experiment 1, and because this replicated prior results, I omitted the stakes variable and evaluations of seriousness in this study. All participants read a simple story about Angelo and his son, who are camping during deer-hunting season when they hear two loud bangs behind their campsite (modeled closely after the scenario tested in Turri in press, Experiment 1). In the false version of the story, the bangs are not gunshots but rather backfire from a nearby vehicle's exhaust system. In the true version of the story, the bangs are gunshots from a nearby hunter. After the bangs, Angelo's son asks, "Were those gunshots?"

After reading the story, participants rated an assertability attribution:

Angelo should say that they were gunshots.

Participants then went to a new screen and rated five qualities of an assertion:

If Angelo says that they were gunshots, then his statement will be:

Immediately below was a matrix table listing five qualities (order randomized): false, immoral, irrational, impolite, foolish. I asked participants to rate folly rather than legality because legality is clearly not an issue in the scenario, and people might think it is foolish to scare a child with

false information. All responses were collected the same way as in Experiment 1.

The results resembled the findings from Experiment 1. The truth value manipulation was extremely effective and again strongly affected assertability attributions. (See Appendix, Table 5.) Independent samples t-tests also revealed an effect of truth value on participant ratings of immorality, irrationality, impoliteness, and foolishness. (See Figure 2 and Appendix, Table 5.) Ratings of these four qualities were intercorrelated and formed a reliable scale (Cronbach's $\alpha = .926$). So, as in Experiment 1, I created a composite measure for each participant that was the mean of these four ratings (immorality, irrationality, impoliteness, and foolishness). Then I conducted a linear regression analysis predicting assertability attributions. (See Table 2.) The predictors were evaluation of falsehood, the composite measure, participant gender, and participant age. The model was significant and explained most of the variance in assertability attributions ($R^2 = .626$). Evaluation of falsehood significantly predicted assertability attributions ($\beta = -.804$), but nothing else did.

