

Supplement to:

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SUPPLEMENTAL MATERIALS

Methodological Appendix

As reviewed in the main text, the strongest evidence that enforcement can create an “illusion of sincerity” comes from Study 3 of Willer, Kuwabara, and Macy (2009). Here we lay out the major methodological differences between that study and our studies and explain why we developed a related but distinct experimental paradigm in order to test our theory.

In Study 3 of Willer et al. (2009), subjects learned (i) that three students had read an unintelligible yet purportedly scholarly text; (ii) that the three students had each given private evaluations of the text; (iii) that the students then had a discussion in which two expressed a favorable opinion of the text while one dissented with a negative view; and (iv) that one of the students who publicly expressed a favorable opinion was asked to rate the other students’ performance. The premise of this experiment is that subjects might recognize that the student had an ulterior motive to give a low rating to the public deviant. Yet despite such recognition, subjects were more likely to believe that this student had privately expressed a favorable view when he gave the public deviant a negative evaluation than when he gave the public deviant a neutral evaluation. Based on these results, Willer et al. suggest that audiences do not perceive that the negative evaluation is driven by the ulterior motive, perhaps due to cognitive limitations.¹ Our theory suggests an alternative—i.e., that suspicion is low when assessments of others’ actions occur in response to a mandate.

While it might seem natural to test this idea by exactly reproducing and extending Study 3 of Willer et al., there are several aspects in Study 3 of Willer et al. that make it an inappropriate setting to test when ulterior motives become salient in acts of norm enforcement. We thus

¹ For more details on their design and results, see: Willer et al. (2009:476-481).

modified those aspects, but were still able to replicate the key results of Willer et al. (in the *Mandated* conditions of Study 1).

Modifications

The most important change is that conformity in our studies means adhering to a norm rather than performing in accordance with a group performance standard. As reviewed above, the fictive participants in the vignettes presented in Willer et al. Study 3 evaluated the quality of a scholarly text and then evaluated one another's assessment of that text. As in the classic Asch (1951) experiments, the group majority sets a performance standard. Those in the minority appear to be less *capable* than those in the majority. But this is subtly different from conformity with a group norm.² Noncompliance with a norm is not regarded as problematic if the individual is recognized as incapable of adhering to the norm (e.g., van Maanen 1973). The issue instead pertains to individuals who could choose to join the majority in conforming to the norm but decide not to do so. This indicates problematic *commitment*.³ Based on these considerations, we alter the scenario from one in which individuals judge the quality of a piece of work to one where individuals assess the appropriate norms for their community, as shown in the main text.⁴

² Phillips, Turco, and Zuckerman (2013) review this issue.

³ This contrast may not be so sharp in some contexts. For instance, one may be able to successfully appear committed to the norm even after changing her belief to match those of others, if she can produce a new principle behind supporting the norm. Therefore, as reviewed in the main text, we varied how the enforcer and the nonenforcer articulate her belief with different wording subconditions, and we tested the effect of enforcement through different plausible scenarios.

⁴ Underlying this assessment are beliefs about the welfare of the community and how group members ought to behave to increase its welfare. By contrast, although promoting a performance standard might shore up one's own status within the group, it is harder to draw the link to group welfare. Note however that some situations of normative judgment involve a mix of individual versus group-oriented justifications. For instance, consider norms against theft of intellectual property (e.g., Di Stefano, King, and Verona 2015). Enforcing such a norm is generally motivated by an attempt to protect one's interests or those of one's allies, but enforcement is justified in terms of overall group welfare: we should all protect my rights because your rights will be threatened next. It would seem that suspicions of ulterior

This distinction is also crucial in sharpening when and why audiences recognize strategic reasons for enforcement. Willer et al. present their study as addressing the question of why actors would enforce an “unpopular norm.” As noted, their case is actually not one of norms but of performance standards. In addition, the label “unpopular” is applied based on the premise that since the scholarly text is nonsensical, each subject has a private experience of the performance that is below that of the majority’s public assessment. The ulterior motive for enforcement therefore derives from insecurity about one’s capability: *if everyone else thinks the text is compelling, maybe I’m wrong and will be called a fool for missing it?* However, it is not clear how this insecurity about one’s *capability* translates to the context of norms, especially when multiple norms compete with one another: there is no *a priori* reason for individuals to guess where others stand (e.g., supporting or opposing allowing alcohol on campus). In the context of norms, therefore, the strategic reason to enforce comes from *insecurity about one’s commitment or status in the group*; and the group’s commitment is likely inferred from the group majority’s opinion (e.g., Prentice and Miller 1993; cf., Kim 2017). By investigating a setting of normative debate, we sharpen when and why there might be strategic reasons for appearing committed—i.e., where the group majority seems to endorse a norm.

