

## Going to College and Unpacking Hazing: A Functional Approach to Decrypting Initiation Practices Among Undergraduates

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Initiation practices likely support group functioning by promoting group-relevant skills and attitudes, reinforcing status hierarchies, and stimulating cognitive, behavioral, and affective forms of social dependency. In field tests of these propositions, 269 undergraduates from same-gender organizations rated their initiation experiences. As predicted, athletes reported relatively more physical challenge and pain, whereas members of Greek-letter organizations reported more social deviance and embarrassment. Hierarchy was positively associated with initiations featuring social deviance but unexpectedly negatively related to physically and psychologically harsh initiations. Harsh treatment and fun independently predicted group identity. Laboratory experiments on male ( $n = 74$ ) and female ( $n = 37$ ) undergraduates found that discomforting inductions increased social dependence on group opinion and, for women, increased additional forms of dependence (proximity to induction agents and negative mood when left alone). The results across studies suggested that hazing's task masters are 3: schooling skills and attitudes, conveying hierarchy, and promoting social dependency.

*Keywords:* initiation, hazing, conformity, social identity, attachment to groups

If those above love ritual, then the common people will be easy to manage.

—Confucius, 551–479 BCE (translated by E. Slingerland)

The chain of motivational, cognitive, and social processes that bind individuals to collections of others is forged early in life. Infants and young children inherently form affectional bonds and seek proximity with those who become familiar to them (Ainsworth, 1972; Bowlby, 1969/1982; Cassidy, 1999). The need to belong burgeons, fueling a desire for interpersonal attachments that older children, adolescents, and adults may satisfy through group membership (Baumeister & Leary, 1995; Smith, Coats, & Murphy, 2001). A cognitive proclivity to distinguish in-groups from out-

groups, and to self-categorize, transforms individual identity into in-group social identity (Tajfel & Turner, 1979; Turner, 1985). Striving to belong to a particular group, especially during ritualized initiations, may result in the justification of that effort, thereby inoculating individuals against any dissonant cognitions they may harbor concerning the consequences of group membership (Aronson & Mills, 1959; Brehm, 1960; Cialdini, 2001). These linkages of motivational, cognitive, and social elements prepare individuals to seek group affiliations and adopt social identities throughout their lifetime (Baumeister & Leary, 1995).

Affiliation and identification with a group and its leader cultivate feelings of security, especially under conditions of uncertainty or threat (Baron, 2000; Baumeister & Leary, 1995; Festinger, 1954; Gump & Kulik, 1997; Hogg, 2001; Rosenblatt, 1964; Schachter, 1959; Smith, Murphy, & Coats, 1999; Tajfel & Turner, 1979). For this reason, group leaders who are perceived as powerful and influential in managing threat are likely to enjoy memberships with relatively strong collective identities (Baron, 2000; Hogg, 2001; Rosenblatt, 1964). Theoretically, it matters little where the threat

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originates. In humans and other primates, feelings of threat may direct affiliative behavior and affectional bonds toward those suffering the same fate or even toward the agents of the threat (Baron, 2000; Baumeister & Leary, 1995; Bowlby, 1969/1982; Rajecki, Lamb, & Obmascher, 1978). Therefore, events simulating threat may be used to trigger the psychological processes that connect individuals to groups and to their leaders.

At times when threat is low, groups and their leaders may instill threat in potential members by invoking perceived enemies (Hogg, 2001; Landau et al., 2004; Rosenblatt, 1964) or perhaps by staging initiation rituals that activate feelings of threat (Baron, 2000; Galanter, 1999). Contrived threats are likely to empower leaders and groups by stimulating the kinds of attitudes, social perceptions, and affiliative bonds that breed group identity and inspire obedience and devotion among new members of face-to-face groups. Processes such as these may be unleashed among constituencies as large as nations (Landau et al., 2004; Rosenblatt, 1964) or as small as universities and social clubs (Baumeister & Leary, 1995; Hermanowicz & Morgan, 1999; Moreland & Levine, 1989).

The premise of our research was that threatening initiation practices such as hazing rituals function to support and maintain groups in at least three ways: by promoting group-relevant skills and attitudes, by reinforcing the group's status hierarchy, and by stimulating cognitive, behavioral, and affective forms of social dependency in group members. Field and laboratory research probed these propositions in samples of college students. The rationale for these studies is articulated next, and then the studies are described.

### Initiations as Contrived Threat

Preliminary welcoming receptions designed to attract new group members typically entail mildly enjoyable social experiences such as informal, conversational gatherings surrounding parties or dinners. However, the character of events often changes after these early meetings, consistent with the "foot in the door" technique. That is, initial requirements to attend group events may consist of simple efforts that are only mildly arousing, such as turning out in particular attire for an occasion, spending time

engaged in prescribed, social exchanges with group members, or waiting for extended periods of time before being interviewed by representatives of the group (Pomerantz, 1995). Initial compliance with low-cost efforts like these makes subsequent, costlier forms of compliance more likely (Cialdini, 2001). Subsequent initiation events invite increasingly more effort and may ultimately require newcomers to endure various types of discomfort and threat. For example, cleaning up after parties is a common assignment given to newcomers, and it can become ritualized into particularly degrading forms: In some cases, pledges clean up garbage, vomit, and broken glass in the aftermath of nights of binge drinking using bare hands and wearing "uniforms" that they are not allowed to wash from party to party (Pomerantz, 1995). Yet the heightened negativity of the experience is apparently transformed as devotion to the collective.

Case studies reveal that a variety of initiation practices characterize groups with highly cohesive and intensely loyal memberships (e.g., Galanter, 1999; West, 1993). From what is known about real-world groups, initiation and indoctrination protocols are orchestrated so as to stimulate sequences of emotional, perceptual, and cognitive experiences over time (Baron, 2000; Galanter, 1999; Moreland & Levine, 1989; Singer & Ofshe, 1990; West, 1993). Initiations may include activities perceived to be fun and rewarding, physically and emotionally demanding, embarrassing, socially deviant, degrading, painful, and sometimes dangerous or brutal. The activities designed for newcomers typically adhere to highly prescribed protocols defined by group traditions (Robbins, 2004). Established group members may be given specialized roles, such as "pledge master," and charged with maintaining the integrity of initiation protocols. Leaders and group members commonly subscribe to the belief that newcomers should undergo induction procedures resembling those they experienced. Initiations are thought to produce "better" group members. It is not unusual for initiates to perceive induction activities as fun and rewarding, and initiation practices may, in fact, be fun. However, there is also evidence that participants cognitively skew discomforting initiation experiences in ways that make them seem more enjoyable than they actually were (Cialdini, 2001).

In some cases, the initiation activities new members endure clearly induce threat by incorporating *physical challenge or pain*. For example, athletic teams and gang members have been known to ritualistically paddle incoming members; these episodes at times degenerate into beatings or sexual assaults (Finkel, 2002). Pledges to Greek-letter organizations may submit to ingesting concoctions meant to induce nausea; in some instances, pledges have choked to death (Finkel, 2002). Pledges may be directed to wait for hours in dark, cold, uncomfortable places or to maintain painful physical positions for extended periods of time. They may be charged with the exhausting task of painting ceilings in the fraternity house all night long. Branding with lit cigarettes has been practiced as an initiation ritual in some college fraternities and sororities (Finkel, 2002).

College campuses are but one setting in which newcomers to groups may face physical extremes. Canadian Air Force initiates perform demeaning tasks, binge drink, and submit to intense, painful, physical activity (Winslow, 1999). During "blood pinning" initiations, U.S. Marine paratrooper trainees earning golden wing pins had them slammed and punched into their bodies by fellow marines (Gleick, 1997). New cult members have been subjected to inadequate diets while performing repetitive tasks requiring physical endurance (Galanter, 1999; West, 1993). On campus or off, the threat provoked by these types of experiences combines the physical and psychological consequences of submitting to effortful, painful, or self-injurious behavior. Having endured it, individuals may find the consequence of such physically harsh treatment to entail feelings of mastery over the challenge.

Other types of threatening inductions feature *social deviance, embarrassment, or humiliation* (Cialdini, 2001). For instance, initiation rituals in some fraternity houses include "lard sliding," where pledges strip, slather their bodies with lard, and slide along the floor (Pomerantz, 1995). Initiates may be assigned to while away hours concocting original nicknames for fellow recruits that have secret, shared meanings. New members may be asked to reveal personally embarrassing information and to memorize and keep secret special songs and histories meant to distinguish the group from the larger society (Galanter, 1999; Pomerantz, 1995; Robbins,

2004). Telling and keeping secrets is an effective way to establish social bonds between unfamiliar individuals (Wegner, Lane, & Dimitri, 1994). Initiates to all-female organizations may be assigned to sing bawdy songs in front of all-male groups. In some sororities, pledges disrobe and have areas of body fat identified and circled with markers while being observed by fellow recruits and group leaders and members (Broadbent, 2003). Binge drinking and cigar smoking, sexual conquest assignments, performing tedious tasks, and running fools' errands are socially deviant, silly, embarrassing, or demeaning activities characterizing the initiations of many groups. Though not always physically demanding, initiation activities such as these harness the power of effortful engagement in norm violation to create arousal and distress, thereby inducing threat of a social nature. At the same time, these practices seem geared toward creating and elaborating distinctions between the in-group and normative groups (Robbins, 2004).

