

# The False Enforcement of Unpopular Norms<sup>1</sup>

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Prevailing theory assumes that people enforce norms in order to pressure others to act in ways that they approve. Yet there are numerous examples of “unpopular norms” in which people compel each other to do things that they privately disapprove. While peer sanctioning suggests a ready explanation for why people conform to unpopular norms, it is harder to understand why they would *enforce* a norm they privately oppose. The authors argue that people enforce unpopular norms to show that they have complied out of genuine conviction and not because of social pressure. They use laboratory experiments to demonstrate this “false enforcement” in the context of a wine tasting and an academic text evaluation. Both studies find that participants who conformed to a norm due to social pressure then falsely enforced the norm by publicly criticizing a lone deviant. A third study shows that enforcement of a norm effectively signals the enforcer’s genuine support for the norm. These results demonstrate the potential for a vicious cycle in which perceived pressures to conform to and falsely enforce an unpopular norm reinforce one another.

## INTRODUCTION

In November 1978, the Reverend Jim Jones and over 900 of his followers living in a remote camp in Guyana committed mass suicide by drinking cyanide-laced Flavor Aid. On the brink of the “Jonestown Massacre,”

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Christine Miller, a lone dissenter, challenged Jones in front of the congregation about the merits of “revolutionary suicide” (Maaga 1998). A chorus of voices criticized Miller for her dissent from the group’s normative judgment, insisting that she follow the decision of mass suicide. Miller lost her appeals, and almost everyone gathered would die within the hour. One report said that many of the prior opponents of the mass suicide were the first to line up to be poisoned. Miller herself relented and also ended her life.

The Jonestown Massacre has become the textbook example of mass persuasion, of how groups can be convinced of even the most extreme beliefs by a single charismatic leader (Cialdini 1988). However, Jones’s repeated use of “white nights” suggests an alternative explanation that does not require the assumption that his followers acted out of an ideological commitment to revolutionary suicide. White nights were mock suicide drills in which cult members did not know until after drinking the Flavor Aid that it had not been poisoned. Repeated drills may have led members to perceive drinking the Flavor Aid (and risking suicide) to be less costly than protesting and risking exposure as a deviant. Moreover, the hostile reaction to Miller’s dissent raises an equally provocative possibility—that skeptics might not only drink the poison but pressure others to do so as well. Why did Jones’s followers not only comply with the norm to drink the Flavor Aid but also enforce it? Is it possible that they did so not out of conviction but instead to cover up their own private doubts and fears? Were those who spoke up to criticize Miller true believers, or were they looking for a way to prove their sincerity?

We will never know the answers to these questions about Jonestown, and many of the details remain hotly debated (Harray 1992). However, there are many other empirical cases in which people feel pressured to publicly support behaviors or beliefs that they privately question, including prohibition of intercaste marriage (Kuran 1995), infibulation (Mackie 1996), honor killings (Vandello and Cohen 2003), adoration of incomprehensible scholars (Willer 2004), and self-destructive adolescent behaviors (Prentice and Miller 1993). Our investigation is not focused on why people conform to “unpopular norms” (Bicchieri and Fukui 1999) in the face of social pressure; rather, we want to know where the pressure comes from in the first place. Is it imagined? Does it reflect the conviction of true believers? Or is it possible that, as we suspect was the case in Jonestown, groups can become trapped in a self-enforcing equilibrium in which they pressure one another in order to cover up their own private doubts? If this “false enforcement” appears genuine to group members, it may appear so to researchers as well, leading to widespread underestimation of the number of unpopular norms.

Given the difficulty in natural settings of discerning genuine conviction

from effective social posturing, we turn to controlled laboratory methods to carefully demonstrate false enforcement. We also investigate the effects of enforcement on perceptions of underlying conviction. Altogether, the results provide compelling support for the existence of false enforcement and its effectiveness in disguising private dissent.

### The Normative Conception of Norms

Why do norms exist and why are they enforced? Despite deep differences in their theoretical approaches, functionalist, conflict, and utilitarian theories of social control converge around the prevailing idea that norms arise because they are useful, either to society at large (in functionalist accounts), to dominant groups (in conflict approaches), or to those who enforce them (in utilitarian arguments). Parsons (1971, pp. 4–8) argues that norms “function primarily to integrate social systems,” a view echoed by Arrow (1971, p. 22), who describes “norms of social behavior” as “reactions of society to compensate for market failures.” Conflict theorists narrow the functionalist explanation by pointing to the role of norms in protecting the interests of dominant groups. In “The German Ideology,” Marx and Engels ([1845] 1986, p. 13) refer to norms as “ruling ideas” that “are nothing more than the ideal expression of the dominant material relationships, the dominant material relationships grasped as ideas; hence of the relationships which make the one class the ruling one, therefore, the ideas of their dominance.” The utilitarian conception is summarized by Hechter and Opp (2001, p. xvi): “The view that norms are created to prevent negative externalities, or to promote positive ones, is virtually canonical in the rational choice literature” (see also Bowles and Gintis 2001, p. 6).<sup>2</sup>

The utilitarian conception of norms is also canonical in research on social dilemmas—situations in which choices that are individually rational can lead to collectively irrational outcomes. Laboratory experiments have shown that norms obligating mutual cooperation in social dilemmas can emerge spontaneously in groups that would otherwise remain trapped in a deficient equilibrium (Yamagishi 1986; Fehr and Fischbacher 2004). These studies suggest that norms provide solutions to collective action and coordination problems in social dilemmas (Horne 2001*a*).

Increasingly, social psychologists, economists, and sociologists are ques-

<sup>2</sup> The utilitarian view does not require that norms be objectively useful so long as they are subjectively desirable, given some distribution of preferences. For example, working from a rational choice perspective, Horne (2001*a*, p. 5) defines norms as “rules, about which there is at least some degree of consensus, that are enforced through social sanctions.”

tioning the canonical account and proposing an alternative possibility, one that invites us to revisit our sociological intuitions about informal social control. Norms do not necessarily solve social dilemmas or correct market failures; they can also undermine social welfare. Unpopular norms can emerge through a cascade of self-reinforcing social pressure that increases with the level of conformity (Centola, Willer, and Macy 2005). Like a witch hunt, the process can quickly spiral up into a powerful and dangerous dynamic.

The problem is highlighted in the Hans Christian Andersen ([1837] 1998) fable “The Emperor’s New Clothes,” which tells the tale of a naked emperor whose nonexistent clothes are widely admired by those fearful of being regarded as “unfit for office.” Finally, an innocent child laughs at the naked emperor, triggering a cascade of derision that breaks the spell. The “emperor’s dilemma” (Centola et al. 2005) formalizes the decision of whether to join a group consensus that violates private beliefs. Every player has the same four choices—whether or not to conform to an unpopular norm and whether or not to enforce it. The game qualifies as a social dilemma under the assumption that the payoffs to each player favor conforming and enforcing if all others do the same, yet each player would prefer that everyone deviate and tolerate deviance. However, the game is the opposite of most other social dilemmas, describing situations in which norms of cooperation are not useful for the group, but are instead harmful.

Below we present two prominent explanations of how a population can become trapped in an unpopular norm: herd behavior and pluralistic ignorance. We then consider an alternative explanation based on false enforcement that better explains the remarkable stability of some unpopular norms. Finally, we report results of three controlled experiments designed to investigate the existence and dynamics of false enforcement.

#### EXPLAINING UNPOPULAR NORMS

Explanations of unpopular norms can be classified into three types, based on three different causal mechanisms—*herd behavior* (primarily studied by economists), *pluralistic ignorance* (primarily studied by psychologists), and *false enforcement* (proposed by Centola et al. [2005]). Herd behavior (Banerjee 1992) and information cascades (Bikhchandani, Hirshleifer, and Welch 1992, 1998; Hirshleifer 1995) are responses to widespread uncertainty that leads people to follow the decisions of others who are assumed to have more accurate or reliable information, when in fact the others are also responding to uncertainty by following the herd. The belief that “this many people can’t be wrong” can generate a “Matthew effect” (Mer-

ton 1968), as when people become more likely to download an unfamiliar song the more they see that others download it (Hanson and Putler 1996; Salganik, Dodds, and Watts 2006; Salganik and Watts 2008). Accounts based on herd behavior have also been used to explain instabilities in financial markets, such as bubbles and crashes (Lee 1998), bank runs (Chen 1999), and faddish investments (Graham 1999; Schiller 2000).

Herd behavior is highly dependent on the behavior of early movers who exert a disproportionate influence on the future direction of the collective (Arthur 1990). As a consequence, the behavior of the group tends to reflect the preferences of a small minority of the population. Thus, by “following the crowd,” people are led to decisions that are sometimes inconsistent with or even contrary to what they privately believe.

Pluralistic ignorance describes the “belief that one’s private attitudes and judgments are different from those of others, even though one’s public behavior is identical” and is common in situations where public behavior is widely misrepresented (Miller and McFarland 1991, p. 287). Like herd behavior, pluralistic ignorance (Katz and Allport 1931; O’Gorman 1986; Miller and McFarland 1991) is based on a false belief that becomes self-reinforcing. The difference between the two phenomena centers on Deutsch and Gerard’s (1955) distinction between “normative” and “informational” social influence. Informational influence rests on the need for accuracy, while normative influence reflects the need for social approval. In cases of herd behavior, people address their uncertainty by copying the behavior of others who are assumed (incorrectly) to have better information. In cases of pluralistic ignorance, people suppress their dissent and copy the behavior of others who are assumed (again incorrectly) to represent the popular majority. It is, in Krech and Crutchfield’s (1948, pp. 388–89) words, the situation where “no one believes, but everyone thinks that everyone believes.” Andersen’s fable is a classic illustration: privately everyone knows the emperor is naked, but publicly everyone goes along with the charade, based on the false belief that others are sincere in their public expressions of fawning adoration.

