Perceptions of a Fluid Consensus: Uniqueness Bias, False Consensus, False Polarization, and Pluralistic Ignorance in a Water Conservation Crisis

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A 5-day field study (N = 415) during and right after a shower ban demonstrated multifaceted social projection and the tendency to draw personality inferences from simple behavior in a time of drastic consensus change. Bathers thought showering was more prevalent than did non-bathers (false consensus) and respondents consistently underestimated the prevalence of the desirable and common behavior—be it not showering during the shower ban or showering after the ban (uniqueness bias). Participants thought that bathers and non-bathers during the ban differed greatly in their general concern for the community, but self-reports demonstrated that this gap was illusory (false polarization). Finally, bathers thought other bathers cared less than they did, whereas non-bathers thought other non-bathers cared more than they did (pluralistic ignorance). The study captures the many biases at work in social perception in a time of social change.

Keywords: *false consensus; uniqueness bias; pluralistic ignorance; false polarization; water conservation*

When tropical storm Floyd hit the East Coast of the United States in September 1999, a sudden water shortage prompted Princeton University to ask students to limit their water usage and avoid drinking potentially contaminated water. These instructions included a ban on showering for the first 3 days of the crisis. As a result, showering suddenly went from a common behavior denoting hygiene and social grace to a rare behavior reflecting a lack of concern for the community. When the ban was lifted 3 days later, showering went back to being common and desirable. In our social world, the frequency and desirability of behaviors often fluctuates, but rarely at such a rapid pace. This situation thus pro-

vides a unique opportunity to study biases both in estimates of the prevalence of the behavior ("What proportion of my peers shower?") and in the inferences drawn from this behavior ("What kind of person would shower?") in the context of a changing consensus. This article presents the results of a field study that we conducted during these 5 consecutive days, tracking the various biases as the crisis unfolded.

Changing Consensus

It is particularly important to study these biases in the context of a changing consensus because change is a staple of the social world rarely captured by laboratory experiments or punctual surveys and more often than not left to historians, sociologists, economists (e.g., Kuran, 1995), or journalists (e.g., Gladwell, 2000). With time, a behavior that was common and desirable can become rare and undesirable (e.g., smoking in late 20th-century America; see S. Katz, 1997), or vice-versa. It is not rare for behaviors to move back and forth on these dimensions. Hairstyles and hemlines go up and down as dictated by fashion. Fads regulate what restaurant to go to, what book to read, but also what theoretical bandwagon academics jump on, what health-promoting

behavior people engage in, or what psychological disorder gets diagnosed in children. Watershed changes in actual consensus and desirability are the ultimate goal of the marketer, the public health advocate, and the moral crusader. Consensus changes can be brought about by an authority figure (e.g., the Surgeon General), by the publication of new scientific evidence, by a vocal minority mistakenly assumed to represent the majority, by trendsetters and the media, by a sudden crisis, and so forth. They can happen over decades or overnight. Witness the sudden frequency and desirability of displaying the American flag after the events of September 11, 2001. A behavior once suspect of jingoism suddenly became a demonstration of concern and sympathy for disaster victims. Consensus also will change for a given individual as he or she moves from one social group to another. Thus, the college freshman might encounter a culture that is much more permissive of alcohol consumption than she was accustomed to in high school (Prentice & Miller, 1996); the expatriate may soon realize that the mores of his own culture have little currency in his country of residence ("When in Rome . . . ").

The current study illustrates the common case in which a resource comes to be limited and an authority figure asks group members to voluntarily limit their usage to avoid depletion. Examples abound, from the rationing of household goods in postwar Europe to energy conservation following the oil crisis in the 1970s or the current plea to avoid computer programs using inordinate amounts of bandwidth (e.g., music-sharing software) on university computer networks. Such situations are particularly dependent on perceptions of consensus because, as is illustrated in the classic "commons dilemma," if one believes that others are not engaging in conservation efforts, then one's own sacrifice is pointless and is best to be avoided (Dawes, McTavish, & Shaklee, 1977). For all of these reasons, it is crucial that we start investigating social biases in the context of a changing consensus.

