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HOW, WHEN, AND WHY BAD APPLES SPOIL THE BARREL: NEGATIVE GROUP MEMBERS AND DYSFUNCTIONAL GROUPS

Will Felps, Terence R. Mitchell and Eliza Byington

ABSTRACT

This paper presents a review and integrative model of how, when, and why the behaviors of one negative group member can have powerful, detrimental influence on teammates and groups. We define the negative group member as someone who persistently exhibits one or more of the following behaviors: withholding effort from the group, expressing negative affect, or violating important interpersonal norms. We then detail how these behaviors elicit psychological states in teammates (e.g. perceptions of inequity, negative feelings, reduced trust), how those psychological states lead to defensive behavioral reactions (e.g. outbursts, mood maintenance, withdrawal), and finally, how these various manifestations of defensiveness influence important group processes and dynamics (e.g. cooperation, creativity). Key mechanisms and moderators are discussed as well as actions that might reduce the impact of the bad apple. Implications for both practice and research are discussed.

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Organizations are increasingly relying on the work team model to capture efficiencies and create value, with estimates predicting that as much as half of the U.S. workforce will be working in teams by the year 2010 (Stewart, Manz, & Sims, 1999). Indeed, most models of the "organization of the future", such as networked, clustered or horizontal forms, are implicitly or explicitly based on teams as the central organizing unit. As groups have become more common, so has the importance of scholarly efforts to understand their potentialities and limitations (see for reviews Cohen & Bailey, 1997; Hackman, 1987; Ilgen, 1999; Ilgen, Hollenbeck, Johnson, & Jundt, 2005; Kozlowski & Bell, 2003). However, all teams are not equal, and as the literature continues to evolve, we are beginning to understand how and why these differences emerge.

In this vein, researchers have noted that, while some teams achieve cohesion between members, a mutually supportive ethos, and high collective efficacy, other groups exhibit divisiveness, conflict, as well as the tendency to "burn themselves up" (Kozlowski & Bell, 2003). As noted by Hackman (2002) "Some project groups do turn out to be more frustrating that fulfilling, more a source of angst than of learning … . Teams can stress their members, alienate them from one another, and undermine their confidence in their own abilities" (p. 29). Many groups fail, but our understanding of how and why this occurs is limited.

To date, the academic literature tends to highlight group-level phenomena (Kozlowski & Bell, 2003) such as group paranoia (Kramer, 2001), group think (Janis, 1982; Moorhead, Neck, & West, 1998) and low group efficacy (Gully, Incalcaterra, Joshi, & Beaubien, 2002) as the culpable forces behind ineffective teams. While these group-level variables are surely important, this paper argues that, in some cases, a single, toxic team member may be the catalyst for group-level dysfunction. This is a perspective echoed in Keyton's (1999) review of dysfunctional teams, which states that in most models of group process or performance "group members are [treated as] equal or interchangeable" and that there is a paucity of "attention to difficult group members" (p. 492). He goes on to claim that "[s]ometimes the source of the dysfunction is one individual" (p. 493).

Upon first blush, Keyton's statement seems obvious. Indeed, the common idiom "a bad apple spoils the barrel" captures the core idea of negative individuals having an asymmetric and deleterious effect on others. In a Harvard Business Review article, Wetlaufer (1994) talks about "team destroyers", taking for granted that persistent negative behavior can have huge repercussions on group functioning. In an HR Magazine cover story on "hard-core offenders", Andrews (2004) describes how "egregious

employee behavior can … cripple employee morale'' (p. 43). Similarly, in an article on training, Tyler (2004) urges, ''[b]efore the whole bunch spoils, train managers to deal with poor performers'' and says these ''bad apples'' are ''like a cancer that spreads throughout the entire workplace'' (p. 77). But despite this provocative rhetoric, the truth is that we currently know very little about how, when, or why a negative member might have an asymmetric effect on teammates, group processes, or group outcomes.

Moreover, academic theory is almost totally silent about these issues. Indeed, given current accounts, it is unclear exactly how a negative individual would persist in a group, or have powerful effects if they did. For example, in his influential work on how groups influence individuals, Hackman (1976) suggested that members co-regulate each other's behavior through ambient and discretionary stimuli to effectively produce uniformity among members (p. 1473). Recently, Lepine and Van Dyne (2001) suggested four potential peer responses to low performers: training, compensation, motivation, or rejection. In both of these seminal and recent models, the roseate conclusion seems to be that difficult teammates will be rehabilitated, ousted, or teammates will compensate for them.

In contrast, we are interested in the instances when constructive responses are not available or utilized and when negative behavior persists day after day with little recourse. These scenarios may result when the harmful person has seniority, political connections, task expertise, or when teammates choose ineffective response strategies. We believe these scenarios describe the circumstances under which the ''bad apple spoils the barrel'', through a profound and harmful effect on the group. In other words, the focus of this paper are those situations where the group functions poorly, and may alternately fail or disband as a result of one member's actions. By integrating and extending prior work, we detail which negative behaviors are a threat to effective group functioning, the conditions under which groups are able to deal with negative behavior; how negative members influence the thoughts, feelings, and behaviors of teammates; and the mechanisms by which these ''bad apples'' can provoke dysfunctional group dynamics. We conclude with a discussion of what can be done to alleviate these negative effects and, perhaps, ''save the barrel''.