The appeal of Andersen’s fable reflects the ubiquity of “naked emperors.” For example, studies show that college students believe they are expected to celebrate intoxication and participate in binge-drinking rituals as a test of group loyalty (Baer 1994; Nagoshi et al. 1994; Perkins and Wechsler 1996; for a review, see Borsari and Carey [2001]). Yet Prentice and Miller (1993) found that most students were privately less comfortable with excessive drinking than they believed others to be. The widespread misperception that others do not share these feelings in turn leads to a “spiral of silence” (Noelle-Neumann 1984) that confirms the belief.

Explanations based on herd behavior and pluralistic ignorance posit self-reinforcing beliefs that are quite fragile, as in the Andersen fable. In

both theories, the unpopular norm is likely to crumble if more accurate information on the underlying consensus comes to light. The norm is a house of cards that can quickly collapse if people discover that the belief that motivated their conformity was false—for instance, that the child who laughs at the emperor is admired and not ridiculed.

This fragility may not exist, however, if the norm is enforced. The threat of informal sanctions by peers can allow unpopular norms to become surprisingly stable, as the following everyday examples suggest:

*Homophobia*: men deriding homosexuals in an attempt to affirm their gender identity in the face of masculine insecurity (Willer 2005)

*Snobbery*: gossiping about a faux pas or ridiculing those who fail to appreciate esoteric artwork among intellectual and cultural snobs anxious to affirm their superior intelligence, breeding, and aesthetic taste

*Adolescent rebellion*: students chiding one another for buying into educational achievement instead of engaging in self-destructive behaviors (e.g., shoplifting, reckless driving, binge drinking; Prentice and Miller 1993)

*Witch trials*: affirming the credibility of one's confession by revealing the names of other religious or political heretics, thereby perpetuating the anxiety that fuels the accusations

*Unintelligible scholarship*: joining the chorus of praise for an obtuse scholar to address one's own insecurity fostered by not understanding an unintelligible text that others appear to admire (Sokal and Bricmont 1998; Willer 2004)

*Flag waving*: congressional Democrats voting for the war in Iraq, despite deep private misgivings, to avoid appearing unpatriotic and to prove their "fortitude," thereby increasing the vulnerability of any colleagues tempted to dissent

These examples of naked emperors are highly stable because they rest on false beliefs supported by very real willingness to enforce compliance. What is most puzzling, however, is the possibility that that these norms are publicly enforced by people who privately question them. We know why people enforce norms they agree with—to get people to behave the way they want them to. But why would people publicly enforce a norm that they secretly wish would go away?

## THE ILLUSION OF SINCERITY

Naturally, the best proof of the sincerity of your confession was  
your naming others whom you had seen in the Devil's company.  
(Miller 1996)

Centola et al. (2005) propose a simple explanation: enforcement is an effective way for those who conform to demonstrate their sincerity—that is, to show that they did not conform simply to secure social approval. This is because, to true believers in the group, mere conformity is insufficient. Those who conform may only be posturing for group approval and can only be trusted to do so as long as behavior is monitored (Hechter 1987). The demand for sincerity was fundamental to the anticommunist “red scare” of the 1950s. Loyalty oaths for government employees would often require that the oath taker be sincere. For example, University of California employees are still required to sign a form certifying not only that they will “support and defend the Constitution of the United States . . . against all enemies,” but also that they “take this obligation freely, without any mental reservation,” and not simply because it is a precondition for employment.<sup>3</sup> The Catholic Church used similar wording during the Spanish Inquisition. Canon law required that confessions given following torture be sincere, denoted by the phrase *confessionem esse veram, non factam vi tormentorum* (i.e., “the confession was true and free” [Blötzer 1910]).

The problem for University of California job applicants, heretics seeking to avoid torture, or, more commonly, adolescents afraid of being exposed as “posers,” is that sincerity is difficult to signal. Even sincere conformists might worry that others may suspect they did not “take this obligation freely.” Research on the “illusion of transparency” underscores the everyday anxieties motivating individuals to create an impression of sincere conformity (Gilovich, Savitsky, and Medvec 1998). The illusion of transparency refers to the tendency of individuals to overestimate others' abilities to view their internal states. Of particular significance, this research demonstrates that liars overestimate how detectable their lies are to others. This research implies that individuals who conform out of a desire for social approval rather than genuine conviction will worry that others may detect their insincerity.

One way out of this predicament is to demonstrate sincerity by behaving the way true believers do, and sanctioning deviants in the group who voice dissent from the norm. Centola et al. (2005) call this signaling be-

<sup>3</sup> University of California State Oath of Allegiance, obtained from the University of California Office of the President, July 1, 2009.

havior the “illusion of sincerity,” which they illustrate with two examples, college drinking and scholarly posturing.

*College drinking.*—Insecure students who worry about social acceptance may seek peer approval by drinking heavily and celebrating intoxication. However, they must be careful not to appear to be motivated by this goal or they risk being scorned as posers. Thus, it is not enough to drink and party—one must also target social approval toward those who drink and disapproval toward those who do not, which in turn adds to the peer pressure that leads others seeking social acceptance to join in.

*Scholarly posturing.*—Clance’s (1985) “imposter phenomenon” refers to anxiety among many academics (and other professionals) about being seen as an “intellectual fraud.” Those who affirm their erudition by pretending to appreciate some highly opaque scholar (Gross and Levitt 1994; Sokal and Bricmont 1998) worry that others will see through the bluster. A common solution is to disparage as intellectually shallow those unable to appreciate real genius. This in turn adds yet another voice to the chorus of intimidation that produces the insecurity motivating the behavior in the first place.

In both these examples, the norm becomes self-enforcing. Most norms are self-limiting, which means that the motivation to enforce decreases with the rate of conformity. That is because the motivation to enforce derives from what Heckathorn (1988) calls a “regulatory interest” in changing the behavior of others. If the marginal return on each additional act of enforcement diminishes with the rate of compliance, then the more people who comply, the lower the incentive to enforce.

Unpopular norms are unusual in that they are enforced by those with no true regulatory interest, which is why some functionalists and utilitarians may have difficulty believing such norms can exist. Axelrod (1986) proposed “metanorms” as an explanation for norm enforcement when regulatory interests are weak—that is, when the cost of administering sanctions exceeds the benefit of sanctioning, creating “second-order” free riding (Oliver 1980). A metanorm is a norm that obligates enforcement of another norm. A familiar example is the metanorm against tolerance of racial prejudice, or honor systems that obligate group members to report violations. Recent laboratory studies have found compelling evidence for metanorms under controlled conditions.<sup>4</sup>

<sup>4</sup> For example, in a series of experiments with public-goods games, Yamagishi (1986, 1988a, 1988b) demonstrates that sanctioning systems are established in direct response to the likelihood of free riding. Horne (2001b, 2004, 2009) shows that regulatory interests can motivate both sanctioning and sanctioning of sanctioning. Fehr and colleagues (Fehr and Gächter 2000, 2002; Fehr and Fischbacher 2004) go further, suggesting that metanorms are also rooted in strong emotional reactions that drive cooperators as well as mere observers to punish noncooperators, even at a net cost and without the promise



People may also enforce norms they secretly oppose in order to create an illusion of sincerity around their support for the norm. Just as conformity may be regarded as insincere, so too may enforcement be seen as insincere or externally motivated if there is an explicit obligation or pressure to enforce, as in an honor system. However, in the absence of such obligations, “voluntary” enforcement (as is expected from true believers) may provide an effective signal that one’s behavior is motivated by genuine conviction.

Centola et al. (2005) used agent-based modeling to examine the population-level implications of false enforcement as a signal of sincerity. In their model, a very small fraction of true believers can spark a cascade of conformity and false enforcement that quickly engulfs a vulnerable population—not because people are converted to new beliefs, but just the opposite: because of the need to affirm sincerity, a need felt by those who know that their conformity is a lie.

#### EMPIRICAL OVERVIEW

While computational experiments have demonstrated how the desire to create an illusion of sincerity can generate cascades of false enforcement of unpopular norms, the behavioral assumptions of the model have not been tested under controlled conditions. The experimental studies that follow extend this work by testing two key behavioral assumptions—that conformity to an unpopular norm can lead in turn to false enforcement, even without an explicit metanorm (studies 1 and 2), and that false enforcement can effectively signal that one is a true believer in the norm (study 3). More specifically, in study 1 we demonstrate false enforcement in a wine-tasting setting in which participants must decide whether to agree with a consensus evaluation that they have reason to doubt, after which they must judge the performance of their fellow participants. Study 2 establishes the robustness of false enforcement in evaluations of an academic text, under conditions that differ in several ways from study 1. Finally, study 3 investigates whether enforcers of norms are seen as true believers who conform because of underlying conviction and not simply to gain approval. Taken together, the studies illuminate the potential for a vicious circle of false admiration for naked emperors and false derision of those who cannot see the clothes.