Biases in the Estimation of Consensus

In the abundant literature on the estimation of consensus since F. H. Allport (1924) introduced the concept of social projection, two biases have been particularly pervasive: the false consensus effect and the uniqueness bias.

The *false consensus* effect refers to the tendency to estimate more support for one's own position or behavior than do people holding the opposite position or engaged in the opposite behavior (Ross, Greene, & House, 1977). The effect, defined empirically as the difference between the estimates given by people who perform the relevant behavior and those given by people who do not, has been observed in numerous studies (see Mullen & Hu, 1988, for a review). For example, when participants who agree to carry a sandwich board around campus provided estimates of the prevalence of their response, they offered higher estimates than did participants who refused to carry the sandwich board (Ross et al., 1977). In the present field study, the false consensus effect would take the form of bathers giving higher estimates of the prevalence of showering than non-bathers.

The *uniqueness bias* (Goethals, Messick, & Allison, 1991; Suls & Wan, 1987), on the other hand, is the tendency for people to underestimate the proportion of others who can or will perform desirable actions, computed by subtracting the mean estimate of prevalence of a desirable behavior from its actual reported prevalence. In practice, those who perform a desirable behavior underestimate the number of others as good as them, whereas those who perform an undesirable behavior overestimate the number of others as bad as them. For example, people underestimate the percentage of their peers who would perform moral or altruistic acts such as giving blood and overestimate the prevalence of selfish acts (Allison, Messick, & Goethals, 1989; Goethals, 1986). In the situation under investigation, the uniqueness bias would be observed if the prevalence of showering is overestimated during the shower ban but is underestimated once the ban is lifted.

As the literature on these two biases accumulated, it became apparent that their surface simplicity and the ease with which they were obtained belied their theoretical complexity and the difficulty to pinpoint a single cause for their occurrence. For example, although many of the factors originally put forward by Ross et al. (1977) were shown to impact the false consensus effect, none was shown to be necessary (Krueger, 1998; Marks & Miller, 1987). Soon, more parsimonious models that could account for both the false consensus effect and the uniqueness bias emerged. Mullen and Hu (1988) argued that both effects could be explained by the fact that, independently of desirability, majorities systematically underestimate their size, whereas minorities overestimate theirs. Because desirable behaviors tend to be more common, this results in the apparently self-enhancing uniqueness bias.[1] Furthermore, because minorities overestimate more than majorities underestimate, we observe the false consensus effect. Recently, Krueger and Clement (1997; see also Krueger, 1998) argued that the simple assumption that all respondents believe they are in the majority, regardless of true majority status, can account for both the false consensus effect and the uniqueness bias. Because our central aim was to demonstrate the co-occurrence of a variety of biases in the context of fluctuating, real-world norms, our data do not speak directly to this debate: The fact that these

biases may be multiply determined, of course, is part of what makes them so interesting.

Consensus Estimates and Psychological Inferences

The other aspect of the situation we wanted to explore is people's willingness to draw attitude or personality inferences from simple behavioral labels. Implicit in the basic question of consensus estimate studies ("How many people do X?") is a question about the psychological implications of the behavior ("What kind of person does X?"). Given the logic of causal attribution (Kelley, 1972), asking how many people cheat on their taxes is tantamount to asking what it takes to cheat on one's taxes. If very few people are thought to cheat, it probably takes a very dishonest person, but if everyone does, the explanation must lie elsewhere, maybe in the incentive structure of the situation. It should therefore be instructive to study the inferences people make based on a given behavior in conjunction with how frequent people perceive that behavior to be. Individuals have a tendency to make dispositional judgments based on other people's behavior (Gilbert & Malone, 1995; Jones & Davis, 1965; Ross, 1977), to make the leap from what an actor does to what kind of person the actor is. This phenomenon has most often been studied by placing participants in the role of observers and asking them to judge a target. In real life, however, we have often had to decide beforehand whether to engage in the behavior for which we judge others. The attribution process becomes much more self-relevant, and this opens the door to a whole new class of biases. As with consensus estimates, where people exhibit predictable patterns of relationship between their choices and their estimates of other people's choices, we expect to observe systematic relationships between one's attitudes and the attitudes imputed to others on the basis of their behavior. However, whereas social projection revealed an excessive belief in self-other similarity, biases in psychological inferences tend to reveal, if anything, a failure to take into account one's experience when imagining that of others (Miller & McFarland, 1991). This leads people to take the behavior of others as more representative of their personality and attitudes than it really is. As a result, they think that behavioral differences represent wide gaps in attitudes or personalities (false polarization) and they believe that others behaving like them are more committed to the values underlying the behavior than they are (pluralistic ignorance).