Finally, it is useful to clarify why our studies involve a debate between competing principles—a libertarian position that is opposed to the alcohol ban and a health/welfare-based position that is in favor. One reason is that such cases are quite common (Duncan 2015). Our design is reflective of the real-world examples where there are often coherent principles for both sides (e.g., being a Democrat or Republican on college campus; for or against abolishment of capital punishment). A second reason is methodological. In particular, if there is not a coherent

motive are even more salient in such conditions (cf., Reilly 2016), thus making our setting a conservative test.

alternative to the majority opinion, subjects may think that the (fictitious) students are conforming and enforcing simply because the opposing argument is weak; that is, it becomes a matter of performance rather than that of commitment.

Beyond these main differences between our studies and Study 3 of Willer et al., there are also more minor differences:

Number of Students in the Group: Our study's fictitious student group consisted of six students, instead of three students as in Study 3 of Willer et al., because it is questionable whether there is any social pressure when the majority consists of two out of a group of three. After all, if the third switches, the majority moves with her: thus social pressure seems rather weak.

Accidental Revelation of a Deviant: Whereas the deviant in Study 3 of Willer et al. revealed himself as a deviant (by declaring that the scholarly text was unintelligible), we designed the story so that the deviant is revealed by accident. If someone is willing to voluntarily reveal himself as a deviant as in Study 3 of Willer et al., it becomes questionable whether the norm exerts social pressure on members of the group. By revealing the deviance accidentally, it remains a viable interpretation that being supportive of banning alcohol is not simply a minority opinion, but an embattled one. However, as in Study 3 of Willer et al., it obviously remains unknown who might be a closeted deviant.

Revelation of a Closeted Deviant: Our experiments create situations where an unknown deviant is known to hide among those who apparently are genuine in endorsing the norm. To recall the case of the Chinese Cultural Revolution, the key opening event was Mao's declaration that there were traitors in their midst. This is also common in more mundane situations, where deviance is witnessed (e.g., a failure of collective action) but it is less clear who the deviant is

(e.g., Alchian and Demsetz 1972). In a setting we present as a benign academic exercise, audiences would have no reason to suspect ulterior motives of anyone without hearing about the (hidden) presence of a deviant.

Online Supplement Table 1: Wordings for each condition’s peer evaluation

	<i>Simple</i>	<i>Stating-principle</i>	<i>Activist</i>
<i>Mandated and Enforce</i> ⁵	"I obviously think that opinions of Students 1, 2, 3, and 4 are very valid. But I think Student 5’s opinion—that alcohol should be banned—is not valid at all."	"I obviously think that opinions of Students 1, 2, 3, and 4 are very valid. But I think Student 5’s opinion—that alcohol should be banned—is not valid at all. Student 5 does not appreciate the importance of individual freedom. This is not a value on which we can compromise."	"I obviously think that opinions of Students 1, 2, 3, and 4 are very valid. But I think Student 5’s opinion—that alcohol should be banned—is not valid at all. Student 5 does not appreciate the importance of individual freedom. This is not a value on which we can compromise. Actually, I really want to make sure that the college doesn’t ban alcohol! Let’s get together in my dorm room after the session to talk about how to stop the college from banning alcohol."
<i>Mandated and Not Enforce</i>	"I think that the opinions of Students 1, 2, 3, 4, and 5 are all equally valid."	"I obviously think that the opinions of Students 1, 2, 3, and 4 are quite valid. While I ultimately disagree with him, I also think that Student 5’s opinions are quite valid too. Don’t get me wrong—I think that we need to make sure that we uphold the principle of individual freedom. But let’s also make sure	"I obviously think that the opinions of Students 1, 2, 3, and 4 are quite valid. I also think that Student 5’s opinions are quite valid too. It is important to make sure that no underage students feel pressure to drink, and I agree it’s important to keep our mind and body healthy."