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of long-term gain. Similarly, Ostrom, Walker, and Gardner (1992) note that, in the absence of in-group communication, participants in public-goods games can overuse sanctions. Shinada, Yamagishi, and Ohmura (2004) extend the idea of “altruistic punishment” to an evolutionary theory of group cohesion, showing that noncooperation by in-group members is more likely than noncooperation by out-group members to trigger costly sanctions.

STUDY 1: FROM CONFORMITY TO FALSE ENFORCEMENT

Fanaticism is overcompensation for doubt. (Davies 1972)

Study 1 tests the claim that a group consensus can lead participants not only to conform to a norm they privately do not support, but also to enforce compliance by others. To do this we use a variant of the classic Asch (1951) conformity experiment. In Asch's study, participants were asked to identify which of three lines was the same length as a focal line. One of the three lines was identical to the focal line and the other two were obviously shorter or longer. On several "critical trials" participants were asked to respond after confederates had all given an identical but blatantly incorrect judgment. Thirty-two percent of participants' answers on critical trials were incorrect, and 74% of participants gave at least one incorrect answer. When participants were asked to compare the lines in isolation, the error rate did not depart significantly from zero, indicating that incorrect answers were a consequence of group influence.

Study 1 goes beyond the Asch experiment to test not only conformity to but also enforcement of normative judgments that are privately questioned. In a new experimental setting, participants were asked to taste and evaluate three wines and then evaluate the performance of five fellow wine tasters via a computerized interface. Although participants were told that they were tasting three different wines, all three samples were actually from the same bottle. The only difference among the three samples was that one was secretly tainted with vinegar. In part 1 of the experiment, participants rated the wines after reading the erroneous responses of four computer-simulated confederates, who all rated one of the two identical wines as greatly inferior to the other and even worse than the wine tainted with vinegar, and before reading the correct response of a simulated deviant. This setting allowed us to establish a normative rating of the wines and then study participants' enforcement behavior toward the lone deviant from the norm. After tasting and rating the wines, participants were then asked to judge the wine-rating abilities of all the group members, including the simulated deviant. All wine ratings were public, but judgments of other participants were public for half the participants and private for the other half. Participants were randomly assigned to one condition or the other.

We define false enforcement as the public enforcement of a norm that is not privately endorsed. We have argued that false enforcement can occur when individuals have conformed to the norm due to social pressure and are motivated to demonstrate the sincerity of that conformity. Thus, not all participants in the experiment were expected to falsely enforce—

only those who conformed to the norm by agreeing with the judgment of their peers.

Study 1 was designed to identify false enforcement by comparing participants' peer judgments in the public and private conditions. In behavioral research, directly asking participants to reveal their beliefs creates a perception of pressure from the researcher to behave consistently with those reported beliefs (e.g., Tedeschi, Schlenker, and Bonoma 1971; Gaes, Kalle, and Tedeschi 1978). We therefore avoided a direct measure of private beliefs.<sup>5</sup> Instead, we had some participants express their peer judgments anonymously, where these judgments should reflect their private beliefs about their peers, while others expressed their judgments in public, where judgment could be influenced by perceived social pressure to demonstrate the sincerity of conformity.

When enforcement is anonymous, we predict that peer judgments will reflect participants' private beliefs about the wines—either agreement or disagreement with their peers' wine ratings. Other factors might also influence peer judgments, such as admiration for the courage to challenge the group consensus, as suggested by research on minority influence (Moscovici and Nemeth 1974) or the need for cognitive consistency (Festinger 1954) between public wine ratings and private peer ratings. However, these effects should be constant across all conditions and therefore should not affect the public-private comparison.

Further, we expect the peer judgments of those who did not conform to reflect agreement with the lone deviant and disagreement with the conformist wine tasters, in both the public and private sanctioning conditions. Having publicly disagreed with the normative consensus, participants who did not conform need not prove that their evaluations of the wines were genuine.

Among participants who conformed to the norm, however, we predict a difference between public and private peer judgments. When given anonymously, their peer judgments can be expected to reflect their private disagreement with the conformists about the quality of the wines. When given publicly, their peer judgments provide an opportunity to show the other group members that their wine ratings reflected genuine conviction and not simply "going along" to avoid a negative social judgment from their peers. Hence, those participants who conformed to a norm they privately did not agree with are predicted to favor the conformists over the deviant in public, but not in private. If we find that conformists favor the deviant in private but not in public, while nonconformists favor the

<sup>5</sup> Future research could try different methodological strategies for assessing private beliefs, perhaps using nonobtrusive measures like the "bogus pipeline" (Jones and Sigall 1971; but see Aguinis and Handelsman 2006).

deviant in both private and public, it will provide important support for the theory of false enforcement.

We tested our prediction using a repeated-measures analysis of variance (ANOVA) of participants' peer judgments, using three predictors: how much the participant conformed, whether the peer being judged conformed or not, and whether peer judgments were given in public or in private. We predict a three-way interaction in which participants' conformity will tend to lead to more favorable judgments of conformist peers (relative to the deviant peer), but only when the judgments are given in public. If this interaction term is not significant, the false enforcement hypothesis must be rejected.

### Method

Fifty-two undergraduate students (34 women, 18 men) at a large private university participated in the study in return for \$8 or extra credit in a sociology class.<sup>6</sup> Participants were recruited either by fliers advertising payment for participation in a study or via an announcement in their class. Participants were directed to an Internet-based sign-up page where they were first asked to take a brief "art appreciation test" in which they indicated which of several pairs of abstract paintings had been judged by experts as the "100 best paintings of the 20th century." Regardless of participants' responses, all were told that their score qualified them for participation in a "high art appreciation group." The test was in fact bogus and designed to heighten anxiety about social judgments based on sophisticated cultural tastes.

Participants arrived at the lab and took the study in groups of six.<sup>7</sup> A research assistant seated each participant at a separate computer terminal in a computer classroom with cardboard dividers arranged to prevent eye contact between participants. Though participants believed that they were interacting with the other five participants in the room, all in fact interacted with the same computer-simulated confederates for the duration of the study. Participants were told they would receive all instructions on their computer terminals. Once everyone was seated the study session began. Instructions displayed on their terminals indicated that they were to participate in an "aesthetic discrimination and appreciation study"

<sup>6</sup> One participant's data were lost due to a computer crash. Neither gender nor age ( $M = 20.1$  years) of participants significantly interacted with any of the results presented, and so they are not discussed further.

<sup>7</sup> Two study sessions included only five participants due to no-shows. In both cases the sixth position was filled by an undergraduate research assistant posing as a participant.

funded by the National Endowment for the Arts. They were told that the study concerned the relationship between aesthetic tastes in different domains (e.g., the ability to appreciate fine art and wine) and that in the present study the researchers were particularly interested in their opinions of several nonalcoholic wines.<sup>8</sup>

Next to their computer screens, participants found a set of three cups of nonalcoholic wine marked A, B, and C. Their task was to rate these three wines. To enhance concerns about others' social judgments of their performance, participants were told (1) that all group members would participate in a face-to-face group discussion after the computerized component of the study, and (2) that their scores in the study would be evaluated according to the "Beckman aesthetic discrimination scale," and score reports on all study participants would be mailed to any participants interested in receiving one. In fact, there is no such thing as a Beckman scale, and there was no poststudy discussion or score report.

Participants were further instructed that all six people in their session would partake in a group wine-tasting procedure known as the "Dutch round" that had been adapted for a computer-mediated environment. Participants were told that the Dutch round was a centuries-old tradition among Dutch wine enthusiasts in which people stood in a circle and took turns giving their opinions of different wines, followed by a second round in which they evaluated one another's wine-tasting ability, again in turn. In fact, no such Dutch tradition exists, and the details of the Dutch round were invented to create the conditions necessary for our experiment.

Participants were then given an opportunity to introduce themselves to one another by answering questions on the computer about their gender, year in school, college affiliation, what musical instrument they played (if any), what foreign language they spoke (if any), and whether they had taken a popular wine class offered at the university where the study was conducted. Following the introductions, participants were told that they had been randomly assigned the ID number 5, which meant that their personal information was displayed fifth out of the six participants. Six responses were displayed on each participant's screen, ostensibly in the order to which the six people in the study session had been assigned, but in fact five of the six responses, other than the participant's, were simulated. The other five "participants" were all introduced as upperclassmen with proficiency with a musical instrument and a foreign language. Ad-

<sup>8</sup> University and state regulations prohibited the use of alcoholic wines with undergraduate participants. We tested a large number of nonalcoholic wines before finding one that unambiguously tasted better without the added vinegar. It is possible that nonalcoholic wine invites less snobbish behavior than would a "real" wine and therefore provides a more conservative test of the hypothesis, since snobbery can be expected to induce increased anxiety about negative social judgments.

ditionally, three of the five simulated confederates were identified as having taken the wine class, excepting one of the first four confederates and the confederate in the sixth position, who would become the lone deviant.<sup>9</sup> This information was provided to heighten the participants' concerns about social judgments by others with apparently superior cultural credentials. The mention of the wine class was used to add credibility to the group consensus.

At this point in the program, participants were told that all group members would taste three different wines in the first part of the study and then submit ratings of them in order of their previously assigned ID numbers. Each of the three samples contained two ounces of nonalcoholic wine. Instructions prompted participants to taste all three wines twice each, in accordance with the tradition of the Dutch round. Participants were then asked to rate the three wines on the following dimensions: bouquet, flavor, aftertaste, robustness, and overall quality. The rating system was the familiar five-point A–F grading scale used in the classroom.