To summarize, initiations comprising physical and psychological hardships may be used to induce arousal and threat in initiates. These conditions leave individuals more susceptible to group influence and indoctrination (Baron, 2000). But beyond that, certain types of initiation activities seem orchestrated to achieve particular effects. Experiencing physical extremes may train initiates to withstand physical duress. Engaging in social deviance may primarily function to etch distinction between the in-group and normative groups in the minds and emotions of initiates. Maltreatment may elicit cognitive, behavioral, and emotional symptoms of social dependency. From a functional perspective, different types of initiation experiences seem designed to preserve group features and cultivate group allegiance in particular ways.

### Initiations Cultivate Group-Relevant Skills and Attitudes

We tested the proposition that initiation practices preserve critical features of group life by "unpacking" the initiation practices of college athletic teams, sororities, and fraternities in hopes of identifying basic elements. We reasoned that physical challenges would predominate the induction practices of athletic groups

whereas activities highlighting social deviance (and therefore social distinctiveness) would characterize the initiations of groups dedicated to creating exclusive social networks, such as Greek-letter organizations. On the basis of a functional perspective, athletes were predicted to report relatively greater degrees of physical duress in their initiations than were members of Greek-letter organizations. Members of Greek-letter organizations were expected to report initiation activities entailing more social deviance than were members of athletic groups.

### Initiations Reinforce Group Hierarchy

A second function of initiations may be to attune new members to the group's hierarchical structure (Moreland & Levine, 1989). Initiations provide early opportunities for group leaders to establish power over newcomers to the organization. Getting recruits to follow induction protocols essentially trains them to comply with the group's authority structure. Groups characterized by relatively complex, vertical, formalized hierarchies maintain greater social distances between leaders and new members than do groups with flatter, informal hierarchies. Therefore, hierarchical groups were expected to rely on the long, psychological reach of stressful initiations as a means of establishing social control more than were groups with less hierarchy. We predicted that members of groups with more structured hierarchies, operationally defined by greater role diversity and greater power differences between leaders and new members, would report more severe initiation practices and more frequent engagement in initiation activities than groups with less hierarchy.

### Initiations Stimulate Social Dependency

Initiations also function to promote cognitive, behavioral, and affective forms of social dependency among group members (Moreland & Levine, 1989). But what psychological mechanisms explain why initiation experiences that induce threat, duress, or discomfort rally rather than discourage the loyalties of those who endure them? One possibility stems from attachment theory (Ainsworth, 1972; Bowlby, 1969/1982). For a decade or so, researchers have noted parallels between the attachment pro-

cesses characteristic of parent–infant bonds and those underlying adult bonds (e.g., Hazan & Zeifman, 1999; Shaver, Hazan, & Bradshaw, 1988). More recently, attachment theory has been applied to individual attachments to groups (Smith et al., 2001). Smith and his colleagues noted, for example, that the self-regulatory processes that tie individuals to one another resemble those that bind individuals to groups (Smith et al., 1999, 2001). Smith et al. (2001) argued that because the biosocial–emotional system for human attachment is evolutionarily old and ingrained in human nature, it could have been coadapted to configure individual relationships with collectives as well as with other individuals. Using similar thinking, we propose that a unique aspect of the attachment system, maltreatment effects, applies to human connections with groups and may cast light on how group initiations function to promote behavioral, cognitive, and affective forms of social dependency.

Maltreatment effects describe the phenomenon whereby harsh conditions trigger goal-directed responses in organisms seeking refuge from the duress (Bowlby, 1969/1982). Hence the infant seeks out a caregiver when hungry, fearful, tired, or in pain. Under mundane circumstances, manifesting such social dependency would be adaptive, contributing fitness to both kin caregivers and offspring. However, the response can be elicited even when the caregiver is the source of the discomfort; that is, social dependency may be directed toward the very agent of the mistreatment (Bowlby, 1969/1982; Rajecki et al., 1978).

Maltreatment effects have been investigated in a variety of nonhuman species, including monkeys, dogs, sheep, and chickens (Cairns, 1979; Rajecki et al., 1978). In one study, puppies were either indulged or alternately indulged and punished by their human handler (Fisher, 1955, as cited by Rajecki et al., 1978). When tested for attachment to him, puppies that were both indulged and punished showed more than twice the desire to maintain close proximity to their handler than did the indulged group of puppies. The stimulation of abuse can be potent: Monkeys often form stronger bonds with periodically abusive agents than with non-abusive agents (Rajecki et al., 1978).

The implications of maltreatment effects for human attachments to groups are important. In-

dividuals who undergo mental and physical duress can become dependent on and even attached to those inflicting the treatment, especially when a clear power differential is present and alternative social options are unavailable (Auerbach, Kiesler, Strentz, Schmidt, & Serio, 1994; Moreland & Levine, 1989; Rajcecki et al., 1978). From a functional perspective, treatment that includes punishment as well as reward may be most effective in creating social dependency on its agents (Dolinski, Ciszek, Godlewski, & Zawadzki, 2002; Galanter, 1999).

Anecdotal evidence seems to support the idea that severe treatment sometimes stimulates social bonds in humans. The Stockholm syndrome describes the ideological support and affection that hostages have been known to develop for their captors (West, 1993). It was named for the reactions of employees taken hostage by two ex-convicts during an attempted bank robbery in Sweden in 1973. During captivity, the hostages came to identify with their captors' cause and resisted efforts to be rescued. Affectional bonds also developed; after being freed by police, two hostages eventually became engaged to their captors. Patty Hearst experienced a similar transformation of ideology, affection, and identity after being kidnapped, terrorized, and held hostage by the Symbionese Liberation Army in the 1970s (Hearst, 1988). More recently, an American kidnapping victim taken hostage by Muslim rebels in the Philippines seemed to suffer a similar, psychological fate; he was described as having "fallen for his captors" (Macfie, 2000, p. 1). And when Auerbach et al. (1994) simulated a highly stressful captivity situation in which airline employees were "taken hostage" by "terrorists," liking for the "terrorists" increased over time. Related psychological processes presumably explain why abused spouses and children often prefer to stay with rather than leave their abusers (Boulette & Andersen, 1986; Dutton & Painter, 1993; Rajcecki et al., 1978).

When maltreatment is connected to involvement with a defined group, the social dependency it fuels may be manifested cognitively, emotionally, and behaviorally. Cognitively and emotionally, the need to maintain and defend the sense of self in the face of the threat and uncertainty can be remedied by transforming an individuated identity into a group identity (Hogg, 2001). Behaviorally, the dependency

fostered by maltreatment is likely to be expressed as compliance with group norms and attraction to group members (Baron, 2000; Moreland & Levine, 1989). We tested whether social dependency in the wake of relatively severe initiations was manifested in these ways by assessing group and individuated identity and by tracking conformity and attraction to groups. Identity was assessed among the members of campus groups with varying initiation practices. Conformity and attraction to the groups was measured in laboratory experiments that simulated mild or severe inductions to contrived groups.

### *Identity*

Two ratings of membership importance were construed as measures of identity. Following Ethier and Deaux (1994), our first measure tapped group identity by asking participants to rate the importance of the group to them. Our second, relatively novel measure of individuated identity invited participants to rate *their own* importance to the group. Identity, therefore, had dual, self-related aspects: (a) how much the individual was psychologically invested in belonging to the group and (b) how much the individual perceived the group to invest in his or her unique, individuated belonging.

The distress-provoking aspects of initiations were expected to augment ratings of the importance of group membership by the individual as individuals sought refuge from threatening circumstances in the psychological safe house of group belonging (Baron, 2000; Baumeister & Leary, 1995; Hogg, 2001; Rosenblatt, 1964). Threatening conditions were not, however, expected to make individuals feel more important to the group; if anything, there was reason to believe that being subjected to severe initiation procedures was likely to diminish rather than increase an initiate's sense of individuated power and importance relative to the group (Baron, 2000; Moreland & Levine, 1989). For the members of campus groups we surveyed, our specific prediction was that those who rated group initiations as severe would also rate the group's importance to them as greater than would individuals belonging to groups with less severe initiation practices. In contrast, members' perceptions of their individuated impor-

tance to the group were not expected to relate to severe treatment.

### *Conformity*

Because the behavioral expression of social dependency—conformity—was difficult to measure in the field, we resorted to experimental simulations of initiation protocols to test whether harsh treatment evoked compliance. There is some behavioral evidence from laboratory studies that has linked social dependency in the form of compliance or conformity to experimentally induced discomfort. For example, harsh treatment in the form of public failure was found to increase social compliance (Van Duuren & Di Giacomo, 1996, 1997). Studies of initiation severity per se rarely test for social dependency, although when Schopler and Bateson (1962) did, they found that severe inductions increased initiates' dependency on the opinion of the experimenter. These researchers argued that the severe initiation generated dependency by establishing, in the perceptions of initiates, the experimenter's power over them. Consistent with Schopler and Bateson (1962), we predicted that the social dependency engendered by relatively severe treatment would be manifested in high rates of conformity to group opinion.