⁵ Since Student 6 in the *Mandated and Enforce* conditions was asked to comment on all the other students as well as Student 5, Student 6 in the *Mandated and Enforce* conditions expresses his agreement with Students 1, 2, 3, and 4 as well as disagreement with Student 5. It is unrealistic, however, to add this to Student 6’s wording in the *Entrepreneurial* conditions, since Student 6 has no reason to comment on those who agreed with Student 6 in the first place.

that we keep listening to people like Student 5."

Entrepreneurial

"I just want to say that I think Student 5's opinion—that alcohol should be banned—is not valid at all."

"I just want to say that I think Student 5's opinion—that alcohol should be banned—is not valid at all. Student 5 does not appreciate the importance of individual freedom. This is not a value on which we can compromise."

"I just want to say that I think Student 5's opinion—that alcohol should be banned—is not valid at all. Student 5 does not appreciate the importance of individual freedom. This is not a value on which we can compromise. Actually, I really want to make sure that the college doesn't ban alcohol! Let's get together in my dorm room after the session to talk about how to stop the college from banning alcohol."

Baseline

No one says anything after the administrator announces that there is someone who changed his opinion.

Online Supplement Table 2: Results of unbalanced ANOVA (Type II) assessing effect of *High-Accusability/Mandated and Enforce* (vs. *High-Accusability/Mandated and Not Enforce*) and different wordings in Study 1

Variable	F	Df
<i>High-Accusability/Mandated and Enforce</i>	35.33***	1
Wording: <i>Simple</i>	0.54	1
Wording: <i>Stating-Principle</i>	0.78	1
<i>Mandated and Enforce</i> × <i>Simple</i>	6.13*	1
<i>Mandated and Enforce</i> × <i>Stating-Principle</i>	3.06	1
Residuals		301

Note: Analysis for 2 *Mandated* conditions (*High-Accusability/Mandated and Enforce* and *High-Accusability/Mandated and Not Enforce*) × 3 wording subconditions (*Simple*, *Stating-Principle*, and *Activist*). The baseline condition is the *High-Accusability/Mandated and Not Enforce – Activist* subcondition. The F-value for the *High-Accusability/Mandated and Enforce* variable represents the main effect of (i.e., variance explained by) enforcement (prompted by the mandate). The F-value for wording subcondition represents the added variance explained by each wording subcondition of *High-Accusability/Mandated and Not Enforce* (i.e., how different is each *High-Accusability/Mandated and Not Enforce* wording subcondition from the baseline condition). The F-value for interaction terms represents the added variance explained by each comparison of wording subconditions (i.e., how different is the main effect for the comparison between the two wording subconditions of *High-Accusability/Mandated and Enforce* and *High-Accusability/Mandated and Not Enforce*).

* $p < 0.05$ (all tests are two-tailed)

** $p < 0.01$

*** $p < 0.001$

Online Supplement Table 3: Results of unbalanced ANOVA (Type II) assessing effect of *High-Accusability/Entrepreneurial* (vs. *High-Accusability/Baseline*) and different wording subconditions in Study 1

Variable	F	Df
<i>High-Accusability/Entrepreneurial</i>	4.29*	1
<i>Entrepreneurial</i> × Wording: <i>Simple</i>	0.06	1
<i>Entrepreneurial</i> × Wording: <i>Principle</i>	0.39	1
Residuals		183

Note: The baseline condition is the *High-Accusability/Baseline* condition. Because the *High-Accusability/Baseline* condition does not vary in wording, there are no subconditions corresponding to any subconditions in the *High-Accusability/Baseline* condition. Since the *Activist* wording is the most plausible, the baseline wording condition is the *High-Accusability/Entrepreneurial – Activist* subcondition. The F-value for the *High-Accusability/Entrepreneurial* variable represents the main effect of (i.e., variance explained by) entrepreneurial enforcement in the *Activist* subcondition. The F-value for the other two variables (i.e., interaction terms) is for the added variance explained by each wording subcondition.