All participants were assigned to the fifth position in the Dutch round, which meant that they submitted their wine ratings after seeing four others' ratings and before the last person's ratings were displayed.<sup>10</sup> Table 1 shows the ratings given to each of the three wines by the four confederates and the simulated deviant, in the order that they took their turns. As summarized in the table, all four computer-simulated raters who gave their ratings before the real participant gave very high ratings to wine A and very low ratings to wine B, which was in fact identical to A. They gave somewhat higher ratings to wine C, which had been tainted with vinegar. The last confederate, whose turn came after the participant, broke ranks with the consensus and rated B the same as A.

In the Asch study, confederates occasionally gave correct answers to ensure credibility of the experimental design; we used wines A and C for the same purpose. All five confederates agreed on these two wines, including the lone deviant. However, they disagreed sharply about wine B, with the deviant challenging the consensus view that B was much worse than A. As in the Asch experiment, we tested the stimuli using a separate set of individuals, outside of the group setting. This test ( $N = 17$ ) confirmed that, in the absence of social pressure, ratings of the three wines

<sup>9</sup> As noted above, participants also indicated whether they had taken the wine class. Taking the class did not affect any of the results presented here.

<sup>10</sup> Asch (1951) found that at least three unanimous confederates were needed to induce participant conformity in his setting. Unlike Asch, we ran the experiment on computers, using simulated participants as confederates. We use the term "confederate" to distinguish the behaviors of these simulated people from those of the real participants.

TABLE 1  
 OVERALL RATINGS OF WINES SUBMITTED BY  
 SIMULATED CONFEDERATES IN STUDY 1

WINE	PARTICIPANT				
	1	2	3	4	6
A ....	A	A	B	A	A
B ....	D	C	D	D	A
C ....	C	C	C	C	C

were most similar to those given by the lone deviant in the group setting. Though there was no significant difference in ratings given to wines A and B ( $P > .65$ ), both were rated significantly higher than wine C ( $P < .001$ ).

Following part 1, participants proceeded to part 2 of the Dutch round, in which they were told that everyone would grade each other's wine-rating abilities on five-point scales ranging from A to F. The study featured a two-condition between-subject design. Half the participants were randomly assigned to the "private sanction" condition, in which they were told that their ratings of the other five wine tasters would be completely anonymous and private. The other half of participants were randomly assigned to the "public sanction" condition. These participants were told that ratings of all six wine tasters would be submitted publicly in random order. Each participant was then "randomly" chosen to go first in submitting his or her ratings of the others' wine-rating abilities. This was necessary to insure that enforcement behavior was not influenced by having observed enforcement behavior by the confederates and to allow the participant to use enforcement to gain approval from others.

After submitting their performance ratings, participants were shown the performance ratings that the other five wine tasters had ostensibly submitted. These were simulated to be consistent with their wine ratings in part 1, with four of the five confederates giving negative judgments of the lone dissenter. None of the confederates offered negative judgments of the participant.

#### Post-study Questionnaire and Debriefing

In both conditions, after submitting their ratings of the others, participants completed a post-study questionnaire. Participants were individually debriefed about the actual goals of the research. They were asked if they had heard about the experiment from former participants. A funnel debriefing procedure was used to assess participants' suspicion of deception

in the study.<sup>11</sup> The reasons for not revealing the true nature of the study from the start were carefully explained in detail. Participants were further assured that their data would be entirely anonymous and that they could request a copy of the research findings. Participants were asked not to discuss the details of the study with other students until the conclusion of the semester.

### Results

Over 50 years of research on conformity have demonstrated that members of a group can be influenced by other members to publicly misrepresent their private beliefs (Bond and Smith 1996). Although doing so was not our primary goal, we first tested this assumption since we needed participants to conform in order to see whether the same social pressures inducing conformity might also lead to false enforcement. All analyses of participants' wine ratings used their ratings in the overall category.<sup>12</sup>

The consensus among the four confederates who rated the wines prior to the participant created sufficient social pressure to generate conformity. Although wines A and B were identical, B was rated significantly worse than A ( $M = 3.96$  vs.  $M = 4.39$ ;  $t = 4.2$ ;  $P = .004$ ).<sup>13</sup> Though B's average rating was much higher than the consensus rating of wine C (2.25), this is because participants ranged from strongly conformist to strongly non-conformist. Twenty-seven participants (52.9%) rated B below the identical wine A. Of these, three participants (5.9%) also rated B even worse than the vinegar-tainted wine C. Of the other participants, 13 (25.5%) rated B and A equally, while 11 (21.6%) rated B higher than A.

Our main theoretical interest is not conformity but enforcement behavior. To test whether social pressure to conform can lead participants not only to join the group consensus but also to enforce a view that they privately question, we submitted participants' peer judgments of the other wine tasters to a repeated-measures ANOVA. The model included two between-subject variables: the experimental manipulation (public or private enforcement) and the participant's conformity. Conformity was measured by the rating assigned to wine B, for which the consensus was in

<sup>11</sup> The level of suspicion was not high and did not significantly affect the results presented below.

<sup>12</sup> We repeated all analyses that follow using composite measures of participants' ratings of each wine, averaged across each of the different rating categories (bouquet, robustness, etc.). All results were substantively identical.

<sup>13</sup> Participants rated the wines before knowing whether their evaluations of the other wine tasters would be public or private (which they were told just prior to giving those evaluations). Hence, rates of conformity should not have varied by condition, and they did not.



error. Since B was identical to wine A, we used A as the baseline and measured conformity as the rating of A minus the rating of B.<sup>14</sup> A third predictor was a within-subjects designation of the target being judged (conformist or deviant). Since each participant rated five targets, the repeated-measures data set consists of 255 observations. Our theory of false enforcement does not predict any main effects. Rather, we predict an interaction effect in which greater conformity leads participants to give lower ratings of the lone deviant relative to the conformist targets, but only when peer judgments are public.

The results of the ANOVA are summarized in table 2. As shown, we found two significant effects. The two-way interaction of deviant target and participant's conformity indicates that the more strongly participants conformed, the more they tended to favor conformist targets ( $F [3, 196] = 2.85; P < .04$ ). The three-way interaction of deviant target, participant's conformity, and public enforcement represents the additional effect of peer judgments' being submitted in public instead of in private ( $F [3, 196] = 3.16; P < .03$ ). This interaction effect indicates that the effect of participant's conformity on favoring conformist targets over the lone deviant was significantly stronger in the public condition.

These interaction effects are evident in figure 1, which reports enforcement behavior broken down by whether the peer judgment was given in public or in private, whether the target was conformist or deviant, and whether the participant had previously conformed. Although the ANOVA used a continuous measure of conformity, for purposes of illustration, we classify participants as having conformed if they agreed with the consensus that wine A was superior to wine B and as having not conformed otherwise.

Figure 1 shows that participants favored the conformist targets over the deviant only when the participants themselves had conformed and only when their peer judgments were given in public. In private, conformist participants favored the deviant, as did the nonconformist participants. These results provide clear support for the prediction that conformists would give less favorable peer judgments to deviants, compared to conformist targets, only when evaluations were made in public.

#### Discussion of Study 1

Past research has shown that social influence can cause people to agree with a group consensus that they privately know to be false (Asch 1951).

<sup>14</sup> Though participants' ratings of wine C may also have been influenced by the first four confederates' ratings, no confederates defected from this normative rating and thus it is not relevant to the possibility of subsequent false enforcement.

TABLE 2  
RESULTS OF REPEATED-MEASURES ANALYSIS OF VARIANCE IN STUDY 1

Variable	<i>F</i>	<i>df</i>
Between subjects:		
Public enforcement .....	7.44**	1
Participant's conformity .....	1.54	3
Public enforcement × participant's conformity .....	1.58	3
Within subjects:		
Deviant target .....	1.61	1
Deviant target × public enforcement .....	1.41	1
Deviant target × participant's conformity .....	2.85*	3
Deviant target × participant's conformity × public enforcement .....	3.16*	3
Residual .....		196

NOTE.—Experimental condition (public or private enforcement), participant's conformity (participant's wine A rating minus wine B rating), and target (deviant or conformist) are used to predict participants' peer judgments of the simulated confederates.

\*  $P < .05$  (all tests are two-tailed).

\*\*  $P < .01$ .

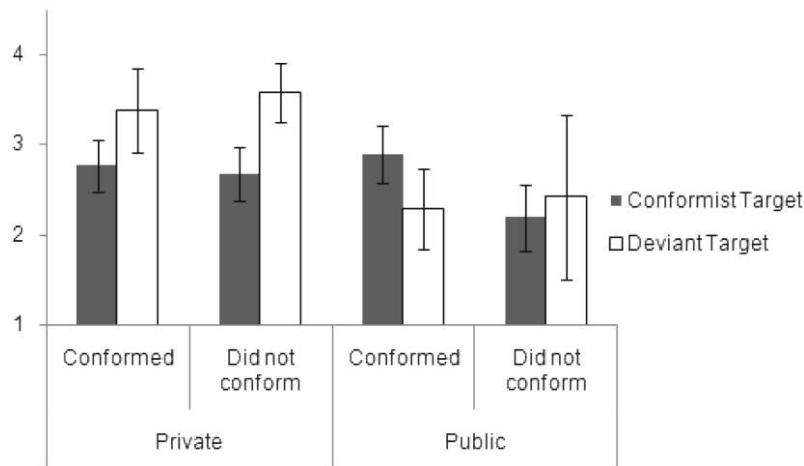


FIG. 1.—Peer judgments in study 1 by condition (public or private enforcement), target (conformist or deviant), and participant's conformity. Peer judgments have been converted to numbers (A = 4, B = 3, etc.). For participants, "conformed" denotes an evaluation of wine A > wine B; "did not conform" denotes a rating of wine A ≤ wine B. Error bars indicate 95% confidence intervals.