### *Affective Social Bonds*

According to attachment theory, discomfort readies the emotional system to seek protection by establishing affective bonds with potential caregivers (Bowlby, 1969/1982). When the sources of abuse are the only available outlet, affiliative responses may be directed toward them (Rajecki et al., 1978). Thus, another possible outcome of severe initiations is the development of interpersonal attraction toward its agents. This hypothesis was tested in two laboratory experiments in which confederates staged either discomforting or innocuous initiations. Discomforting initiations were predicted to enhance the attractiveness of confederates in the eyes of participant "initiates" (Study 2). In Study 3, we tracked two additional measures of attachment, proximity maintenance and separation anxiety (Bowlby, 1969/1982), and predicted that inductees who experienced a relatively severe induction would maintain close

physical distances to confederates and experience heightened anxiety when confederates left them alone.

### *Cognitive Dissonance: An Alternative Mechanism*

The standard, social psychological explanation for why we come to value the group we suffer for—and the greater the suffering, the greater the value—is dissonance theory (Aronson, 1995; Brehm, 1960; Cialdini, 2001; Festinger, 1954). Theoretically, harsh initiations arouse dissonance in individuals who engage in activities that violate conceptions of the self (Aronson & Mills, 1959). The more voluntary the engagement, the greater the dissonance aroused and the more motivation there is to resolve it (Elliot & Devine, 1994). Dissonance is mitigated by either cognitively diminishing the negative aspects of initiation activities (e.g., "It wasn't degrading; it was fun!"), overvaluing the group (e.g., "Belonging to this group is so worthwhile that it is worth suffering in order to become part of it"), or both (Aronson, 1995; Brehm, 1960; Cialdini, 2001). Thus, the mechanism underlying the connection between severe initiations and enhanced evaluation of the group is ostensibly dissonance reduction.

Support for the idea that relatively threatening or severe initiations make groups more valuable to newcomers comes from a few classic, laboratory experiments conducted in the 1950s and 1960s (i.e., Aronson & Mills, 1959; Gerard & Mathewson, 1966). These early studies essentially found that the greater the mental or physical effort required for group membership was, the more inflated ratings of group attractiveness became. For instance, participants in Aronson and Mills's (1959) study who underwent an embarrassing induction found fellow group members to be more attractive than did participants who experienced a mild induction. Similarly, participants given relatively intense electrical shock during induction exhibited greater liking for their group than did those who received mild shock (Gerard & Mathewson, 1966). These early studies were consistent with the notion that newcomers reduce dissonance by overvaluing the group for which they suffered.

## Discrepancies Among Previous Studies of Initiations

Both attachment theory and dissonance theory offer psychological mechanisms that purport to explain the connection between severe initiation practices and group attraction. Yet later studies have failed to support the basic idea that severe initiations produce greater liking for the group. In the laboratory, Hautaluoma, Enge, Mitchell, and Rittwager (1991) manipulated the severity of induction and reported that mild rather than severe procedures heightened inductees' attraction to the group. Field studies have also cast doubt on the link between suffering and liking. Lodewijckx and Syroit (1997) surveyed newcomers to Dutch sororities and found no evidence that (reportedly) severe inductions provoked either strong group affiliations or heightened group attraction. Specifically, the Dutch sorority pledges who assessed initiation experiences as "unpleasant" reported feelings of frustration, loneliness, and depression, as well as diminished affiliation with the group (Lodewijckx & Syroit, 1997). In a recent refinement of these analyses, Lodewijckx and Syroit (2001) reached a similar conclusion by finding no evidence of dissonance effects. Thus formal evidence of hazing's effects on social-emotional bonds is quite mixed. It appears that harsh treatment does not reliably produce the kind of attraction to groups that some researchers seek to construe as evidence of dissonance reduction or that we suggest may be a manifestation of maltreatment effects.

### Limitations of Previous Research

Irrespective of theoretical orientation, measurement and design problems may account for discrepancies among the findings of laboratory experiments, field studies, anecdotal reports, and case studies of the effects of initiations. Laboratory experiments typically impose short-term "inductions" designed to invoke specific, psychological threats, such as social embarrassment (i.e., Aronson & Mills, 1959; Schopler & Bateson, 1962), fear of shock (i.e., Gerard & Mathewson, 1966), or anxiety produced by performing a repetitive task (Hautaluoma et al., 1991). What laboratory participants placed in "minimal" groups experience is short lived and variously defined (e.g., embarrassment, fear of

pain, boredom). Meanwhile, initiates of real-world groups experience something very different.

Anecdotal reports and case studies suggest that real-world initiation activities arouse a confluence of feelings. Activities may comprise aspects that are fun, embarrassing, disgusting, boring, painful, brutal, and challenging. Unfortunately, researchers in the field typically measure real-world hazing by packaging these experiences together and measuring them as a single construct. For example, Lodewijckx and Syroit (1997) measured "severity" of initiation experiences on scales for "unpleasantness." Studies indexing initiations with a single scale (i.e., "severity") constrain the complexity of initiations and initiate reactions into a unitary response. We gathered multiple assessments of initiation experiences and submitted them to a multiple regression analysis in order to distinguish among them.

### The Present Research

We "unpacked" initiations and their consequences for individuals and groups on college campuses from a functional perspective. In the field, we assessed whether initiation practices related to the development of group-relevant attitudes and skills, to the reinforcement of group hierarchy, and to group identity. In the laboratory, we tested whether relatively severe inductions spawned conformity and attraction to group members as a manifestation of the social dependency generated by maltreatment.

In Study 1, we asked students belonging to campus organizations (typically, sororities, fraternities, athletic teams and clubs, and a cappella groups) to retrospectively assess their impressions of "activities designed to initiate or test new members." Members rated the degree to which these activities were fun, embarrassing, physically and psychologically challenging, socially deviant or abnormal, and painful. Members also responded to rating scales assessing the relative power of group leaders over new members. Measures of group and individuated identity were taken; participants rated how important the group was to them and how important they were to the group, respectively.

In Studies 2 and 3, experimental confederates served as group members who "inducted" naive participants into their group using either dis-

comforting or innocuous procedures. Social dependence was measured by assessing participants' conformity to confederates' opinions and by having them rate the attractiveness of confederates and the enjoyment of the experience. In Study 3, affiliative bonds were indexed by the proximity participants maintained with confederates and by the anxiety they reported when confederates left them alone, consistent with the thinking of Bowlby (1969/1982).

Gender was likely to add complexity to relationships involving power. Male and female attitudes toward social dominance typically differ (Pratto, Sidanius, Stallworth, & Malle, 1994), and the nature of power structures in male and female groups reflects these differences. Power relationships among males are maintained and supported by overt aggression and are characterized by well-defined hierarchies (Bjorkqvist, 1994; Buss, 2004; Crick & Grotpeter, 1995). Power bonds among females emerge from subtle, indirect, relational forms of aggression and coincide with less obvious hierarchical dominance structures (Bjorkqvist, 1994; Buss, 2004; Crick & Grotpeter, 1995). From early to late in life, male relationships typically promote status distinction whereas female relationships generally project status diffusion (Ostrov & Keating, 2004; Pratto et al., 1994). Thus, our samples included only individuals initiated into same-gender organizations, and gender of participant was incorporated as a variable.

### Limitations

Our field study (Study 1) was meant to launch a new look at the fundamentals of initiations. We investigated how initiations, as contrived threats, altered perceptions of self in relationship to groups and their mission.

There were several shortcomings to this rough start. First, we relied on participant verbal reports of initiation experiences rather than actual observation. Second, we studied only undergraduate volunteers who identified with a same-gender group, thereby restricting our ability to generalize results beyond the sample we gathered. Third, our natural groups confounded organization with hierarchy: We relied predominantly on Greek-letter organizations for elaborated hierarchies and on athletic teams and clubs for less hierarchical structures. Moreover, the

individuals attracted to different organizations may have had inherent proclivities toward or against particular forms of initiation activities. Though our experimental studies (Studies 2 and 3) offered partial remedies to some of these methodological problems, they suffered from the kinds of shortcomings inherent in contrived settings.

## Study 1

### Method

*Participants.* An initial pool of 156 male and 166 female undergraduate students participated by volunteering to complete a short questionnaire. All were enrolled in a small, highly selective liberal arts college in the Northeast. They ranged in age from 18 to 22. Each received a coupon for a free slice of pizza for their participation except for 39 participants who earned introductory psychology laboratory credit in lieu of the coupon.

Ninety-two percent of men and 87% of women who participated reported membership in a single-gender organization as their primary affiliation. Data from these participants formed the basis of all analyses. Therefore, our final sample included 138 men and 131 women who indicated a same-gender group as their most important campus membership.

*Materials.* Testing materials included a small (6.5 × 3.5 in.), innocuous-looking booklet containing 21 pages. On the first page, participants reported their academic class year and gender. On the second page, they checked off an organizational affiliation (if they had one). Printed instructions asked each participant to chose the one group he or she identified with most, with the following options listed: a club sport team, student newspaper, an a cappella group, a sorority, student government, pep band, a varsity sports team, a religious organization, a fraternity, or "other." Each subsequent page presented a single question so that previous responses were less salient as each new question was considered and subsequent responses were made.