* $p < 0.05$ (all tests are two-tailed)

** $p < 0.01$

*** $p < 0.001$

Online Supplement Table 4: Results of unbalanced ANOVA (Type II) assessing effect of *High Accusability* (i.e., Study 1) vs. *Low Accusability* (i.e., Study 2) and different wording subconditions within *Entrepreneurial* conditions

Variable	F	Df
<i>High Accusability</i> (Study 1)	13.49***	1
Wording: <i>Simple</i>	2.63	1
Wording: <i>Stating-Principle</i>	0.00	1
<i>High Accusability</i> × <i>Simple</i>	3.34	1
<i>High Accusability</i> × <i>Stating-Principle</i>	0.57	1
Residuals		302

Note: Analysis for 2 *Entrepreneurial* conditions (one from Study 1 [*High-Accusability*] and one from Study 2 [*Low-Accusability*]) × 3 wording subconditions (*Simple*, *Stating-Principle*, and *Activist*). The baseline condition is the *Low-Accusability/Entrepreneurial – Activist* subcondition from Study 2. The F-value for the '*High Accusability*' variable represents the main effect of (i.e., variance explained by) increased accusability in Study 1. The F-value for wording subconditions represents the added variance explained by each wording subcondition of *Low-Accusability/Entrepreneurial* in Study 2. The F-value for interaction terms represents the added variance explained by each wording subcondition of *High-Accusability/Entrepreneurial* in Study 1.

*p<0.05 (all tests are two-tailed)

**p<0.01

***p<0.001

Online Supplement Table 5: Results of unbalanced ANOVA (Type II) assessing effect of *Low-Accusability/Entrepreneurial* (vs. *Baseline*) and different wording subconditions in Study 2

Variable	F	Df
<i>Low-Accusability/Entrepreneurial</i>	6.61*	1
<i>Entrepreneurial</i> × Wording: <i>Simple</i>	6.79**	1
<i>Entrepreneurial</i> × Wording: <i>Stating-Principle</i>	0.25	1
Residuals		222

Note: The baseline condition is the *Low-Accusability/Baseline* condition. Because the *Low-Accusability/Baseline* condition does not vary in wording, there are no subconditions corresponding to any subconditions in the *Low-Accusability/Baseline* condition. Since the *Activist* wording is the most plausible, the baseline condition is the *Low-Accusability/Entrepreneurial – Activist* subcondition. The F-value for the *Low-Accusability/Entrepreneurial* variable represents the main effect of (i.e., variance explained by) entrepreneurial enforcement. The F-value for the other two variables (i.e., interaction terms) is for the added variance explained by each wording subcondition.

* $p < 0.05$ (all tests are two-tailed)

** $p < 0.01$

*** $p < 0.001$

Online Supplement Table 6: Results of unbalanced ANOVA (Type II) assessing effect of *Low-Accusability/Mandated and Enforce* (vs. *Low-Accusability/Mandated and Not Enforce*) and different wording subconditions in Study 2

Variable	F	Df
<i>Mandated and Enforce</i>	36.33***	1
Wording: <i>Simple</i>	0.31	1
Wording: <i>Stating-Principle</i>	1.57	1
<i>Mandated and Enforce</i> × <i>Simple</i>	2.53	1
<i>Mandated and Enforce</i> × <i>Stating-Principle</i>	3.92*	1
Residuals		342

Note: Analysis for 2 *Mandated* conditions (*Mandated and Enforce* and *Mandated and Not Enforce*) × 3 wording subconditions (*Simple*, *Stating-Principle*, and *Activist*). The baseline condition is the *Mandated and Not Enforce – Activist* subcondition. The F-value for the *Mandated and Enforce* variable represents the main effect of (i.e., variance explained by) enforcement (prompted by the mandate). The F-value for wording subconditions represents the added variance explained by each wording subcondition of *Mandated and Not Enforce* (i.e., how different is each *Mandated and Not Enforce* wording subcondition from the baseline condition). The F-value for interaction terms represents the added variance explained by each comparison of wording subconditions (i.e., how different is the main effect for the comparison between the two wording subconditions of *Mandated and Enforce* and *Mandated and Not Enforce*).

+p<0.1 (all tests are two-tailed)

*p<0.05

**p<0.01

***p<0.001

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