However, much less is known about how the pressure to agree is generated. We wanted to know if a group consensus could cause people not only to publicly express views they privately questioned, but also to pressure others to join in the charade.

If participants were like the characters in the Andersen fable, they would have praised the lone deviant, who played the role of the child whose laughter breaks the spell. Indeed, they might have penalized the four confederates. However, that is not what we observed. Consistent with our theory of false enforcement, we found that participants not only complied with the normative opinion to favor one wine over another when the two were actually identical, but also publicly sanctioned the lone deviant for dissenting from the norm. The ANOVA showed that conformity led participants to publicly favor conformist peers over the lone deviant. However, when enforcement was private, those who had conformed at higher levels approved of the deviant whose views corresponded to their private beliefs. These results support the hypothesis that social pressure to conform to a norm can lead those who conform to also sanction others for not conforming. The implication is that unpopular norms can become self-enforcing, even without formal institutional arrangements, such as an honor system with explicit metanorms mandating enforcement. This in turn allows cascades to trap a population into worshipping a naked emperor, without the possibility of a child breaking the spell.

One might wonder whether participants in the study who judged the conformist targets as more competent wine raters than the deviant target might have privately agreed with the conformist targets they praised; that is, perhaps these peer judgments were sincere and not the product of social pressure. Results, however, are inconsistent with that explanation. First, wines A and B were in fact identical, and pretesting of these stimuli confirmed that in the absence of social pressure, participants on average rated them as of about equal quality. Yet the consensus of the first four confederates was not just that the wines were unequal, it was that the two wines were at opposite ends of the scale, with wine B rated on average even lower than a wine tainted with vinegar. None of the pretesters came close to such a view. Thus, it is unlikely that participants who rated the four confederates as more competent wine tasters did so because they sincerely believed that wine A was vastly superior to wine B or that wine B tasted as bad as or worse than a wine tainted with vinegar. Second, we found that participants randomly assigned to give peer judgments in private tended to rate the deviant more positively than the conformist targets, indicating that, in the absence of social pressure, participants would not have agreed with or enforced the consensus view.

Still another possibility is that participants were highly uncertain re-

garding the stimulus, so much so that they were heavily influenced by the majority of wine tasters and came to accept the consensus wine rating. This explanation, however, also fails to account for the observed difference in public versus private peer judgments. If participants were in fact influenced by the majority view, their peer judgments should have reflected their revised beliefs both in public and in private.

Nonetheless, results of a pilot version of the experiment ( $N = 18$ ) suggest the possibility that uncertainty about the norm may be an important factor in false enforcement. In the pilot study, the tainted wine C was given high marks by the four confederates while the untainted wine B was given very low marks. However, the superior rating of C was so at odds with reality that participants rejected this norm, rating B significantly higher than C ( $M = 3.83$  vs.  $M = 2.78$ ;  $t = 2.19$ ;  $P < .05$ ). This pattern mirrors the assessments given by anonymous raters in stimulus testing. In other words, the consensus that C was a superior wine had no measurable effect on the participants. The explanation for this may be the absence of uncertainty in the pilot study. In stimulus testing, raters almost unanimously rated wines A and B above C, but results were far more mixed on the relative quality of B, which some rated higher than A and some lower. The greater uncertainty about the quality of B may have lowered participants' commitments to their private beliefs, freeing them up to yield to social pressure.

This explanation, however tentative, is consistent with similar findings on the effects of uncertainty in promoting conformity (Deutsch and Gerard 1955). Had the consequences of deviance been more severe, it is possible that conformity might have been higher in the pilot study, but with relatively weak social pressure, it appears that high levels of certainty that the norm was false prevented conformity and false enforcement. Some uncertainty about the norm may therefore be a necessary condition for false enforcement in the absence of more intense pressure to conform.

#### STUDY 2: ENFORCING APPROVAL OF UNINTELLIGIBLE TEXTS

Study 1 demonstrated that social pressure can induce false enforcement of group norms. Participants not only complied with a consensus evaluation to rate one wine far lower than another when the two were actually identical, but also publicly sanctioned a lone deviant in the group. Study 2 was designed to demonstrate the robustness of false enforcement under different conditions. In place of tasting wine, participants were asked to read an unintelligible academic text, ostensibly written by a respected academic. Using a similar cover story to that of study 1, four confederates in succession gave positive evaluations of the text prior to the participant's

turn. After the participant evaluated the text, a lone dissenter from the norm submitted a very negative evaluation of the text. In a second stage of the study, participants submitted judgments of the other group members. Depending on the experimental condition, this peer judgment was given either in public or in private. As in study 1, we predict that participants who conform to the normative evaluation of the text will also enforce it, but only in the public condition.

This setting differed from that of study 1 in several ways. First, in study 1, participants were asked to rate three wines, and they were pressured to indicate that one of two identical wines was worse than a third wine that was tainted with vinegar. In study 2 participants were pressured to say that a nonsensical text had high intellectual merit, an evaluation that is absolute rather than comparative. Second, in study 1, evaluations were largely aesthetic, while in study 2 participants were asked to give an analytical evaluation of an academic text. Finally, study 1 used a pretest to confirm that participants would rate the two wines equally when giving their ratings anonymously, while study 2 included an additional anonymous text-evaluation condition in which participants evaluated the text privately. The anonymous text evaluation was used to test our assumption that, in the absence of social pressure, participants would correctly recognize that the text was incomprehensible.

### Method

Seventy-six undergraduate students (57 women, 19 men) at a large public university participated in the study for extra credit in a sociology class. Participants were recruited via an in-class announcement and scheduled for a specific study session by phone. Participants were scheduled in groups of six, this time to participate in a “roundtable text-evaluation study.”<sup>15</sup> Participants were told that they were participating in a large-scale, multisite study of peer review practices in academia involving undergraduates, graduate students, and faculty from “top schools.” Participants were informed that they would participate in a group text evaluation with five other undergraduates from their school in a computerized version of the “Bloomsbury literary roundtable.” The roundtable provided a credible cover story for the structure of the text evaluation. Similar to study 1, participants were told that this was a traditional format wherein “rounders” would evaluate an academic text in order, and then

<sup>15</sup> One study session included only four participants due to insufficient sign-ups and a no-show. In this case the fifth and sixth positions were filled by undergraduate research assistants posing as participants.

take turns rating one another's evaluation skills. In fact, no such text-evaluation tradition exists.

As in study 1, participants were told that they would be rated according to the "Beckman textual discrimination scale" and that ratings for all study participants would be published in a report available to all other study participants. Next, participants were given an opportunity to "introduce" themselves to the other participants over the computer network, though again all others were computer simulated. Participants were asked to indicate their age, year in school, approximate GPA, whether they intended to go to graduate school, and whether or not they had completed any philosophy classes. Participant 6, the deviant, was characterized as a freshman with a GPA in the 2.75–2.99 range, no exposure to philosophy courses, and no intention to pursue a graduate degree, while participants 1–4 were somewhat older, boasted higher GPAs, and either had taken philosophy or intended to pursue a graduate degree. This information was provided to increase the credibility of the normative consensus and heighten participants' concerns about social judgments by others with apparently superior academic credentials.

Next, participants were presented with a short essay to read and evaluate, ostensibly authored by "Dr. Robert Nelson, Ph.D., Albert W. Newcombe Professor of Philosophy, MacArthur 'Genius Grant' Recipient, 2001, Harvard University." However, the essay was in fact an excerpt from the sections "Differential Topology and Homology" and "Manifold Theory: (W)holes and Boundaries" in Sokal's (1996) "Transgressing the Boundaries: Towards a Transformative Hermeneutics of Quantum Gravity." The text was written by Sokal to be unintelligible, intended to expose academic journals that would accept an unintelligible article for publication. Previous research has shown that participants rated this text as being of higher quality and more intelligible when they believed it had been authored by a renowned Harvard professor than they would otherwise rate it (Willer 2004). Given the unintelligibility of the Sokal text, the distinguished authorship was used to lend credibility to the positive evaluations given by the simulated confederates.

After reading the essay, participants were asked to evaluate the text on the A–F scale on several dimensions: understandability, persuasiveness, logical coherence, quality of argument, and overall quality. In one condition of the study, participants were told that their text evaluations were private. In this condition, participants entered their evaluations and then proceeded to the post-study questionnaire. For the other two conditions, participants gave their text ratings fifth, after four simulated confederates and before a sixth. In both public conditions the first four simulated confederates all uniformly praised the text, awarding As and Bs, but the

sixth rater (the lone deviant) gave it very low ratings (Cs and Ds).<sup>16</sup> Participants in both of the public text-evaluation conditions then proceeded to the peer judgment task. In the “public evaluation/private sanction” condition, participants submitted their peer judgments privately. In the “public evaluation/public sanction” condition, participants gave their peer judgments publicly and were told that they were randomly chosen to go first of the six. Once the peer judgment task was completed, participants in the two public text-evaluation conditions proceeded to a post-study questionnaire designed to probe for suspicion.