The questions appeared in a standard order. Question 1 asked, "Did you participate in initiation activities?"; response options were *never*, *rarely*, *occasionally*, *frequently*, and *often*. The next six questions assessed how psychologi-

cally challenging, how embarrassing, how physically demanding, how much fun, how painful, and how deviant (defined as “not normal, strange”) the activities were and presented 7-point response scales labeled *not at all* (1), *somewhat* (4), and *extremely* (7).

Similar 7-point scales were used for the next two identity-related questions. Similar to Ethier and Deaux (1994), we assessed the degree to which individuals identified with groups by asking, “How important is the group to you?” The second identity-related question posed was “How important are you to the group?”

The next subsequent set of questions asked about the existence of officers and their power over members. The first query in this cluster was “Is there a president, captain, or group leader? (circle No or Yes). How much power does the president, captain, or leader have over other members of the group?” Perceptions were recorded on a 7-point scale labeled *no power* (1), *some power* (4), and *lots of power* (7). Subsequent pages presented similar questions for copresidents/cocaptains/coleaders, vice presidents, secretaries, treasurers, and new member activities chairpersons. In the end, questions about the power of these secondary offices were not analyzed because athletic teams and clubs had no such offices. The final question presented the same 7-point scales and asked, “How much power do new members have over other members of the group?”

**Procedure.** Contact was made by two female experimenters stationed at various locations on and around campus. These locations included dining halls, dormitory lounges, indoor and outdoor student gathering places, libraries, and lobby areas in academic buildings and near athletic facilities. Students were invited to volunteer for a study of student group activities and group identity. They read a consent form stating that we were studying student perceptions of the campus organizations in which they were involved. Students were informed that participation was voluntary and anonymous and that neither their personal identities nor their specific group affiliations would be revealed. After reading the short description of the study, they signed a consent form that was detached from the survey and immediately placed in a separate backpack. Experimenters maintained an appropriate distance from participants as they independently completed the sur-

veys. These procedures were designed to encourage accurate, honest responses.

As part of a pilot study, participants were given the option of completing the 10-item Need to Belong Scale (Baumeister & Leary, 1995) after completing our survey. Approximately 74% of participants completed the scale (these data are not reported here). When finished with their chosen tasks, participants were thanked, debriefed, and given a coupon redeemable for a free slice of pizza.

## Results and Discussion

**Description of the sample.** Table 1 contains descriptive statistics for male and female undergraduate participants who reported membership in same-gender organizations. Men and women were generally similarly distributed in terms of class year and organizational affiliations. Most identified either athletic clubs or teams or Greek-letter organizations as the primary group to which they belonged. The sizes of the groups men and women belonged to averaged between 26 and 50 members. In these ways, male and female participants were comparable. However, male juniors were relatively underrepresented. More men than women were associated with a cappella groups. More women than men identified with athletic groups (see Table 1).

Table 1  
*Descriptive Statistics (Percentages) for Undergraduate Participants in Study 1*

Variable	Men (n = 138)	Women (n = 131)
Class year		
First	29	23
Second	27	24
Third	16	23
Fourth	28	30
Organization		
Athletic teams	50	57
Greek affiliations	38	38
A cappella groups	12	05
Participation in initiation activities		
Never	0	0
Rarely	17	16
Occasionally	28	26
Frequently	26	32
Often	28	25

*Initiation tactics of athletic and Greek-letter groups.* To test the hypothesis that different groups rely on different initiation tactics in order to reinforce group-relevant attitudes and skills, we sorted participants into two distinct memberships: varsity and club athletics ( $n = 146$ ) and Greek letter ( $n = 102$ ). Members of a cappella groups ( $n = 21$ ) were omitted from these analyses. Predictions were that members of athletic groups would report relatively greater degrees of physical challenge and pain as part of initiations and that members of Greek-letter organizations would report relatively greater degrees of embarrassment and deviance during initiations. Group membership and gender were the independent variables in a  $2 \times 2$  multivariate analysis of covariance, with perceptions of the degree of physical challenge, pain, psychological challenge, embarrassment, and deviance entailed in initiations as dependent variables. Ratings of how much fun participants attached to initiations were covaried in order to control for possible dissonance effects in which participants cognitively morph negative experiences into positive ones. The

adjusted means for this analysis appear in Figure 1.

The predicted multivariate main effect for group membership was significant,  $F(5, 236) = 9.41, p < .01$ , and the pattern of results depicted in Figure 1 fit predictions. Members of athletic groups reported significantly more physical challenge,  $F(1, 240) = 7.61, p < .01$ , and more pain,  $F(1, 240) = 6.13, p < .02$ , than did members of sororities and fraternities. Meanwhile, members of Greek-letter organizations reported more embarrassment,  $F(1, 240) = 25.20, p < .01$ , and more social deviance,  $F(1, 240) = 15.16, p < .01$ , than did athletic group members. Differences for psychological challenge were not significant,  $F(1, 240) = 1.96, p < .16$ . A similar pattern of results was obtained when the covariate, perceived fun, was omitted from the multivariate analysis.

The omnibus analysis also yielded a main effect for gender,  $F(5, 236) = 5.23, p < .01$ . The multivariate effect was supported by results for physical challenge ( $M_s = 4.10$  and  $3.12$ ),  $F(1, 240) = 15.64, p < .01$ ; pain ( $M_s = 2.92$

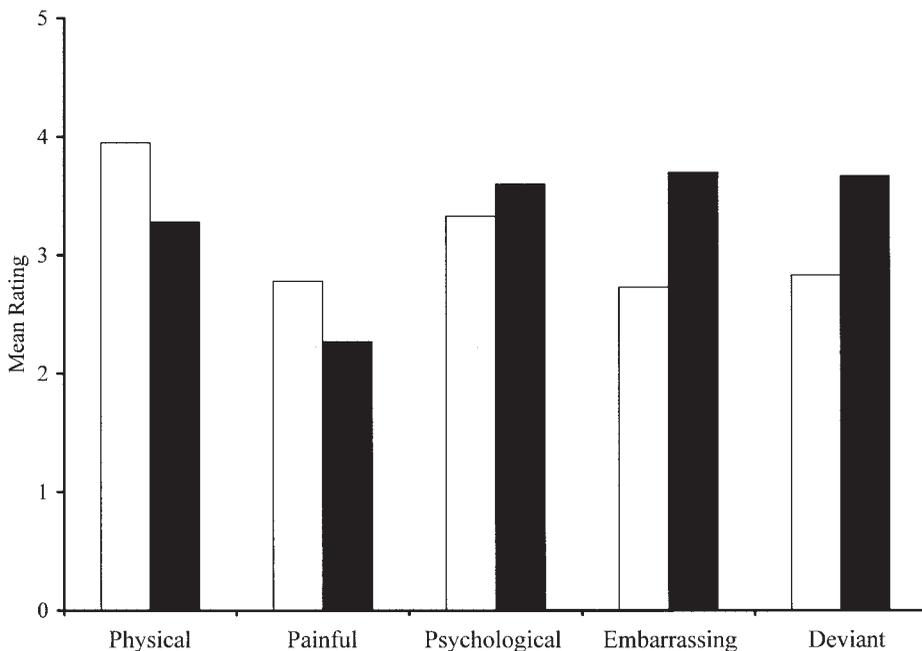


Figure 1. Mean ratings of initiation activities reported by undergraduates belonging to athletic groups (open bars) and Greek-letter organizations (dark bars). Means are adjusted for ratings of fun.

and 2.14),  $F(1, 240) = 14.08, p < .01$ ; psychological challenge ( $M_s = 3.69$  and  $3.23$ ),  $F(1, 240) = 4.10, p < .05$ ; and social deviance ( $M_s = 3.54$  and  $2.96$ ),  $F(1, 240) = 6.95, p < .01$ . In each instance, mean ratings were higher for men than for women. Mean differences for embarrassment did not differ for men and women ( $M_s = 3.18$  and  $3.28$ ),  $F(1, 240) < 1.0$ . The overall main effects for both gender and group membership were robust in that there was no multivariate interaction,  $F(5, 236) < 1.0$ .

*Initiation tactics and perceptions of hierarchy.* To test the hypothesis that initiation tactics support perceptions of group hierarchy, we used initiation practices as predictor variables in regression analyses, with power perceptions as the dependent or predicted variables. Included in these analyses were participants with group membership in any of the three single-gender groups we originally sampled (athletic, Greek letter, and a cappella). The variables available for the predictor set included ratings of the physical and psychological challenge, pain, embarrassment, social deviance, and fun involved in initiations. However, these variables intercorrelated. To avoid problems with multicollinearity, we generated composite predictor variables from the original measurements. This procedure had the additional advantage of reducing the sizes of subsequent predictor sets, which included initiation experiences, gender, and all two- and three-way interactions, to a more manageable number.

Composite predictor variables were created by submitting responses to each of the six scales on which initiation activities were rated to a principal-components factor analysis and varimax rotation. Separate analyses were performed for men and women. The resulting factor structure for each gender was the same.

For men, two factors with eigenvalues greater than 1.0 explained 60% of the variance in ratings. On the first factor, ratings for physical and psychological challenge and for pain loaded .81, .67, and .76, respectively. On the second factor, ratings for deviance and embarrassment had loadings of .90 and .86, respectively. Ratings of fun were not strongly associated with either factor (loadings  $< .45$ ).