Pluralistic ignorance (D. Katz & Allport, 1931) refers to the belief that one's private thoughts, feelings, and behaviors are different from those of others, even though one's public behavior is identical (Miller & McFarland, 1991). Even when individuals do not fall victim to social projection in estimating population param-

eters, they can still err in their inferences about the determinants of that behavior. The issue here is not that the processing or sampling of information is biased but that the information itself is misleading because public behavior is not reflective of private attitudes. As a result, individuals mistakenly believe that their attitudes differ from the attitudes of others, when in reality there is remarkable agreement within the group (Miller, Monin, & Prentice, 2000). Pluralistic ignorance is a common feature of social life and has been documented in a variety of settings (see Prentice & Miller, 1996, for a review). In the case of the water crisis, those who refrain from showering during the ban—presumably because of social pressure—would exhibit pluralistic ignorance if they failed to recognize that other non-bathers fall prey to similar pressure and if they assumed instead that other non-bathers are intrinsically more community-minded than they are. Those who shower, on the other hand, would exhibit pluralistic ignorance if they believed they cared more about the community than other bathers because they thought their behavior was exonerated by special circumstances while failing to recognize that similar factors influence others.

Pluralistic ignorance captures the personality inferences people draw about those who behave like they do, but individuals also draw inferences about those who hold opposing attitudes or make different behavioral choices, sometimes exhibiting *false polarization*. In their study of adversarial disputes such as the abortion debate, Robinson, Keltner, Ward, and Ross (1995; see also Keltner & Robinson, 1996) found that individuals overestimate the extremity of attitudes of the people involved (see also Dawes, Singer, & Lemons, 1972), a bias that extends from inferences about one's fellow partisans (a form of pluralistic ignorance) to inferences about one's opponents. Although partisans on both sides of the debate held relatively moderate positions, they believed that others, both on their side and on the other side, held much more extreme attitudes and that the gap between the two sides was much larger than it really was. We wish to extend this false polarization effect to any situation where an attitudinal or behavioral choice is made: No matter which attitude is endorsed or behavior performed, individuals should exaggerate the difference in attitudes between the two sides. In the situation under study, both bathers and non-bathers should overestimate the difference between the two groups in terms of underlying attitudes, such as caring for the community.

The Present Investigation

This naturally occurring water crisis provided a rare opportunity to study consensus estimates and psychological inferences in the context of rapidly changing desir-
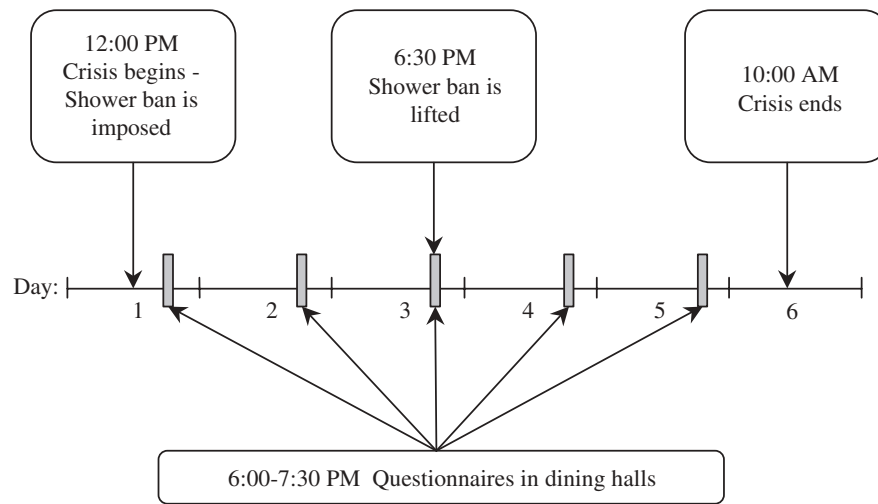
Figure 1   Timeline of water crisis and questionnaire administration.