The study used a three-condition, between-subjects design. Participants were randomly assigned to the private evaluation (baseline), public evaluation/private sanction, or public evaluation/public sanction condition.<sup>17</sup> We had two main predictions. First, we predicted that participants would rate the text significantly higher in public than in private, indicating the effect of social pressure to conform to the normative evaluation despite private disbelief. Second, our primary prediction was that the more participants conformed by rating the text positively, the more they would enforce the normative evaluation by favoring the four conformist confederates over the lone deviant when peer judgments were given in public. However, we did not predict false enforcement among any participants when peer judgments were made privately.

## Results

As predicted, participants who evaluated the text publicly tended to rate it higher than those who evaluated it privately ( $M = 2.73$ , about a B–average, vs.  $M = 1.56$ , about a C–/D+ average;  $t = 6.57$ ;  $P < .001$ ). This indicates that, in the absence of social pressure, participants recognized that the text was unintelligible. Given that social pressure induced participants to conform to a more favorable normative evaluation than they would otherwise have given, we next tested whether social pressure could also induce participants to enforce the norm by favoring conformists over the lone deviant in their publicly submitted peer judgments.

To test for false enforcement, we followed the same approach as in

<sup>16</sup> As a manipulation check, we asked participants in a postexperimental questionnaire which participant in their group had expressed the most divergent opinions from the rest of the group. All but three participants correctly identified participant 6 as the most deviant group member; two of these three gave even more divergent ratings than the lone deviant and correctly identified themselves as most deviant. Thus, participants in our study were almost unanimously aware of which participant was most deviant from the group norm.

<sup>17</sup> Because we were most interested in sanctioning behavior in the study, 16 participants were assigned to the private evaluation condition and 60 to the other two conditions.

study 1, analyzing the peer judgments in a condition (public or private enforcement) by target (deviant or conformist) and degree of participant's conformity with a repeated-measures ANOVA. Because the text-evaluation task did not involve comparison of multiple stimuli (as in study 1, with the three wine samples), we used the raw overall text-evaluation score as the measure of conformity. We treated each participant's rating of each target (either the lone deviant or one of the four conformists) as an observation. Since each participant in the public text-evaluation conditions rated five targets, the repeated measures data set consists of 300 observations.

Results are given in table 3. The overall pattern of effects is similar to the results of study 1, with the exception that participant's conformity is also significant, indicating that participants who gave higher text ratings also generally tended to give higher ratings to all five targets. As in study 1, we find a two-way interaction of participant's conformity and target, indicating that the more strongly participants conformed, the higher they rated the conformist targets relative to the deviant target ( $F [3, 234] = 17.15; P < .001$ ). Most important, as in study 1, there is a significant three-way interaction of deviant target, participant's conformity, and public enforcement. This represents the additional effect of conformists' peer judgments being submitted in public instead of private ( $F [1, 234] = 6.72; P = .01$ ). This three-way interaction effect indicates that the more participants conformed, the more they favored conformist targets over the deviant, and this effect of conformity was stronger when enforcement was public.

Figure 2 reports enforcement behavior in study 2, using a dichotomous instead of a continuous measure of conformity for illustration. We classify those who gave an overall rating to the text of A or B (similar to that of the four confederates) as having conformed, and those who gave an overall rating of C or D (similar to that of the deviant) as having not conformed. We expected that those who did not conform to the group consensus would also not feel the need to falsely enforce by sanctioning the lone deviant. This is confirmed in figure 2. Nonconformists favored the deviant in both conditions, especially in public.

Unlike nonconformists, those who conformed were expected to falsely enforce by sanctioning the lone deviant, but only when enforcement was public. Figure 2 shows that when enforcement was private, conformist participants gave about the same judgments of the conformist targets as of the deviant, despite having themselves conformed to the normative text evaluation. The critical pattern in figure 2 is in the public sanctioning condition. While nonconformist participants became more extreme in favoring the lone deviant in public, conformists moved in the opposite direction, rating fellow conformists higher and the deviant lower. These



TABLE 3  
RESULTS OF REPEATED-MEASURES ANALYSIS OF VARIANCE IN STUDY 2

Variable	<i>F</i>	<i>df</i>
Between subjects:		
Public enforcement .....	0	1
Participant's conformity .....	4.94**	3
Public enforcement × participant's conformity .....	2.65	1
Within subjects:		
Deviant target .....	3.80	1
Deviant target × public enforcement .....	.03	1
Deviant target × participant's conformity .....	17.15**	3
Deviant target × participant's conformity × public enforcement .....	6.72*	1
Residual .....		234

NOTE.—Experimental condition (public or private enforcement), participant's conformity (participant's text rating), and target (deviant or conformist) are used to predict participants' peer judgments of the simulated confederates.

\*  $P < .05$  (all tests are two-tailed).

\*\*  $P < .01$ .

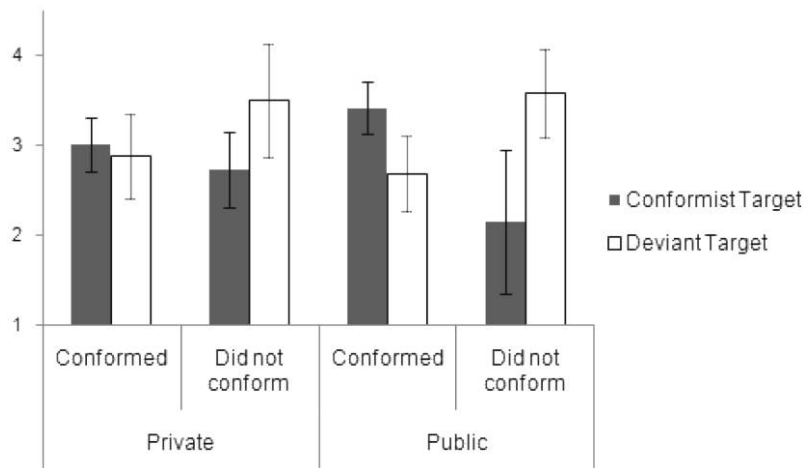


FIG. 2.—Peer judgments in study 2 by condition (public or private enforcement), target (conformist or deviant), and participant's conformity. Peer judgments have been converted to numbers (A = 4, B = 3, etc.). For participants, "conformed" denotes a text-evaluation score of A or B; "did not conform" denotes a score of C or D. Error bars indicate 95% confidence intervals.

results provide clear support for our prediction that conformists would give unfavorable peer judgments to deviants, compared to conformist targets, only when evaluations were made in public.

#### Discussion of Study 2

Study 2 was designed to replicate the results of study 1 in a different setting in order to demonstrate the robustness of the false enforcement effect. The setting used in study 2 differed from that of study 1 in several ways, with an absolute rather than a relative evaluation, an erroneously positive instead of an erroneously negative consensus, and an analytic instead of an aesthetic domain. Study 2 also included an additional private evaluation condition for assessing participants' private beliefs about the text. In the absence of social pressure, participants reported that the text was unintelligible.

In the second part of study 2, participants again exhibited the predicted pattern of false enforcement found in study 1. The more participants conformed to the group norm in their text ratings, the more negatively they judged the deviant target relative to the conformist targets—but only when peer judgments were given publicly. This indicates that social pressure not only induced participants to agree with the group consensus, it also induced them to enforce it.

The results of these studies are consistent with our theoretical reasoning that group members, having already conformed to a norm, will also enforce it to signal to other group members the sincerity of their conformity. However, it remains an open question whether this strategy is effective. Does the enforcement of group norms signal the sincerity of conformity more than mere conformity would on its own?

#### STUDY 3: FROM FALSE ENFORCEMENT TO FALSE SINCERITY

The secret of success is sincerity. Once you can fake that, you've got it made. (Jean Giraudoux, quoted in Miner and Rawson 1993)

The results of studies 1 and 2 are consistent with the claim that false enforcement is motivated by the need to publicly affirm the sincerity of false conformity. However, we do not know from these results whether participants in these studies thought that enforcement makes one more likely to be perceived as a true believer. Presumably, those who falsely enforce know that their own enforcement behavior is a posture, just like their compliance. Hence, they might assume that the same is true of

everyone else. If enforcement is widely regarded as a telltale sign of personal insecurity, social anxiety, and conformity, then it is unlikely that people will enforce to prove to others that they are true believers. Additionally, if false enforcement is viewed as posturing, it may not contribute to overestimation of popular support for the norm, undermining the self-reinforcing dynamic of unpopular norms proposed by Centola et al. (2005).

Study 3 was designed to investigate the credibility of norm enforcement as a signal of sincere conformity. Participants were asked to consider the responses of a protagonist who had participated in a past study of “text evaluations in groups.” Participants were told that the protagonist expressed a view that an unintelligible academic text by a high-status academic was both clear and of high quality, a publicly stated opinion that was very likely a response to group pressure. Depending on the condition of the study, participants were told that the protagonist either did or did not negatively evaluate another group member who disagreed. We then asked participants to estimate the protagonist’s privately reported opinion of the text that had been previously measured through a confidential survey. Our theory predicts that participants would assume that a protagonist who publicly criticized someone for disagreeing with the group’s normative rating of the text was more sincere in his or her positive opinion of the text than an otherwise identical protagonist who said nothing critical about others.