For women, the same two factors emerged (eigenvalues  $> 1.0$ ) and explained 62.5% of the variance in ratings. As for men, Factor 1 comprised ratings for physical and psychological

challenge and pain (loadings = .88, .80, and .89, respectively). Factor 2 contained ratings for deviance and embarrassment (loadings of .81 and .79, respectively). Once again, ratings for fun were not strongly associated with either factor (loadings  $< .35$ ).

On the basis of these analyses, three components of initiation experiences were identified and measured for men and women. Composite scores for experiencing harsh treatment encompassed the averaged ratings of the physical challenge, psychological challenge, and pain involved in initiation activities (interitem correlations ranged from .50 to .61;  $\alpha = .78$ ). Composite scores for engaging in activities involving social deviance incorporated the averaged ratings of initiation experiences perceived as deviant and embarrassing (interitem correlation = .52;  $\alpha = .70$ ). Ratings of the perceived fun of initiation activities were maintained as the third component.

Hierarchy, the predicted variable, was assessed in two ways. First, we constructed a *power discrepancy* score by subtracting participant ratings of the power new members had over other group members from the power leaders had over group members. Second, we computed a *role differentiation* measure by summing the number of leadership positions participants identified as part of the structure of the group (president/captain/group leader, copresident/cocaptain/coleader, vice president, secretary, treasurer). Separate regression analyses were computed for each measure of hierarchy.

Predictor sets for these analyses initially included the three categories of initiation experiences (fun, harsh, and deviant), gender, and all two- and three-way interactions among these variables. A hierarchical regression approach was used to control for the underlying overlap between perceived fun and perceptions of harsh and deviant activities. Thus, ratings of fun and participant gender were added first to the predictor set, followed by ratings of harsh treatment and social deviance, then by all two-way interactions, and finally by all three-way interactions.

When perceptions of the deviance and harshness of initiations were added to the model, predictive power increased significantly,  $R = .17, R^2$  change = .025,  $F(2, 263) = 3.42, p < .04$ . A summary of these results appears in Table 2. As expected, initiations involving so-

Table 2  
*Summary of Hierarchical Linear Regression Analysis for Variables Predicting Perceptions of the Power Differential Between Leaders and New Members in Single Gender Groups (n = 269)*

Initiation activities	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
Socially deviant	0.18	.14	2.15	.032
Harsh	-0.16	-.13	-1.94	.054
Fun	0.01	.03	0.54	.588

cial deviance predicted greater power differentials between leaders and members. But unexpectedly, harsh initiation activities were associated with marginally less of a distinction between leader and member power.

Because prediction of the perceived power differential between leaders and initiates was additionally altered by entry of the set of two-way interactions,  $R = .27$ ,  $R^2$  change = .045,  $F(6, 257) = 2.07$ ,  $p < .06$ , separate regression analyses were computed for women and men. The results for women reflected the overall results; social deviance predicted perceptions of enhanced power differentials,  $B = .33$ ,  $\beta = .24$ ,  $t(124) = 2.75$ ,  $p < .01$ , whereas harsh treatment was linked to reductions in these perceptions,

$B = -.24$ ,  $\beta = -.19$ ,  $t(124) = -2.16$ ,  $p < .04$ . The case for men was more complex; only perceptions of social deviance and fun combined predicted relative power,  $B = .13$ ,  $\beta = .68$ ,  $t(130) = 2.08$ ,  $p < .04$ . When men were trichotomized into categories based on reported deviance and fun, power differentials were highest for those who perceived initiation activities to be both extremely fun and highly deviant (see Figure 2).

The hierarchical regression analysis for our second measure of hierarchy, role differentiation, yielded  $R = .30$ ,  $R^2$  change = .08,  $F(2, 264) = 11.92$ ,  $p < .01$ , when perceptions of social deviance and harshness were added to the model. Table 3 summarizes these results. Once again, whereas social deviance conformed to predictions by being linked to increased role differentiation, perceived harshness produced results contrary to expectations by being associated with reductions in this measure of hierarchy. The additional entry of interaction sets did nothing to improve prediction ( $ps > .50$ ).

Individuals belonging to groups characterized by formal hierarchy were expected to report more frequent engagement in initiation activities overall. Only one of our two indexes of

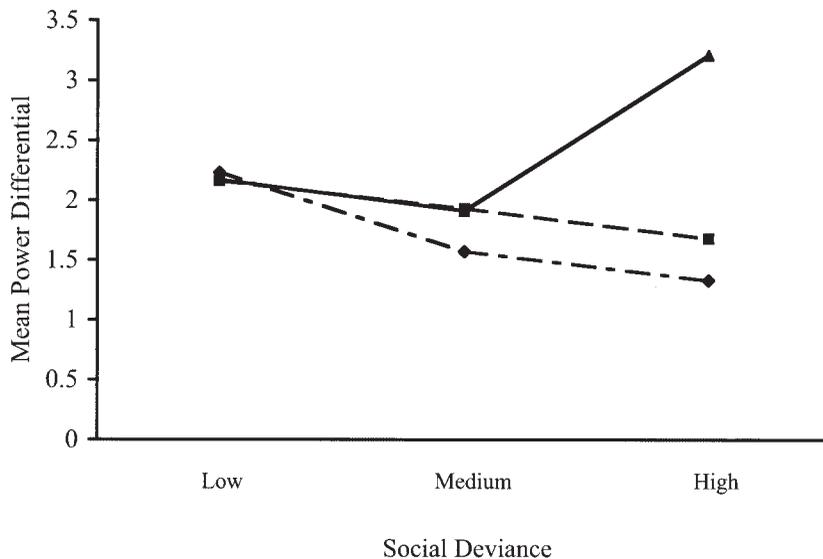


Figure 2. Mean power differences between leaders and members of male groups as rated by men trichotomized into levels of social deviance and levels of fun experienced during initiations. Dashed-and-dotted line indicates low levels of fun, dashed line designates medium levels of fun, and solid line indicates high levels of fun.

Table 3  
*Summary of Hierarchical Linear Regression Analysis for Variables Predicting Perceptions of Role Diversity in Single Gender Groups (n = 269)*

Initiation activities	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
Socially deviant	0.34	.28	4.66	.001
Harsh	-0.18	-.16	-2.48	.014
Fun	0.01	.02	0.39	.696

hierarchy yielded the expected result. Consistent with predictions, the correlation between frequency of engagement and role differentiation was  $r(136) = .37, p < .01$ , for men and  $r(129) = .27, p < .01$ , for women. Correlations between frequency of engagement and power discrepancy were nonsignificant for men,  $r(136) = .09$ , and for women,  $r(129) = .11, p > .05$ .

To summarize, the results linking initiation practices to social hierarchy were mixed with regard to predictions. Consistent with expectations, initiations characterized as involving social deviance were linked to perceptions of the relative power of leaders over new members and to elaborated power structures. Contrary to predictions, initiations typified by harsh treatment were associated with diminished differentials for each index of hierarchy. One of two measures of hierarchy, role diversity, was associated with more frequent engagement in initiation activities, as predicted.

*Predicting identity from initiation experiences.* The predicted (dependent) variables were measurements of group and individuated identity operationalized by two questions, respectively: "How important is the group to you?" and "How important are you to the group?" These measures intercorrelated for men,  $r = .48, p < .01$ , and for women,  $r = .70, p < .01$ . Because we predicted differences in the relationships between these aspects of identity and initiation practices, we maintained them as separate dependent variables and computed separate analyses.

For these tests, hierarchical multiple linear regression analysis was again used to separate overlapping perceptions of initiation experiences within predictor sets. Ratings for fun were entered first, along with gender. Next, perceptions of harsh and deviant initiations were

added. The entry of all two- and then three-way interactions followed.

*Importance of the group to the individual.* Participant reports of the group's importance to them from rated fun and gender alone produced significant prediction,  $R = .38, F(2, 266) = 22.58, p < .01$ , but improved significantly when the other perceptions of initiations were added to the model,  $R = .42, R^2$  change = .03,  $F(2, 264) = 4.85, p < .01$ . Interaction sets did little to improve prediction ( $ps > .10$ ). Table 4 presents a summary of contributing factors.

As Table 4 reveals, initiation activities perceived as fun contributed significantly to perceptions of the importance of the group to the individual. Above and beyond perceptions of fun, harsh initiations were associated with elevated perceptions of the importance of the group to the individual, confirming predictions. Social deviance, however, showed no independent relationship with this measure of identity.

*Importance of the individual to the group.* Participants' reports of their individual importance to the group were also regressed on perceptions of initiations, gender, and all two- and three-way interactions. As shown in Table 5, fun was the only significant independent predictor in the set. Perceived fun during initiations was associated with enhanced individuated importance to the group, at least in the eyes of the individuals who belonged to it.

In Study 2, a laboratory study, we tested whether relatively severe initiations fostered social dependency in the form of conformity to group opinion, and attraction to group members and its activities.