ability and frequency of the target behavior. Note that the false consensus effect and the uniqueness bias have been studied conjointly in the past (e.g., Mullen & Goethals, 1990) but never in such a naturalistic and evolving environment. Furthermore, we wished to go one step further in our understanding of the psychology of consensus estimation by simultaneously looking at biases in drawing psychological inferences from the target behavior, such as pluralistic ignorance and false polarization. By using a broad array of indicators, and thus assessing a variety of social biases, we hoped to make the most of this rich naturalistic situation and capture some of the theoretical complexities of social perception.

METHOD

Participants

On 5 consecutive nights, we went to a different dormitory on the Princeton campus and distributed a survey titled "Water Crisis Survey" to students as they left their dining halls. All freshmen and sophomores at Princeton live and eat in one of five dormitories and are assigned to them randomly at matriculation. The study was conducted on the first week of class, so prior contact and socialization within colleges was limited. Overall, 415 respondents took a version of our survey, broken down as follows: Day 1, $n = 78$; Day 2, $n = 122$; Day 3, $n = 44$; Day 4, $n = 70$; and Day 5, $n = 101$. We chose to go to a different dormitory every night, each of which houses from 450 to 500 students, to make sure we would never survey the same respondent twice.

Materials and Procedure

Figure 1 recapitulates the timeline of the study. On the night immediately following the ban (Day 1), we gave people a list of seven recommendations included in the administration's initial water conservation message. We asked them to indicate how much they had followed each instruction, on a scale from 1 to 14, with lower scores meaning they had followed it better. In this pilot survey we found that students had promptly followed the self-protective instructions (e.g., "Don't drink from water fountains or taps"), $M = 3.3$ for these items, but were more hesitant to make personal sacrifices in their water usage for the community (e.g., "Don't shower"), $M = 5.3$ for these items, $t(81) = -4.3$, $p < .001$. We thus used a water conservation measure—refraining from showering—in the subsequent surveys.

On Days 2 and 3, we ensured that participants were aware of the shower ban by asking them when they had heard about it and through what medium. Then we asked them how many showers they had taken since 5 p.m. the day before and what percentage of "other Princeton students" they thought had taken one or more showers since that time.

After the ban was lifted (Day 3), we modified the format of the survey on the last 2 days to include questions about showering during the ban. Thus, on Days 4 and 5, in addition to the three questions about showers taken since 5 p.m. the previous day, participants reported how many showers they had taken "from Monday [Day 2] at 5 p.m. until Tuesday [Day 3] at 5 p.m.," that is, at the height of the water crisis.

On the last 3 days, we added items specifically designed to study perceptions of behavioral stereotypes:

TABLE 1:   Estimated and Actual Percentage of Students Taking a Shower, Broken Down by Day and by Respondent's Behavior

Estimated Percentage of Showers	*Day 2*		*Day 3*		*Day 4*		*Day 5*		*All Days*	
	P	n	P	n	P	n	P	n	P	n
By bathers	63	39	66	20	75	52	75	82	72	193
By non-bathers	39	81	47	23	52	15	58	15	44	134
False consensus	24***		19**		23***		17**		28***	
All respondents[a]	47	120	56	44	70	68	72	99	60	331
Reported percentage of showers	33		47		77		84		59	
Uniqueness bias	14***		9**		–7*		–12***		1	

*p < .05. **p < .01. ***p < .001.

a. Some of the column total *n*s are slightly greater than the sum of bathers and non-bathers because of the few respondents (*n* = 4) who did not report their behavior.

On Day 3, Day 4, and Day 5, we asked respondents how much they cared about the community, how much people who showered during the ban cared about the community, and how much people who did not shower during the ban cared about the community, on a 7-point scale ranging from 1 (*don't care at all about the community*) to 7 (*care very much about the community*). After the ban was lifted (Days 4 and 5), questions about caring were explicitly phrased to refer to taking showers during the ban.