### Method

Forty-five undergraduate students (30 women, 15 men) at a large private university participated in the study in return for \$8 or extra credit in a sociology class.<sup>18</sup> Participants were recruited either by fliers advertising payment for participation in a sociology study or via an announcement in their sociology class. Participants were directed to a webpage where they signed up to participate in a “miscellaneous surveys study.” Upon arriving in the lab, participants completed a series of unrelated surveys, including a “social perception task.”

The social perception task was presented as a test of the participant’s ability to accurately infer the responses of people involved in an earlier study. In fact, the earlier study was entirely fictitious. We designed the study to test whether enforcement behavior would be interpreted as an accurate signal of private beliefs. Participants were given the following instructions:

<sup>18</sup> Gender of participants did not significantly interact with any of the results presented and is not discussed further.

We recently conducted a laboratory experiment about the evaluation of academic discourse. We had a group of participants read a short essay which you are also going to read in just a few moments. After reading the essay, the participants filled out a questionnaire about their impressions of the text and then put their anonymous questionnaire in a cardboard drop box. The participants were told that their responses on the questionnaire were completely confidential. None of the other participants ever saw anyone else's responses. After all the questionnaires were placed in the drop-box, we held a group discussion in which the participants publicly discussed their thoughts about the essay with one another. Finally, following the discussion, the participants were told to rate one another's competence at evaluating the texts. Participants were told that their ratings of the competence of other participants were to be written down on a score card and the scores would then be read to the group by the experimenter.

We are going to show you what one of the participants had to say in public about the essay and about the competence of the other participants. We will then ask you to guess what this participant said earlier about the essay in the anonymous questionnaire that was submitted prior to the group discussion.

After reading this cover story, participants were asked to read the short essay the previous participants had evaluated. We used the same unintelligible text used in study 2 (Sokal 1996), again identifying the author as "Dr. Robert Nelson, Ph.D., Albert W. Newcombe Professor of Philosophy, MacArthur 'Genius Grant' Recipient, 2001, Harvard University." However, in study 3, we were not interested in whether these participants could be pressured to enforce positive evaluations of this text. Instead, we wanted to know if they would interpret public criticism of someone who negatively evaluated the text as an indication that the person making the criticism sincerely believed that the text warranted a positive evaluation.

After reading the essay, participants in study 3 were asked to review public evaluations of the text submitted by three of the participants in the earlier (fictitious) study, identified as participants A, B, and C. Participants were then shown A's rating of the competence of B and C. Participants were told that A and B had both provided "consistently positive comments" in the group discussion, while C had provided "sharply critical comments." Participants were then told that after submitting their ratings of the text, all group members submitted their ratings of one another on scales ranging from 0 (very low competence) to 10 (very high competence), and these ratings were then announced to the group. Participants were only given A's ratings of other group members.

The study featured a two-condition (target did or did not enforce) between-subjects design. Half of the participants (chosen randomly) were told that A had given B and C ratings of 8 and 3, respectively, on the 10-point competence scale. The other half were told that A had given

both B and C ratings of 5. Participants were then asked to guess how A had previously rated the text confidentially, before having heard the views of participants B and C. (Participants were reminded that A had submitted a private evaluation of the text before participating in the group discussion, using an anonymous questionnaire that was placed in a drop box). Participants were asked to guess A's responses to four items on the anonymous questionnaire that asked A to rate the text's intelligibility, overall quality, quality of arguments, and understandability on 10-point scales. Each participant's four guesses about A's private text ratings were later summed as a composite measure of the participant's underlying estimate of A's private belief. A reliability analysis of the four items justified construction of the composite measure (Cronbach's  $\alpha = .89$ ).

After this, participants were asked to give their own evaluations of the text using the same scales and items. Finally, after completing the social perception task, participants were administered a post-study questionnaire. The survey instructions asked participants to think back to the answers they had given earlier and to indicate the relative importance of several factors in formulating their guesses about A's true opinion of the text. On seven-point scales, participants indicated the importance of each of the following factors: "his/her [A's] ratings of the others' rating abilities," "suspicion that he/she might be pretending to like the text," and "your own opinion of the text."<sup>19</sup>

### Debriefing

After completing the questionnaire, participants were individually debriefed about the actual goals of the research. A funnel debriefing procedure was used to assess participants' levels of suspicion of deception in the study. No participants reported suspicion. Participants were assured that their responses were anonymous and that they could request a copy of the research findings.

As a manipulation check, we tested to make sure that participants assigned to each condition did not significantly differ in their evaluations of the text, either because of a failure of random assignment or as an unanticipated by-product of the manipulation. No such differences across the two conditions were found, ruling out the possibility that the hypothesized differences between the conditions might be confounded with differences in participants' own ratings of the text.

<sup>19</sup> Scale formats and the formatting used in each part of in the "miscellaneous surveys study" were varied to prevent suspicion that the previous study had been invented solely for the purposes of the present one.

## Results

The main hypothesis in study 3 was that participants in the “target enforced” condition (in which A gave ratings of 8 and 3 to B and C, respectively) would expect A’s private, anonymously submitted opinion of the text to be more positive than would participants in the “no enforcement” condition (where A gave ratings of 5 to both B and C). Results supported this prediction. Participants in the target enforced condition assumed that A privately liked the text more than participants in the no enforcement condition did ( $M = 7.73$  vs.  $M = 6.31$ ;  $t = 3.24$ ;  $P = .002$ ). This finding suggests that enforcing a view is effective at increasing the apparent sincerity of that view, even if the enforcement occurs in a setting where suspicion of conformity and false enforcement would be very plausible.

It is interesting to note that participants’ own evaluations of the text had no effect on their estimates of A’s private evaluation ( $r = .09$ ; NS), and this did not vary by condition. Thus, even if participants had negatively evaluated the unintelligible text, they did not suspect the target of false enforcement.

Analysis of post-study questionnaire items offers further support for the hypothesis. Participants who were told that A enforced a positive evaluation of the text reported less suspicion that A might have pretended to like the text than did participants who were told that A did not enforce a positive view ( $M = 3.65$  vs.  $M = 5.36$ ;  $t = 3.20$ ;  $P = .003$ ). In addition, a *t*-test shows that the mean reported suspicion in the no enforcement condition was significantly higher than the midpoint of the scale ( $M = 5.36$ ;  $t = 3.69$ ;  $P = .001$ ). Thus, in the experimental setting, not enforcing a positive evaluation of the text led to significant suspicion that the target might have been pretending to like the text.

## Discussion of Study 3

An important implication of studies 1 and 2 is that we should not necessarily assume that enforcers believe the views they pressure others to adopt. If people enforce norms for the same reason they comply with the norms, then enforcement could, ironically, be a sign of posturing. Over time, we might expect people to learn to see through the bluster of self-appointed “thought police” and to heavily discount the zealotry of those seeking to prove their commitment.

However, study 3 suggests that this lesson may not be so easy to learn. For every unpopular norm, there are presumably many more norms that are enforced by those who truly believe in them. This allows unpopular norms to “piggyback” on popular norms that reinforce the credibility of

enforcement as a signal of sincerity. Study 3 supports such a conclusion. Participants were more likely to assume that a protagonist truly liked the text when they were told that the protagonist gave more favorable scores to those who also liked the text than to those who didn't. The results suggest that enforcement of a norm is an effective way to affirm the sincerity of one's conformity as a true believer and to avoid suspicion that one has conformed in order to gain approval.

A possible limitation of study 3 is that participants did not themselves engage in false conformity and therefore did not experience firsthand the motivation to use enforcement to signal the sincerity of compliance. Had they done so, they might have recognized the possibility that enforcement need not reflect private belief. However, research on herd behavior and pluralistic ignorance provides very convincing evidence that people do not project their own motivations onto others (e.g., Miller and McFarland 1991; Prentice and Miller 1993), and research on the "correspondence bias" indicates that people tend to attribute private beliefs to others that are consistent with their observed public behavior (Jones and Harris 1967; Gilbert and Malone 1995). People follow others because they assume others know better or represent the consensus, without considering the possibility that the others they are following are doing the same thing. Nevertheless, future research is needed to determine if this cognitive blind spot applies not only to herd behavior and pluralistic ignorance but also to false enforcement.

#### GENERAL DISCUSSION AND CONCLUSION

If there is anything the nonconformist hates worse than a conformist, it's another nonconformist who doesn't conform to the prevailing standard of nonconformity. (Vaughan 1981)

Prevailing sociological theory assumes that norms emerge because they are useful, whether to society at large, to dominant classes, or to individuals with a regulatory interest in controlling others' behavior. Theories of herd behavior and pluralistic ignorance challenge the traditional view. Both theories show how unpopular norms can be an equilibrium based on an overestimation of support for a norm. However, the predicted equilibrium is highly unstable because there is motivation only to conform but not to enforce. Thus, people leave the herd as soon as they discover that the beliefs are false, a result anticipated by Andersen in his fable of the naked emperor. The equilibrium collapses when a single child violates the norm with impunity.

However, there are many examples of unpopular norms where the

pressure to conform is painfully real. The theory of false enforcement goes beyond herd behavior and pluralistic ignorance to explain why. False beliefs become much more stable when backed up by expectations of enforcement that are confirmed when someone deviates.