Table 4  
*Summary of Hierarchical Linear Regression Analysis for Variables Predicting Ratings of the Importance of the Group to the Individual (n = 269)*

Initiation activities	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
Socially deviant	0.01	-.05	-0.79	.430
Harsh	0.17	.19	3.11	.002
Fun	0.40	.42	7.26	.001

Table 5  
*Summary of Hierarchical Linear Regression  
 Analysis for Variables Predicting Ratings of the  
 Importance of Individuals to the Group (n = 269)*

Initiation activities	<i>B</i>	$\beta$	<i>t</i>	<i>p</i>
Social deviance	0.01	-.08	-1.37	.170
Harsh	0.01	.02	0.34	.733
Fun	0.34	.34	5.65	.001

## Study 2

### Method

**Participants.** Eighty 1st- and 2nd-year male undergraduate students participated in the study and received credit toward an introductory psychology laboratory. Data from 5 men who detected the purpose of our conformity manipulation were dropped and another man opted not to give consent, which resulted in a final sample of 74 participants.

**Procedure.** Two induction protocols were used to establish generalizability. For the charades protocol, participants performed either embarrassing or innocuous charades purportedly as a test of "creative body movement." For the motor skills protocol, participants performed either embarrassing or innocuous motor tasks purportedly as a test of fine and gross "motor skills." Participants were inducted individually. They were told they would perform behaviors for evaluation by upper-class research students and could be selected to help evaluate the performances of other students. Each participant was escorted to the observation room to meet two male, upper-class student researchers who acted in an outgoing, confident manner by shaking hands and introducing themselves with broad smiles according to a standardized script.

The upper-class students were actually confederates of the experimenter made to seem attractive and powerful. The observation room they appeared to control was appointed to look like their "hangout." It featured comfortable, upholstered furniture, a rug, and warm, incandescent lighting. Each participant was shown how the upperclassmen would be able to observe and judge their performance by looking through a one-way mirror into the performance room. These details were meant to convey that

the benefits of membership included status (being an evaluator of other men's performances rather than being the performer evaluated), affiliation with upperclassmen, and privilege (access to creature comforts such as food and comfortable seating).

Once back in the performance room, participants completed self-report measures (measuring handedness and personality traits). Each was instructed to choose the first of a series of 10 index cards from the table and, at the sound of a buzzer, act out the activity described on it for 15 s. At the sound of the next buzzer he was to stop the activity, pick up card number two, and portray the activity described on it. This procedure was to continue until the researchers determined that the participant had acquired enough points to stop the first part of the experiment and join their group. Having delivered these instructions, the experimenter left the room.

After each participant had completed the first four activities, he was interrupted by the experimenter and told that he could join the upper-class researchers and judge the videotaped performances of other students. In fact, the confederates were prevented from watching performances. They were kept unaware of which motor activities participants performed in order to prevent any systematic bias in the way confederates acted toward participants in different conditions.

Participants were randomly assigned to either severe or innocuous induction conditions. Those assigned to the severe induction performed embarrassing activities, whereas participants assigned to the innocuous induction performed mundane ones. Embarrassing charades were as follows: kneel and polish the boots of someone standing in front of you; act like a dog; act like a slave; and lying on your stomach, place your chin on the floor and hands behind your back. Benign charades were as follows: row a boat; brush your teeth; read a newspaper; and juggle. Embarrassing motor skills were as follows: dance to music played on a boom box; trace the outline of your lips on the mirror using the lipstick; bowl with a miniature bowling set; and play the game Perfection. For the innocuous induction, bouncing a ball to music and tracing a pencil maze were substituted for dancing and using lipstick.

Once a participant joined confederates in the

observation room, he watched a series of videotaped clips showing other students (accomplices) performing novel, innocuous activities either poorly, impressively, or in a mediocre fashion. After every clip, the confederates and participant each gave a verbal rating of the performance on a 10-point scale. On five critical conformity trials, the confederates responded first and gave similar (within 1 point), unrealistically positive or negative ratings (according to pilot tests of the stimulus tapes), and the participant's spoken response was subsequently recorded.

After the judgment task, the confederates left the room on a pretext. The experimenter asked the participant to give the Psychology Department feedback on how well the experiment was run. Each participant was left alone to complete several 5-point, unipolar rating scales with poles labeled *not at all* to *extremely*. On the basis of a priori criteria, two scales assessed the *congeniality* of the evaluators (i.e., their friendliness and whether they were "easy to be with";  $\alpha = .95$ ). Three scales assessed perceptions of their *social power* (i.e., competence, knowledge, and influence;  $\alpha = .88$ ). Two scales indexed their *poise* (i.e., poise, confidence;  $\alpha = .85$ ). These scales were intermingled with others for authenticity (e.g., politeness of researchers; clarity of instructions). Participants also rated whether the experiment was *fun* (i.e., interesting, creative, fun, and not boring;  $\alpha = .94$ ) and how *embarrassed* it made them feel. Last, participants were asked to write down what they thought the experiment was about, and then they were thanked and debriefed.

### Results and Discussion

**Conformity.** To measure conformity, we calculated the absolute difference between the average ratings of the confederates and that of the participants for each of the five critical tri-

als, in which the two confederates gave uniformly biased ratings (varying by a point or less). These differences were added to form discrepancy scores. Thus, conformists gave ratings that were *least* discrepant from the biased ratings of confederates.

To test whether severe treatment induced conformity, we compared discrepancy scores for each induction condition using a one-way analysis of variance (ANOVA). As predicted, men who experienced the discomfiting initiation conformed most by producing discrepancy scores that strayed least from the biased judgments of confederates ( $M_s = 7.26$  and  $11.10$ ),  $F(1, 72) = 12.67, p < .01$ .

**Social-emotional bonds.** To test predictions that discomfiting initiations would elevate ratings of the group's attractiveness and increase the perceived enjoyment of the experiment, we computed a multivariate analysis of variance (MANOVA) comparing induction conditions (innocuous vs. discomfiting) across ratings of the confederates' poise, congeniality, and power and ratings of how much fun and embarrassment participants experienced. The overall main effect for induction was significant,  $F(5, 68) = 2.26, p < .05$ . Table 6 depicts the univariate means differences on which this result was based. The univariate tests indicated that participants who received the discomfiting induction perceived confederates as more powerful,  $F(1, 72) = 5.88, p < .02$ , and as marginally friendlier,  $F(1, 72) = 3.34, p < .07$ , than did those who received the innocuous induction. Participants who experienced the discomfiting induction also tended to report having had more fun than did those inducted via innocuous procedures,  $F(1, 72) = 3.51, p < .06$ . Induction did not significantly alter perceptions of the confederates' poise or of inductees' perceived embarrassment by the end of the experiment,  $F_s(1, 72) < 1.0$ .

Did perceptions of the group and the experi-

Table 6  
Mean Ratings of Confederates and Experiment by Men Who Experienced Either Innocuous or Discomfiting Inductions

Induction	Poise	Power	Congeniality	Fun	Embarrassing
Innocuous	4.15	3.40	4.16	3.76	3.24
Discomfiting	4.22	3.81	4.42	4.05	3.00

Note. For each induction group,  $n = 37$ .

ence predict conformity? The correlations presented in Table 7 indicate that discrepancy scores were significantly associated only with the men's perceptions of the confederates' power; the greater the degree of power attributed to inductors was, the less men's opinions differed from them.

Did perceptions *mediate* the effect of treatment condition on conformity? We performed separate mediation analyses (Baron & Kenny, 1986) on ratings of confederates (power, poise, congeniality) and the experiment (fun, embarrassing). Beta for the condition–discrepancy relationship was  $-.39$  ( $p < .01$ ). Only power revealed a mediating role, and it was weak. Specifically, confederates were perceived to be more powerful by men in the discomfiting than in the innocuous condition ( $\beta = .27$ ,  $p < .02$ ), and these perceptions were associated with lowered discrepancy scores ( $\beta = -.26$ ,  $p < .02$ ). But partialing power from the equation reduced the condition–discrepancy relationship only slightly ( $\beta = -.31$ ,  $p < .01$ ), suggesting that perceptions of confederates' power only partly accounted for the effect of initiation condition on discrepancy (conformity) scores.

*Summary.* Consistent with a dependency interpretation, severe treatment produced inductees who yielded most to conformity pressure from the group. In addition, men who experienced a psychologically discomfiting induction before joining a group tended to rate its members as more powerful and friendly and reported having had more fun than did men exposed to an innocuous induction. In sum, by orchestrating a discomfiting induction routine we elevated men's dependence on and attraction to the agents who inducted them. Perceptions of the group's power rather than aspects of their attractiveness predicted compliance.

However, the uniformly attractive demeanor of our charismatic group may have masked the effects of attractiveness of the group. In Study 3, we varied the attractiveness of the

group. We also refined our design by inviting "qualified" participants to choose whether they wished to join the group. This modification made the process more closely resemble real-world fraternity and sorority rushing.

In Study 3, female undergraduate students were "initiated" by feeling and smelling either unpleasant or innocuous objects while blindfolded. Following induction, they joined upper-class students (confederates) who pressured them to conform. Confederates either behaved in a warm, friendly, attractive fashion or manifested a cool, formal, less appealing demeanor. Ratings of the confederates and the experience were collected from inductees as in Study 2. In addition, self-reports of negative and positive feelings were gathered, and we surreptitiously measured the proximity inductees maintained to confederates as indicative of social bonds (Bowlby, 1969/1982; Rajecki et al., 1978).