Predictions

Social projection: Behavior. When participants were required to estimate how many others took showers, we expected to observe social projection, manifested by (a) *false consensus:* bathers should estimate higher rates of showering among students than non-bathers and (b) *uniqueness bias:* showering should be overestimated when it is undesirable and uncommon but underestimated when desirable and common again.

Social projection: Attitudes. We expected participants to rely on social projection when estimating other people's attitudes. Thus, we predicted (c) *self-other correlation:* reported caring by respondents should correlate with their estimates of how much others (bathers or non-bathers) care about the community.

Psychological inferences. Although bathers and non-bathers might differ slightly in how much they report caring about the community, we expected these differences to be vastly exaggerated in participants' perceptions. We predicted (d) *false polarization:* bathers and non-bathers should be seen as differing more in how much they care than is actually the case and (e) *pluralistic ignorance:* bathers should think they care more about the community than do other bathers because they believe that theirs are special circumstances (e.g., having engaged in strenuous exercise) and overlook similar excuses in others, whereas non-bathers should believe they care less about the community than do other non-bathers because they are aware of situational forces affecting their decision (e.g., conformity) but are oblivious to the strength of these factors on others.

RESULTS

Social Projection

False consensus. (a) We observed a clear false consensus effect. Participants who took one or more showers gave a higher estimate of students showering (*M* = 72% overall) than participants who did not (*M* = 44%), *t*(325) = –11.6, *p* < .001. Table 1 shows that this phenomenon also was apparent within days (all *p*s < .01). During the crisis (Days 2 and 3), social projection was such that both bathers and non-bathers thought they were in the majority. In fact, on Day 3, although most people (53%) did not shower, bathers thought they had more consensual support (66%) than did non-bathers (53%), *t*(41) = 2.5, *p* < .05. When the ban was lifted, although we still observed the false consensus effect, non-bathers—now the minority—tempered their projection and recognized that they were in the minority (48% and 42% on Days 4 and 5).

Uniqueness bias. (b) As Figure 2 and Table 1 illustrate, the results supported our uniqueness bias prediction. During the ban, students were seen as taking more showers than was really the case [Day 2: 47% versus 33%,[2] *t*(119) = 6.6, *p* < .001; Day 3: 56% versus 47%, *t*(43) = 3.1, *p* < .005] but as soon as the ban was lifted, other students were seen as taking fewer showers than was really the case [Day 4: 70% versus 77%, *t*(67) = –2.5, *p* < .05; Day 5: 72% versus 84%, *t*(98) = –5.1, *p* < .001].

Self-other correlation. (c) Participants also showed social projection when trying to guess other people's attitudes. Their estimates of how much bathers and non-bathers cared about the community were highly significantly correlated with their own reported caring (*r*s = .34 and .28, respectively, both *p*s < .001). We report mean values for these variables below.
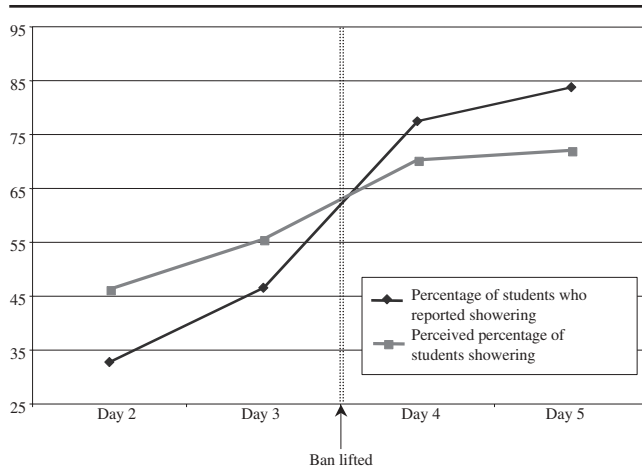
Figure 2   Perceived and self-reported prevalence of showering, by day.