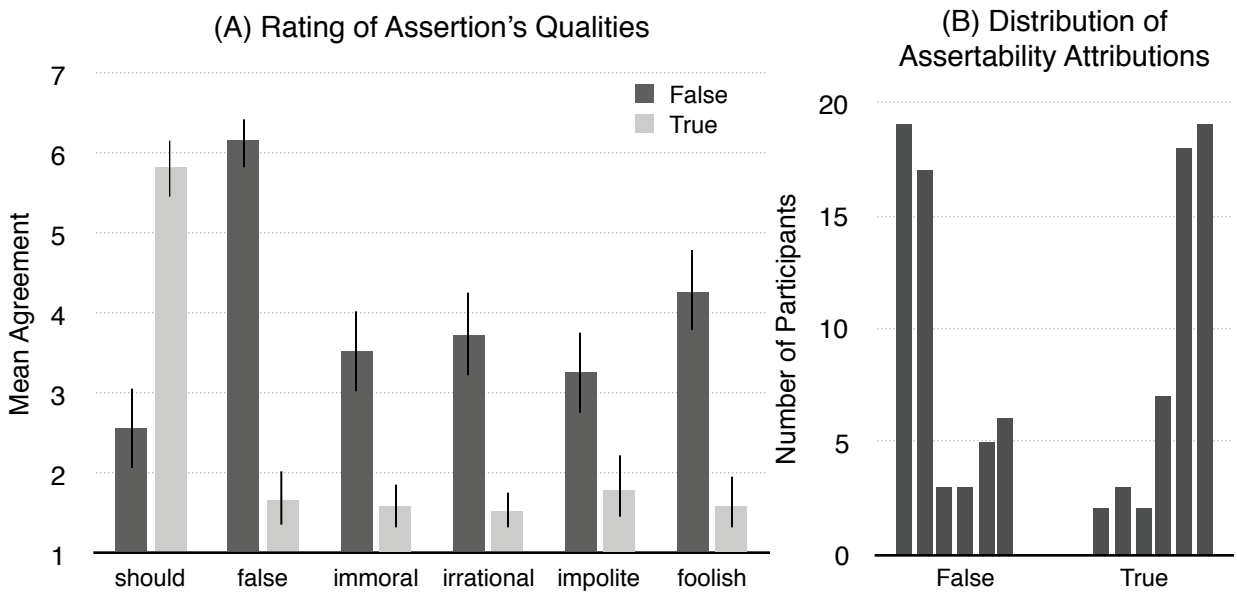

Figure 2. Experiment 2. Panel A: mean ratings of six qualities of the assertion in the two truth value conditions: whether the assertion should be made and whether it would be false, immoral, irrational, impolite, and foolish. Panel B: distribution of responses to the assertion attribution (i.e. "should" from panel A). All scales ran 1 (strongly disagree) - 7 (strongly agree). Error bars represent 95% confidence intervals.

Table 2. Experiment 2. Multiple linear regression predicting assertability attributions.

Predictor	B	SE (B)	β	t	p
Constant	7.237	0.588		12.30	<.001
false	-0.718	0.075	-0.804	-9.56	<.001
composite	0.033	0.114	0.024	0.29	.775
gender	-0.111	0.281	-0.025	-0.40	.693
age	-0.005	0.013	-0.026	-0.42	.676

Note. $F(4, 99) = 41.49$, $p < .001$, $R^2 = .626$. Reference class for gender: female.

Conclusion

Recent work on assertion has assumed that the "should" of assertability does not reduce to other familiar forms of normativity, such as morality, practical rationality, etiquette, and legality. In-

stead, it has been assumed that the "should" of assertability is essentially tied to whether the assertion is true or known by the speaker to be true. The present research tested this assumption of distinctive normativity.

The results support the assumption. Participants recorded judgments about assertability (whether an assertion "should" be made), truth value, morality, rationality, etiquette, legality, folly, and seriousness. When controlling for the influence of the other qualities, evaluations of truth value significantly predicted assertability attributions. Indeed, evaluations of truth value were the strongest predictor. This undermines the worry, expressed by some theorists, that patterns favoring "*true* assertions actually track" considerations that are not "proper to assertion" (Pagin 2015, p. 22).

The results also replicated important findings from previous research. Assertability attributions were strongly affected by the assertion's truth value, further supporting the view that assertion has a factive norm. And assertability attributions were unaffected by participant gender, participant age, or by manipulating how much was at stake for the speaker, further suggesting that important central tendencies in the evaluation of assertion are robust across variation in those factors.

If the social practice of assertion is partly constituted or sustained by a rule concerned with truth, then that should be reflected in people's assessments of assertability. In particular, their truth-evaluations will make a unique, detectable contribution to their assertability judgments. There are at least two importantly different ways this might happen. On the one hand, it might happen because there is a special form of evaluation, pertaining uniquely to assertion, that people

express when judging assertability. On this approach, the rules defining the social practice are reflected in a distinctive aspect of practitioners' psychology, namely, the ability to formulate evaluations of this special sort. On the other hand, it might happen because people are habituated to base their judgments about what people "should" assert on their truth-evaluations. On this approach, there is no special form of evaluation reserved for assertions. Instead there is just a generic evaluation about what "should" be done which, in virtue of enculturation and when an assertion is under evaluation, has a central tendency to be sensitive to truth-evaluations.

The distinction can be illustrated by contrasting aesthetic normativity and legal normativity. At least in my own case, a distinctive feeling informs my aesthetic judgments. I can separate this out from other types of feelings, such as moral indignation, even when they are simultaneously directed at the same object. Because of this I suspect that there is a distinctive element of our psychology associated with aesthetic judgments — an "aesthetic faculty" — which enables us to appreciate the force of aesthetic value and is part of the basis of our more refined social practices of art criticism and appreciation. By contrast no distinctive feeling informs my legal judgments, and I do not believe that there is a distinctive element of our psychology associated with legal judgments. Nevertheless I can still appreciate the force of legal norms and distinguish it from moral indignation, beauty, and other considerations. I think that it is an open question whether assertability is more like aesthetics or legality. But either way there would still be norms of assertion, just as there are aesthetic and legal norms.