Consistent with maltreatment effects, a relatively severe induction was predicted to promote dependency in the form of greater conformity and closer proximity to confederates, whether or not their demeanor was attractive. Social bonds are characterized by anxiety in response to separation (Bowlby, 1969/1982; Rajecki et al., 1978). Thus, negative arousal was expected to intensify when confederates left severely initiated inductees alone.

### Study 3

#### Method

*Participants.* Forty female undergraduate students participated in the study and earned psychology laboratory credit. Data from 2 women who detected the purpose of our conformity paradigm were subsequently omitted, and a third opted to withdraw. A total of 37 participants remained.

*Procedure.* Individual participants were seated at a table facing a video camera. The

Table 7  
*Correlations Between Men's Discrepancy Scores and Their Ratings of Confederates and the Experiment (n = 74)*

Variable	Poise	Power	Congeniality	Fun	Embarrassing
Discrepancy	.14	-.34***	-.16	-.19	.02

\*\*\*  $p < .005$  (one tailed).

study was described as an investigation of creativity, personality, and the senses. The participant's task was ostensibly to explore several items using only her sense of touch and smell and then to describe the items as creatively as she could. To block the visual sense, each participant was told she would be blindfolded. Participants were informed that some of the items "might be unpleasant" to touch or smell, that two upper-class student researchers would observe her through the one-way mirror, and that her responses would be videotaped. Each participant was also told that she might have the opportunity to join the upper-class researchers and rate the creativity of other students.

Next, participants were escorted to the observation room (appointed to look like the women's "hangout") to meet the upper-class researchers. There, on the basis of random assignment, two female upper-class student researchers (confederates) introduced themselves in either a warm, friendly, outgoing manner (attractive group) or a cool, formal, less outgoing way (unattractive group) in accordance with standardized scripts.

After participants returned to the performance room, the confederates donned ear plugs and faced away from the one-way mirror so they would neither see nor hear the participant manipulating and describing objects. In this way, confederates remained unaware of participants' induction condition.

Meanwhile, each participant completed a mood checklist that included descriptors with positive tone (i.e., *happy, excited, enthusiastic, secure, calm, confident*) and negative tone (i.e., *sad, lonely, frightened, angry, nervous, anxious, tense*). Participants also completed three brief personality inventories (for purposes of future research). The experimenter returned with one of two randomly selected boxes. The boxes were kept closed so that the experimenter was unaware of their contents and thus of experimental condition. Each box contained stimulus items housed in plastic containers. On the basis of pilot tests, stimuli for the discomforting (severe) hazing condition were a "water snake" toy, cooked shrimp, a dog snack food, and, as a control item, feathers. For the innocuous treatment, stimulus items included a rubber ball, aluminum foil, a scented candle, and feathers.

As instructed, each blindfolded participant sequentially removed items from boxes and ma-

nipulated and creatively described them. During this time, the experimenter waited in an adjacent room where she could neither hear nor see participants. When finished, participants signaled the experimenter by pressing a button that sounded a buzzer in the adjacent room and alerted the experimenter by switching on a light. The participant's blindfold was removed, and she was given a choice; she could either join the upper-class women in the next room and judge the creativity of other students or put the blindfold back on and describe new objects. If a participant chose to continue with new objects (7 did), the experimenter left the room ostensibly to get the objects, only to return a few moments later to explain that the keys to the cabinet that housed them could not be found. The participant was then asked to join the researchers (all agreed). Data from participants who initially chose to continue to judge items were analyzed to avoid a self-selection bias.

Once the participant entered the observation room, the confederates offered her a chair they had been using as a footstool. The edge of the chair was placed 10 in. from the confederates, and participants typically pulled it back before sitting down. The experimenter surreptitiously recorded how far back participants placed the chair, estimating the distance by using tile grids on the floor. Interrater reliability for the distance measurements was calculated across the 25% of observations for which a confederate as well as the experimenter estimated and recorded distances. Reliability was acceptable ( $r = .75$ ). Distance estimates were converted to a scale score ranging from 0 (*did not move chair/moved chair back from confederates by less than one inch*) to 4 (*moved chair back 18 inches or more*).

After the participant was seated, the experimenter explained that the second part of the study involved judging creative responses rather than inventing them. On four critical trials, participants were exposed to the similarly biased judgments of confederates before rendering their own opinion. Biased judgments were 1.5 standard deviations higher or lower from mean ratings determined by pilot studies. Oral and written judgments were involved. For critical oral trials, descriptions were read out loud by the experimenter, and the participant reported her judgment out loud after the confederates had reported theirs, using a 10-point

rating scale from *not at all creative* to *exceptionally creative*. On critical written trials, participants read the creative statements and recorded their judgments in pen along creativity rating scales adjacent to scales already completed by confederates. To disguise the conformity manipulation, critical trials were intermingled with 10 other trials in which confederates either disagreed with one another or gave realistic (unbiased) ratings, or participants responded first. Differences between confederates' scripted ratings and those produced by participants formed the basis of discrepancy scores: the smaller the discrepancy, the greater the conformity.

With ratings completed, the confederates left the lab. The experimenter reentered the observation room, and the participant completed a second mood checklist. Next, the participant was escorted back to the performance room, where the experimenter left her alone to fill out postexperimental questionnaires ostensibly for Psychology Department feedback. In actuality, these assessments of the confederates and the experiment were identical to those used in Study 2 and served largely as a check for the attractiveness manipulation.

## Results and Discussion

**Manipulation check.** Participant ratings of the congeniality of confederates confirmed that the manipulation of attractive versus unattractive demeanor worked overall. An attractiveness main effect,  $F(1, 33) = 39.73, p < .01$ , reflected higher congeniality ratings for attractive than for unattractive confederates ( $M_s = 4.3$  vs.  $2.9$ ). However, an interaction between induction condition and attractiveness,  $F(1, 33) = 9.32, p < .01$ , revealed that perceived differences in congeniality were more dramatic under severe ( $M_s = 4.5$  vs.  $2.4$ ),  $F(1, 17) = 42.03, p < .01$ , than under mild ( $M_s = 4.0$  vs.  $3.4$ ) induction conditions,  $F(1, 16) = 5.54, p < .04$ .

**Conformity.** A 2 (induction: innocuous vs. discomfoting)  $\times$  2 (group attractiveness: low vs. high) ANOVA was performed on discrepancy scores to test predictions that severe initiations would generate conformity. Only the effect of induction was significant ( $M_s = 3.10$  and  $4.25$ ),  $F(1, 33) = 6.03, p < .02$ , indicating that discrepancy scores were lower for women

initiated under the relatively severe treatment, regardless of the attractiveness of the demeanor of the group. As predicted, experiencing discomfort during induction resulted in comparatively greater yielding to conformity pressure (i.e., less discrepancy) from confederates.

**Affective bonds: Proximity and mood.** To test whether the discomfoting induction generated closer proximity, we computed a 2 (induction: innocuous vs. severe)  $\times$  2 (group attractiveness: low vs. high) ANOVA on the scaled (0 to 4) estimates of the distance inductees chose to sit from confederates. Means for this analysis are displayed in Table 8. The analysis revealed a main effect for induction,  $F(1, 33) = 3.98, p < .05$ , and indicated that participants who experienced the discomfoting induction maintained closer proximity to confederates than those treated less severely. No other effects were significant ( $F_s < 1.0$ ).

We measured changes in mood by subtracting the number of positive and negative mood states endorsed by women prior to induction from the same measure taken after the conformity task when confederates left the room. Means for the positive (felt better) and negative (felt worse) mood change scores appear in Table 8. The 2 (induction)  $\times$  2 (group attractiveness) MANOVA yielded a marginally significant main effect for induction,  $F(2, 32) = 2.57, p < .09$ . Only the univariate test for negative mood supported the multivariate result, indicating that severely hazed women experienced heightened negativity as they sat alone in the observation room near the end of the experiment,  $F(1, 33) = 4.38, p < .04$ . There were no other effects for negative mood ( $p_s > .30$ ).

Did women's affective reactions or perceptions predict their tendency to conform? The correlations that appear in Table 9 indicate that choosing to sit closely to confederates was associated with yielding to group opinion. To a

Table 8  
Mean Distance Rating and Mood Scores for Women Who Experienced Either Innocuous or Discomfoting Inductions

Induction	Distance rating	Felt better	Felt worse
Innocuous	2.78	-.08	-.12
Discomfoting	1.63	-.07	.05

Table 9  
*Correlations Between Women's Discrepancy Scores and Their Ratings of Confederates, the Experiment, and Mood (n = 37)*

Variable	Poise	Power	Congeniality	Fun	Distance	Felt better	Felt worse	Embarrassing
Discrepancy	-.22	-.24*	.17	.12	.33**	-.18	-.09	-.13

\*  $p < .05$  (one-tailed). \*\*  $p < .025$  (one tailed).

lesser degree, attributing greater power to group members was also associated with conformity.

Similar to Study 2, we tested whether affect or perceptions mediated the effect of condition on conformity. Separate mediation analyses predicting conformity were performed for ratings of confederates (power, poise, congeniality) and the experiment (fun, embarrassing) and also on mood and distance scores. Beta for the condition–discrepancy relationship was  $-.38$  ( $p < .02$ ). Only distance came close to meeting criteria for mediation. Severely hazed women sat closer to confederates ( $\beta = -.31, p < .06$ ), and beta for distance was positively but not significantly related to discrepancy scores ( $\beta = .22, p < .20$ ).