Psychological Inferences

None of the five main variables in our "caring" data was influenced by day, as indicated by nonsignificant one-way analyses of variance, and the pattern of means was the same on all 3 days, so we collapsed our data across days. Furthermore, when separating bathers from non-bathers, we used recollections from the height of the ban, Day 3, rather than reports of the day the survey was given out on Day 4 or 5, because by that time the ban had been lifted. We found that these recollected self-reports did not differ significantly from what we actually collected on Day 3, whereas 47% reported showering on Day 3, 44% of our Day 4 sample and 58% of our Day 5 sample remembered showering on Day 3, $\chi^2(1, N = 113) = .05$ and $\chi^2(1, N = 143) = 1.6$, both *ns*.

False polarization. (d) Figure 3 presents the caring data using Keltner and Robinson's (1996) system of representation. As predicted, showering was seen as highly diagnostic of caring about the community in others. Bathers were seen as caring little, $M = 3.5$, whereas non-bathers were seen as caring much more, $M = 5.7$, $t(211) = -20.7$, $p < .001$. However, in reality, as is apparent in Figure 3, the two groups are strikingly similar in their self-reports. Non-bathers report caring only slightly more about the community ($M = 5.2$) than do bathers ($M = 4.9$), and this difference falls short of conventional levels of significance, $t(207) = 1.6$, $p = .10$.

Furthermore, there was remarkable agreement between bathers and non-bathers as to the meaning of showering. Both bathers and non-bathers thought that not showering indicated caring about the community, Ms = 5.8 and 5.6, respectively, $t(207) = .28$, *ns.* They also generally agreed that showering was a sign of not caring much, but bathers still thought that bathers cared a little
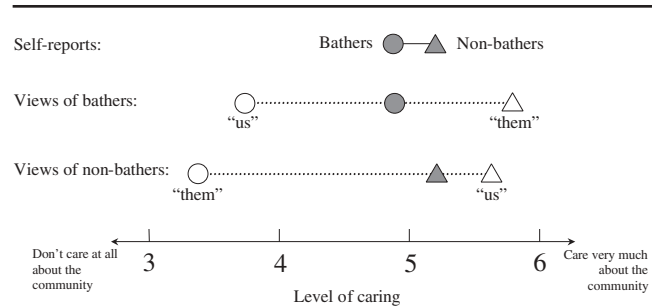
Figure 3   Perceived and actual differences in level of caring about the community.

more, $M = 3.8$, than non-bathers were ready to give them credit for, $M = 3.3$, $t(207) = -2.6$, $p < .01$.

Pluralistic ignorance. (e) The strong version of false polarization was upheld: People used behavior to make unwarranted inferences even about others who behaved like them. They thought that showering was more diagnostic for others than for themselves. Bathers thought they cared about the community more than other bathers, $M = 4.9$ versus 3.8, $t(105) = 8.2$, $p < .001$. This might not seem that surprising given a host of well-studied self-enhancement biases—what is more impressive is that non-bathers thought they actually cared about the community less than did other non-bathers, $M = 5.2$ versus 5.6, $t(100) = -3.6$, $p < .001$.

Correlations

We computed correlations between estimates of consensus and the three measures of caring (self, bathers, and non-bathers) separately for both bathers and non-bathers. Lacking a priori predictions for these six correlations, we used an adjusted alpha of (.05/6). Given this adjusted alpha, none of the correlations was significant, so we will not discuss this analysis any further.

DISCUSSION

This field study of reactions to a naturally occurring emergency illustrates the multiple facets of the estimation of consensus in the instance of fluctuating norms. We were able to approach the situation at two levels. First, we looked at social projection, at the behavioral as well as at the psychological level. As predicted, we found that respondents gave higher estimates of showering when they themselves showered than when they did not (demonstrating false consensus) and that the more they cared about the community, the more they thought others cared. In addition, we observed that participants overestimated the prevalence of showering when it was undesirable and thus uncommon but underestimated it when it was desirable and thus common (demonstrating the uniqueness bias).