A previous study used computational experiments to show how unpopular norms might become self-enforcing. Following Kuran (1995), Centola et al. (2005) used a simple agent-based model to show how a norm with almost no initial support could snowball into a powerful apparent majority stance when those who conformed pressured others to conform as well. The present research tested key behavioral assumptions of the computational model. Study 1 used a variant of the Asch (1951) experiment in which participants made judgments about wines instead of about lines. However, the main purpose was not to test whether people would conform to a view they did not endorse, but to see if those who conformed would also falsely enforce. Had this been the Andersen fable, the lone deviant would have triggered the collapse of the norm. Study participants would have praised the lone deviant and criticized the four confederates. But that is not what happened. Studies 1 and 2 both showed that participants not only were willing to conform to a normative evaluation they knew to be wrong, but would also publicly criticize a deviant who was praised in the private condition.

This result poses another puzzle: Why would people enforce a norm that they do not want others to obey? We proposed a simple mechanism that can account for false enforcement. The illusion of sincerity hypothesis asserts that people enforce norms for the same reason that they conform—as a way to affirm the sincerity of their opportunistic compliance. According to this reasoning, false enforcement should only be observed among conformists and only when enforcement is public. Because of the difficulties involved in unambiguously detecting false conformity and enforcement, we tested the hypothesis using controlled laboratory methods. The results of studies 1 and 2 were consistent with the differences in public and private enforcement we hypothesized based on the illusion of sincerity mechanism, though future research should pursue even more direct tests of this mechanism.

Study 3 took an important step in that direction by investigating the effects of false enforcement on perceptions of the sincerity of someone who claimed to appreciate the brilliance of an unintelligible text (a naked emperor familiar to many academics). Those who also enforced agreement with the normative view were regarded as more sincere than those who did not enforce the norm. This result illuminates the effectiveness of false enforcement in creating an illusion of sincere conformity to a norm. This is important for two reasons. If those who enforce are regarded as true believers, (1) this may explain why conformists choose to falsely enforce,



and (2) widespread enforcement may reinforce overestimation of the distribution of popular support for the norm, thereby increasing the pressure to conform. Taken together, the three studies provide support for the theory that unpopular norms are driven by a self-reinforcing dynamic of social-pressure-induced enforcement and enforcement-induced social pressure.

In both studies 1 and 2 we found that the view publicly enforced by participants who had earlier conformed appeared to be inconsistent with their private beliefs. We showed this in two steps. First, we assessed participants' perceptions in the absence of social pressure. In study 1, a separate test of the stimuli in which participants gave anonymous wine evaluations confirmed that the identical wines A and B were perceived to be about equal in quality and much better than wine C, which had been tainted with vinegar. In study 2 we ran an additional experimental condition in which participants gave their evaluations of the unintelligible academic text anonymously. Again, the results confirmed that participants' perceptions were inconsistent with the group norm, as they gave low ratings to the text.

Second, we compared public and private peer judgments for further evidence of participants' private beliefs. In both studies 1 and 2, the three-way interaction showed that conformity affected peer judgments in public but not in private. In private, it appears that participants expressed their genuine regard for the lone deviant, which suggests private agreement. It could also indicate admiration for and tolerance of dissent (Moscovici and Nemeth 1974), but this is qualitatively different from the conviction that the norm is true—that it is what people should believe. The litmus test of this conviction is private enforcement, because this indicates sufficient certainty about one's beliefs that one disapproves of those who disagree. Those who fail to privately enforce—because of admiration for or tolerance of dissent—lack the conviction that others should believe as they do. Should they nevertheless enforce the norm in public, that enforcement is false.

False enforcement appears to require some level of uncertainty. A pilot version of study 1 in which confederates established a norm favoring the tainted wine showed that, when participants were certain the normative view was wrong, the group consensus had insufficient credibility to induce conformity. It is therefore important to recognize that false enforcement is unlikely to occur in all situations, especially those where uncertainty regarding the norm is quite low. For example, in Jonestown it is very possible that conformity to, and enforcement of, the norm to drink the Flavor Aid might not have occurred if the repeated white nights had not made the fatal consequences of the ritual unclear to Jones's followers.

In addition to uncertainty regarding the norm, other factors may also

be necessary for the false-enforcement results we obtained. In the present research there were no explicit costs to enforcement. Had sanctioning been costly, the rates of false enforcement would likely have diminished. However, costly enforcement might also be a more effective signal of sincerity than simply submitting a negative peer judgment, which might be regarded by skeptics as “cheap talk” (Frank 1988). Further research is needed to see how false enforcement is affected by the cost of sanctioning.

It is possible that the underlying beliefs of participants in our studies changed in the direction of the norm, either as a result of “informational influence” (Deutsch and Gerard 1955) or as a consequence of cognitive-dissonance reduction following conformity (Festinger 1954). Recent neurobiological research indicates that perception can be shaped by social influence (Berns et al. 2005), which suggests the possibility that participants may have come to believe that wine B really was inferior and the academic text was intelligible. However, it is important to keep in mind that those who defer to the majority because the consensus has undermined their confidence that the norm is false are very different from people who agree with the consensus because of their conviction that the norm is true. The private wine and text ratings, and the absence of communication in our experimental design (other than participants’ submission of their ratings), make it unlikely that participants shifted that far in their beliefs. Although informational influence and cognitive-dissonance reduction cannot account for the differences we observed between public and private peer judgments, we cannot rule out the possibility that conformity and false enforcement could lead to change in underlying beliefs in natural settings. Indeed, Centola et al. (2005) included this possibility in their computational experiments and found, surprisingly, that this led to the collapse of the norm, rather than to reinforcement.

For studies 1 and 2, we used a wine tasting and an academic text evaluation. Consensus judgments about the quality of wines or academic texts may not be what we usually think of as norms. We usually think of norms as implying “should” statements regarding appropriate attitudes and behavior, but pressure to agree with and enforce an unwarranted social judgment corresponds with a class of norms that are all too familiar. These include judgments intended to express cultural or intellectual sophistication, group superiority, adolescent independence, or political patriotism. Further, substantial theory and research suggest that violations of accepted convention in culturally and intellectually sophisticated environments can lead to shame and ridicule of those exposed as lacking sufficient cultural credentials (Elias [1939] 1978; Goffman 1963; Bourdieu [1979] 1984). It is not surprising that people in such environments go along with social judgments they privately do not endorse, given the social

pressure. What is harder to explain is how this social pressure becomes self-reinforcing. That was the question these studies were intended to help us answer, though under less heavily charged and more controlled conditions.

It is important to keep in mind that the participants in studies 1 and 2 were unrelated individuals and that the study was conducted under the minimal conditions of spontaneously formed groups of strangers interacting via computer terminals with limited expectation of future interaction with one another. The false enforcement observed in these studies might have been even more pronounced if participants were members of a group on which they depended for social approval (Hechter 1987). Religious, military, and professional groups that are able to demand high levels of sacrifice from their members may be especially prone to unpopular norms because of individuals' greater anxiety about being regarded as insufficiently sincere—as posers who conform simply to gain approval. Future research needs to be directed to these groups with “strong solidarity” (Lindenberg 1988), to norms with political, religious, or ideological content, and to “anachronistic norms” that persist because of social control despite having become dysfunctional (Ogburn 1922; Triandis 1994; Vandellos and Cohen 2004).

Another avenue for future research is to examine the motivations for false enforcement. Study 3 shows that public enforcement is an effective way to appear sincere, but more research is needed to see if false enforcers consciously try to create the illusion of sincerity. Ethnographic research could explore the dynamics of honor systems based on explicit metanorms that assign equal guilt to those who fail to report violations of the honor code as to those who commit the violations. As discussed above, another possible motivation for false enforcement is that acting like a true believer reduces cognitive dissonance among those who falsely conform. Alternatively, one could interpret false enforcement as a manifestation of “reaction formation” (Freud [1894] 1962) by those who feel shame for their private deviance. However, the differences we observed between public and private enforcement are difficult to reconcile with alternative explanations based on dissonance reduction and reaction formation, whereas our account based on the illusion of sincerity fits well with this pattern.

Finally, in both studies 1 and 2 the lone deviant had lower status than the conformist targets to bolster the credibility of the normative wine and text ratings. In addition, participants in study 2 were asked to evaluate a text authored by a prestigious academic. Because these features were controlled across the public and private conditions they do not present alternative explanations for the differences in public and private peer judgments observed in both studies. Nevertheless, the high status of true believers may be essential to false enforcement for two reasons: (1) to

induce public conformity with a norm that is privately questioned and (2) to increase the need to prove sincerity in order to secure approval from those whose judgments carry great weight. More research is needed to investigate the interactions between status standing and norm enforcement. While we encourage pursuit of a wide range of alternative theories and expect that there are likely to be several ways that false enforcement can be generated, we believe that explicit metanorms and the need to demonstrate sincerity are the most promising explanations so far.

One type of status difference that might be especially interesting to examine is that of the new recruit who seeks acceptance and approval from the established members of a group. In extreme cases, new recruits to a group might become the most fervent enforcers of norms they privately question, sanctioning others out of a need to prove their own commitment. Ironically, the true believers who conform out of genuine conviction may find that they can leave enforcement to these zealots, in which case enforcement will be a reliable indicator of private doubt, not of true belief. Although participants in study 3 did not embrace this possibility, if the illusion of sincerity hypothesis is correct, then an effective counterstrategy might be to persuade group members that overzealous norm enforcement is a sign of insecurity, not of conviction. As Milgram (1974, p. 568) noted, "It may be that we are puppets—puppets controlled by the strings of society. But at least we are puppets with perception, with awareness. And perhaps our awareness is the first step to our liberation."

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