*Summary.* Like men, women who experienced a severe induction yielded to the opinions of the confederates responsible for their treatment. Whether confederates were portrayed as attractive or unattractive made no difference: Either way, a severe induction increased dependency on the group as measured by yielding to the biased opinions of its members. Women who received a discomforting induction showed additional signs of what could be construed as signs of maltreatment effects: They maintained close proximity to confederates and experienced negative affect when confederates left them alone. These reactions are reminiscent of those described by attachment theorists who have studied the effects of maltreatment on human and nonhuman social bonds (Rajecki et al., 1978). Moreover, women's proximity to confederates and, marginally, the power they attributed to them predicted conformity to group opinion.

### General Discussion

We set out to “unpack” initiations and their consequences for individual relationships with groups on college campuses from a functional

perspective. In the field, we assessed whether initiation practices related to the development of group-relevant attitudes and skills, to the reinforcement of group hierarchy, and to group identity. In the laboratory, we tested whether relatively severe inductions spawned conformity and attraction to group members as manifestations of social dependency. The results across studies suggested that hazing functions to preserve group features and promote cognitive, social, and emotional manifestations of social dependency.

The premise that initiation activities function to preserve group-relevant skills and attitudes was largely confirmed. For example, the initiation practices of groups with different missions varied as predicted. The success of athletic teams depends on the physical endurance of its members. The success of Greek-letter organizations requires the establishment of an exclusive social network, a goal well served by emphasizing the uniqueness of group membership and its social distinctiveness from out-groups. Consistent with this thinking, athletes characterized their initiation activities as physically challenging and painful, whereas members of Greek-letter organizations highlighted the role of social deviance in initiation activities. Taken together, the implication is that initiations function as a training ground for group-relevant skills and attitudes. However, studies that include a wider array of organizations, missions, and hierarchies are needed for confirmation.

Projections about the functional fit between hierarchy and initiation severity met with mixed success. The psychological techniques of social control manifested in initiations were predicted to be especially severe and frequent in groups characterized by clear power differences between leaders and members and elaborated role diversity. To preserve these features of hierarchy, groups were expected to sponsor initiations that effectively tuned initiates' responses to

them. As predicted, initiations requiring new members to engage in social deviance were linked to enhanced perceptions of the relative power of leaders over new members and to role diversity. In addition, more frequent engagement in initiation activities was associated with greater role diversity, as predicted. Yet our second measure of hierarchy, power differentials, failed to predict more frequent engagement in initiation activities. Moreover, initiations typified by harsh treatment (as distinct from social deviance) were associated with diminished (instead of increased) differentials for each index of hierarchy. Rather than undermining group members' sense of power, harsh treatment requiring initiates to prevail under physical and psychological duress actually seemed to empower them by diminishing perceptions of in-group power differentials.

We hypothesized that the overarching function of all types of severe treatment during initiations was to enhance dependency on the group, expressed cognitively, socially, and emotionally. Consistent with this idea, how much personal importance individuals ascribed to the group they identified with most was predicted not only by how much fun participants had during initiations but also by how harsh initiation activities were perceived to be. The combined, independent effects of these disparate experiences, fun and harsh treatment, perhaps provide a human parallel to the social-emotional impact of the nurturing and punishing treatments Fisher dispensed to puppies and Harlow delivered to monkeys in order to prime social dependency (see Cairns, 1979; Rajcecki et al., 1978). If social identity is a social-cognitive consequence of social dependency, then these results are compatible with the dependency explanation of maltreatment effects.

The results from two laboratory studies also supported the social dependency interpretation. The male and female undergraduate participants who experienced a discomforting induction showed heightened dependence on the opinions of group members. Whether or not group members were viewed as particularly attractive, relatively severe treatment increased vulnerability to group influence relative to mild induction. We construed conformity as a form of dependence and a manifestation of maltreatment effects. Measurement of more traditional attachment behaviors augmented these results:

Women who experienced harsh treatment maintained close proximity to confederates and experienced negative affect after confederates left. In a sense, our laboratory tests simulated the "strange situation" for adults, and induction procedures elicited social bonds with its agents.

To us, the pattern of results across studies seems tailored to a social dependency interpretation. The fact that harsh treatment was associated with a heightened personal stake in group membership could be construed as a social-cognitive manifestation of maltreatment effects and a form of social dependency. Similarly, conformity and group attraction were used to index behavioral, social, and emotional components of dependency in the wake of maltreatment effects. Such effects are normally applied to individual attachments but are used here to explain social bonds between individuals and groups. Some may be bothered by this leap in levels of conceptual analysis and feel unready to bridge theoretical approaches to interpersonal affectional bonds, group attachments, and social identity. Others, however, have welcomed attempts at a synthesis. In particular, Hazan and Zeifman (1999), Shaver et al. (1988), Nelson and Quick (1991), Baumeister and Leary (1995), Aberbach (1995), and Smith et al. (1999, 2001) have all made cogent arguments for a distillation of the basic brew of motives and proclivities that fuel human social bonds across contexts and lifetimes.

The integrative story of maltreatment effects and social bonds might go like this: Maltreatment generates uncertainty, emotional extremes, and stress, which elicit affectional and affiliative behavior toward individuals or groups that is normally adaptive (Baumeister & Leary, 1995; Bowlby, 1969/1982; DeVries, Glesper, & Detillion, 2003; Festinger, 1954; Florian, Mikulincer, & Hirschberger, 2002; Gump & Kulik, 1997; Rajcecki et al., 1978; Schachter, 1959; Smith et al., 1999; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). The social-emotional bonds that result increase vulnerability to social influence and indoctrination (Baron, 2000; Dolinski et al., 2002; Van Duuren & Di Giacomo, 1996, 1997) and foster a depersonalized, social identity (Baron, 2000; Hogg, 2001; Rosenblatt, 1964). At the same time, maltreatment signals differential power: The depersonalized individual's dependence on the group is not matched by any dependence the group has

on individuals. This integration suggests that harsh initiations would enhance perceptions of the importance of the group to the individual but not necessarily heighten members' feelings of their individuated importance to the group. Our studies are largely consistent with this telling and support a social dependency interpretation of initiations.

A few laboratory findings are compatible with a dependency interpretation of maltreatment effects. Van Duuren and Di Giacomo (1996, 1997) also uncovered a link between harsh treatment and dependency across several experimental studies. These researchers reported that undergraduates who experienced public failure were not only more eager to affiliate, they were also more vulnerable to social influence (Van Duuren & Di Giacomo, 1996, 1997). For example, after it was publicly announced that they had performed poorly on a test, participants were significantly more likely to join with a confederate and follow that person's suggestions to participate in a theft (Van Duuren & Di Giacomo, 1996). Van Duuren and Di Giacomo (1997) proposed a model in which social degradation increases both affiliative tendencies and vulnerability to social influence as ways of gaining social approval. Applied to the context of hazing, achieving social approval from the group would likely be a first step along the road to group identity and attachments.

Behavioral science offers surprisingly little insight into the tenacious nature of initiation traditions. Although the costs of initiation to individuals are well documented (e.g., Finkel, 2002; Galanter, 1999; Hoover & Pollard, 2000), its real or perceived benefits are not, and so it is no wonder that formal studies have yet to identify the roots of hazing's impressive resistance to being curbed. Cross-cultural studies could help. For instance, initiation traditions may be especially persistent in societies where early identities must be attenuated or altered (Segall, Berry, Dasen, & Poortinga, 1999). In the United States, for example, it may take a mighty persuader to suppress the individualism inherent in American identity and supplant it with a collective, group identity. Severe hazing rituals may operate in just this way. As Confucius noted many centuries ago, rituals are powerful sources of social influence and control (Confucius, 551–479 BCE, translated by Slingerland, 2003, p. 171).

As we compiled this research, hazing at a nearby college campus ended in the death of a young man who expired after engaging in a tradition of ingesting large quantities of water through a funnel (Foderaro, 2003). On the eve before his death, pledges would have undoubtedly described their initiation activities as deviant but fun, their leader as powerful, and the feeling of belonging to the group as an important source of their identity. What would it have taken for any one of them to change his mind?

Misplaced human social attachments fit the cross-species pattern of behavior spawned by maltreatment effects. Treatment that incorporates elements of punishment can enhance outward signs of attachment toward abusive figures (Rajecki et al., 1978). Supporting the motivation to bond are proximate physiological benefits reaped by organisms drawn to those who typically support and protect them (Uchino et al., 1996) as well as underlying evolutionary forces responsible for human sociability (Baumeister & Leary, 1995). Maltreatment effects may explain why abused children remain attached to abusive parents, why battered wives endure relationships with brutal spouses, and why hostages develop emotional attachments to their captors (Boulette & Andersen, 1986; Bowlby, 1969/1982; Dutton & Painter, 1993; Rajecki et al., 1978). Charismatic groups and, perhaps at some level, more ordinary groups cultivate this same kind of devotion by serving both as agents of abuse and as anchors of attachment.

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