In closing I wish to clarify that the present research was not designed to distinguish between these two broad theoretical possibilities. I view them both as ways for the social practice

to be constituted by a rule concerned with truth. In other words, the defining features of a social practice can be reflected in distinctive aspects of practitioners' psychology, but they do not have to be. It remains for future work to decide between these possibilities, and perhaps others too.

Acknowledgments — For helpful comments and feedback, I thank Matthew Benton, Wesley Buckwalter, Peter Pagin, and Angelo Turri. This research was supported by the Social Sciences and Humanities Research Council of Canada, the Ontario Ministry of Economic Development and Innovation, and the Canada Research Chairs program.

Appendix

Table 3. Experiment 1. Univariate analyses of variance for all dependent variables.

	Factor											
	Stakes				Truth value				Stakes × Truth value			
Measure	**F**	**df**	**p**	**η_p^2**	**F**	**df**	**p**	**η_p^2**	**F**	**df**	**p**	**η_p^2**
should	2.76	1, 196	.098	.014	254.25	1, 196	<.001	.565	0.95	1, 196	.330	.005
false	1.93	1, 196	.166	.010	518.59	1, 196	<.001	.726	0.93	1, 196	.337	.005
immoral	0.01	1, 196	.921	.000	76.33	1, 196	<.001	.280	0.14	1, 196	.713	.001
irrational	0.33	1, 196	.564	.002	89.23	1, 196	<.001	.313	0.05	1, 196	.832	.000
impolite	1.30	1, 196	.255	.007	95.55	1, 196	<.001	.328	1.78	1, 196	.184	.009
illegal	22.89	1, 196	.000	.105	72.28	1, 196	<.001	.269	22.89	1, 196	<.001	.105
serious	102.90	1, 196	.000	.344	5.02	1, 196	<.001	.025	0.24	1, 196	.624	.001

Table 4. Experiment 1. Independent samples t-tests for six qualities of the assertion in the two truth value conditions.

	False (N = 102)		**True** (N = 98)		t	df	p	d	MD	95% CI for MD	
Measure	**M**	**SD**	**M**	**SD**						**LLCI**	**ULCI**
should	3.04	1.87	6.36	0.90	-16.07	146.6	<.001	2.65	-3.32	-3.73	-2.91
false	5.77	1.62	1.41	1.02	22.92	171.8	<.001	3.50	4.37	3.99	4.74
immoral	3.32	1.88	1.42	1.05	8.87	159.9	<.001	1.40	1.91	1.48	2.33
irrational	3.58	1.94	1.47	1.07	9.59	158.4	<.001	1.52	2.11	1.68	2.54
impolite	3.52	1.84	1.43	1.08	9.84	164.8	<.001	1.53	2.09	1.67	2.51
illegal	2.91	1.84	1.33	0.91	7.77	148.5	<.001	1.28	1.59	1.18	1.99

Table 5. Experiment 2. Independent samples t-tests for six qualities of the assertion in the two truth value conditions.

	False (N = 53)		**True** (N = 51)		t	df	p	d	MD	95% CI for MD	
Measure	**M**	**SD**	**M**	**SD**						**LLCI**	**ULCI**
should	2.55	1.75	5.82	1.35	-10.66	97.5	<.001	2.16	-3.28	-3.88	-2.67
false	6.15	1.15	1.67	1.19	19.51	102.0	<.001	3.86	4.48	4.03	4.94
immoral	3.53	1.85	1.59	1.00	6.69	80.9	<.001	1.49	1.94	1.36	2.52
irrational	3.74	1.92	1.53	0.81	7.68	70.4	<.001	1.83	2.21	1.63	2.78
impolite	3.26	1.76	1.80	1.39	4.71	98.3	<.001	0.95	1.46	0.85	2.08
illegal	4.28	1.81	1.61	1.17	8.98	89.3	<.001	1.90	2.68	2.08	3.68

Scenario for Experiment 2

Angelo and his son are camping in a State park. It is also deer-hunting season. One night, they hear two loud, sharp bangs ring out in the forest behind them. In fact, the two loud bangs were [just backfire from a nearby vehicle's exhaust system/gunshots from a nearby hunter pursuing

deer]. ¶[1] Angelo's son asks, "Were those gunshots?"

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[1] Indicates a paragraph break on the participant's screen.

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