People not only misperceived what others were doing but also why they were doing it. At the level of psychological inferences, by asking respondents how much others cared about the community, we witnessed participants' willingness to use relatively innocuous behavior to make sweeping, morally loaded judgments of fellow students. Although bathers and non-bathers reported similar levels of caring about their community, bathers were perceived as much less concerned than non-bathers (demonstrating false polarization). Indeed, participants viewed the simple act of showering as so diagnostic of others' attitudes that bathers themselves assumed that other bathers cared less than they did, whereas non-bathers thought other non-bathers cared more than they did (demonstrating pluralistic ignorance). This latter finding is important because it is sometimes erroneously assumed that pluralistic ignorance is merely the consequence of wanting to feel superior to others, whereas here it results in some participants feeling inferior to others on an important moral dimension.[3]

Social Projection in Uncertain Times

Crises are particularly volatile times, when consensus is unclear and the biases that people normally harbor about what others are doing or thinking can be exacerbated. Social projection may well reach its peak in what is sometimes called the "fog of battle," when no one is sure yet where others stand. It may be particularly likely when situations and choices are ambiguous (Gilovich, 1990): Precisely when we are unsure of appropriate opinions and behavior is when we are most likely to look to others (Festinger, 1954; Hogg & Mullin, 1999) and to seek social support (Festinger, Riecken, & Schachter, 1956). Social projection is further exacerbated because consensus information is particularly difficult to obtain in uncertain times (when a new product is released, a new law is passed, or an old norm becomes obsolete), because others engaged in the same search divulge little until they know what is appropriate. Just as Latané and Darley's (1970) non-intervening bystanders kept poker faces while scrutinizing their neighbors' demeanor for the appropriate response to an emergency, individuals are unlikely to commit publicly to a behavior before they have a sense of the prevailing consensus. Before a norm coalesces, estimates of consensus should be labile and are likely to be particularly influenced by one's own reaction. In particular, during times of uncertainty, individuals should be more likely to rely solely on projection, leading to the belief that one is in the majority when one is really in the minority.[4] Indeed, we observed just that in the study presented here. During the ban, a fairly new and ambiguous situation in which norms did not have time to be established, both bathers and non-bathers believed they were in the majority. Once the ban was lifted, we still observed the false consensus effect, but by then it was clear to all that a majority of people shower every day. Now respondents, back in a familiar context, could rely on pre-existing knowledge about the world. Note that this phenomenon makes the resolution of conflicts particularly difficult in uncertain times, because each side, believing it represents the majority, is unwilling to compromise: Bridging the gap between the two sides is made even harder by the essentialist interpretations of the behavioral divide, to which we now turn.

Behavioral Stereotypes

A simple behavior, showering, was seen as reflective of a deeper underlying personality trait with obvious moral undertones, caring about the community. The tendency to jump quickly from observing an actor's behavior to inferring dispositional attributes of that actor is one of the core findings in social psychology (Gilbert & Malone, 1995; Jones & Davis, 1965; Ross, 1977). The present results show that people are willing to make the same dispositional attributions more generally and infer personality traits or attitudes from behavioral labels the same way they make stereotypical judgments of others based on their membership in social categories (G. W. Allport, 1954; Fiske, 1998; D. Katz & Braly, 1933). In addition, the pluralistic ignorance observed suggests that people infer an underlying attitude from behavior, even when they performed the behavior themselves, but do not hold that attitude as strongly. "Behavioral stereotypes" of this kind are quite common in everyday social experience, as in the case of more familiar stereotypes defined merely by behavior: smokers versus nonsmokers, vegetarians versus meat-eaters, or exercisers versus non-exercisers. We hold well-formed theories about the kind of person who would fall on either side of these behavioral divides, although none of these categories form a group in the traditional sense of the term, in that they do not need to engage in any group-like activity.[5]

One possible concern in using the data in this article to explore behavioral stereotypes is that by only asking about concern for the community, we might have implied that this was the appropriate dimension by which to judge showering during the ban and therefore the most logical personality inference to draw from the behavioral labels. One could then argue that the differences observed in the perception of groups result from the demand characteristics of the situation. One way to address this problem would be to use less directed scales, such as the items of the semantic differential scales (Osgood, Suci, & Tannenbaum, 1967). We asked 107 participants to rate smokers, vegetarians, exercisers, and their behavioral counterparts on the semantic differential scales. As predicted, these behaviors were seen as highly diagnostic of the dimensions underlying the

semantic differential. For example, non-smokers and exercisers were rated significantly higher than their behavioral counterparts on the evaluation, potency, and activity factors. More interestingly, vegetarians, a minority that could claim the moral high ground, were seen as significantly better on the evaluation scale but significantly weaker on the potency scale by our mostly meat-eating (91%) sample. This illustrates that there is a logic to behavioral stereotypes and that they are complex representations that can include positive as well as negative traits.

Casuistry

Another intriguing line of research lies in uncovering the mechanisms by which individuals performing an undesirable behavior are able to distance themselves from others who do the same, implicitly claiming that their behavior is not diagnostic of an underlying disposition. We assume that they engage in some degree of casuistry, claiming they were in special circumstances, thus following a tendency to attribute their own behavior to situational factors and others' behavior to their dispositions (Jones & Nisbett, 1976). Anecdotal evidence supports this view: In an article published by the *Daily Princetonian* on Day 3 (Esguerra, 1999), many student interviewees sympathized with the water concerns but felt that their special circumstances justified taking a shower. For example, the president of a dance group famous for its exhausting practices reported that although members were "doing their best to conserve water," the long auditions on Day 1 would have made it "fairly disgusting" not to shower afterward. This insight into the phenomenology of the shower-taker highlights one strategy that people use to justify—to themselves and others—their socially undesirable behavior. Future research should focus on the systematic study of such exculpatory strategies.

The Legacy of Uncertain Times

Today's norms are often remnants of yesterday's fluid consensus. In the water crisis, things quickly went back to normal after a temporary, if drastic, change in both descriptive (actual consensus) and injunctive (desirability) norms. Such changes, however, are not always temporary, and when crises mark the beginning of a new era (e.g., successful revolutions), the dynamics observed in this article can have lasting consequences. Given the inertia inherent in less critical times, many of the norms and behavioral stereotypes that have currency in times of relative certainty emerged and coalesced in times of uncertainty. Thus, norms and stereotypes that emerge overnight in times of uncertainty, when social consensus is in some sense "up for grabs," may very well endure,

entrenched and crystallized, and remain the ones we deal with in the relative certainty of our everyday lives.

NOTES

1. Whereas earlier writing on consensus estimates tended to privilege the role of desirability (e.g., Goethals, Messick, & Allison, 1991), more recent models emphasize the centrality of actual consensus (Krueger, 1998; Mullen & Hu, 1988). One rare attempt to disentangle these two factors was conducted by Mullen and Goethals (1990), who showed that desirability and actual consensus exert independent, additive, and noninteractive effects on social projection (see also Krueger, 1998). In our investigation of the water crisis, as in many naturalistic settings, the natural confounding of the two factors precludes any analysis of their separate contributions, and our results should be interpreted as reflecting the impact of both desirability and frequency.

2. This figure closely resembles that obtained by the *Daily Princetonian* (57 out of 157, or 36%) through an "informal telephone survey" conducted on Day 2 (Esguerra, 1999). Note that the publication of this figure should have worked against us, because it provides an anchor that might have limited false consensus and the uniqueness bias.

3. Similarly, Miller and McFarland (1987) showed that pluralistic ignorance can lead to people feeling less intelligent than their peers, as exemplified by the typical classroom situation where each student attributes her peers' lack of clarification questions as evidence that she is the only one confused and as a result the whole confused class stays silent.

4. It is important to note, however, that this extreme reliance on social projection is in most cases the optimal strategy because in the absence of other information it would be irrational not to take one's own behavior into account when making consensus estimates. Dawes and his colleagues observed that as predicted by Bayesian statistics, the more perceivers rely on projection when making estimates of consensus, the more accurate they are (Dawes, 1989; Dawes & Mulford, 1996). If there really is a bias involved in social projection, it seems to be that when other information is available, people still give too much weight to their own experience (Krueger, 1998).

5. In a related vein, Gross and Miller (1997) note that "the groups studied in false consensus research, the majority and the minority, typically do not exist in any real interactive sense" (p. 241).

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