EXTANT EVIDENCE OF BAD APPLE EFFECTS

The central goal of this paper is to explain how, when, and why negative group members might have a powerful, asymmetric effect on the group. But

first, it is important to firmly establish that this effect occurs at all. To date, the primary evidence relevant to the "bad apple" phenomenon has been the linkage between member personality and group outcomes. And indeed, the evidence here is remarkably robust even if the causal explanations are sparse or non-existent. This personality-based research has found that how low the lowest teammate is on the variables of conscientiousness, agreeableness, and emotional stability is usually a strong predictor of group-level variables. The ostensible implication is that the "worst" group member can have important effects. We briefly review the relevant studies below.

Across several companies, Barrick, Stewart, Neubert, and Mount (1998) researched how members' personalities affected group outcomes in 51 manufacturing-related work teams. They were surprised to find that the lowest team member's score for conscientiousness, agreeableness, and emotional stability was a good predictor of social cohesion ($r = 0.14$, 0.38, 0.34 respectively), communication ($r = 0.29$, 0.50, 0.50), team conflict ($r = -0.39$, -0.51, -0.40), and perceptions of equitable workload sharing ($r = 0.30$, 0.62, 0.33). Moreover, across these group process variables and across the three personality dimensions, these worst member correlations were substantially stronger predictors than the team's mean personality scores or the highest (e.g. "best") person's score. For the outcome variable of task performance, the scores for the least conscientious and agreeable member predicted team performance fairly well ($r = 0.34$ and 0.32 respectively).

The findings of Barrick et al. (1998) are not isolates. Indeed, an increasingly common practice is to actually operationalize "group personality" as the lowest member's score. Theoretically, this is predicated on Steiner's (1972) argument that the weakest link is particularly important in conjunctive tasks. In the laboratory study of Lepine, Hollenbeck, Ilgen and Hedlund (1997), using the Team Interactive Decision Exercise (TIDE), they test the role of the personality variable of conscientiousness on group performance, and find that the lowest member's score is an important predictor ($r = 0.18$), but that the mean score is not. They use this as evidence that the task is a conjunctive one. Similarly, Neuman and Wright (1999) conducted a study of teams of human resource professionals, and found that the lowest member's score for conscientiousness and agreeableness predict group performance ($r = 0.36$ and 0.27 respectively), and to do so over and above cognitive ability. Chatman and Barsade operationalized collectivism as agreeableness and found that less agreeable members depressed the cooperativeness of more agreeable members, but that the reverse did not hold true. Again, this indicates an asymmetric effect of negative

teammates, as defined by their personality. Finally, in one of the few studies linking emotional stability to group performance, Camacho and Paulus (1995) compared the creativity of groups with different combinations of member social anxiety. Teams composed of all socially anxious (e.g. emotionally unstable) members came up with relatively few ideas ($M = 45.8$); while teams composed of all socially calm members were much more creative ($M = 85.5$); but most interesting and relevant to our purposes, teams composes of two anxious and two stable members performed about as badly ($M = 53.2$) as the group with all socially anxious members – again indicating an asymmetric effect of negative individuals.

However, while these results are interesting, and provide broad support for the "bad apple" phenomenon, they are not adequate. First, they are theoretically inadequate in that most were post hoc findings that were not central to the original questions under investigation. Second and more importantly, the personality approach to understanding the bad apple phenomenon is inherently problematic. There are many situational variables which inhibit or enable the behavioral expression of personality in the workplace (Tett & Burnett, 2003). For example, in many cases, a person with low conscientiousness can force themselves to act thoughtfully and carefully, at least for a while (Tett & Burnett, 2003). But it is the behavioral expressions of negativity, not personalities, that upsets others and blocks key group processes. A direct focus on the asymmetric influence hypothesis requires moving away from distal personality measures to more proximal causal variables of actual negative behaviors and dysfunctional group processes. A recent review of the relationship between personality and group outcomes says it better than we can:

> "Future research … should focus on refining our understanding of how personality traits are related to the task and interpersonal behaviors in group processes … . The inattention to mediating mechanisms is exacerbated in the literature by the tendency to focus on desirable behaviors (e.g. helping, cooperation). For the most part, undesirable behaviors such as malingering, social loafing, dishonesty, and sabotage have been ignored … . We suspect, in short, that many of the process theories need to explicate the negative individual behaviors that cause poor group performance" (Moynihan & Peterson, 2001, p. 340).

After briefly discussing the boundary conditions of this paper, we return to this challenge of Moynihan and Peterson's, and attempt to specify precisely which negative behaviors cause which dysfunctional reactions, group processes, and group outcomes.

BOUNDARY CONDITIONS

McGrath (1984) defines a group as "an entity that interacts, is interdependent, mutually aware, with a past and an anticipated future" (p. 6). We are employing this definition and narrowing the scope of our analysis to small groups for several related reasons. First, we believe that destructive behavior will be particularly impactful in small groups, which are often characterized by a high degree of interaction and interdependence (Wageman, 2000), two factors that are predicted to make dysfunctional behavior both more salient and disruptive. Second, and as a consequence of their interdependence, small groups tend to be less tolerant of negative behaviors than independent individuals (Liden et al., 1999). Members of small groups have a greater motivation to identify and address behavior, which threatens the group. The third reason for focusing on a small group context is that these groups have properties that facilitate responses to negative group member behavior. Small groups build a consensual social reality that is negotiated through reoccurring interaction and discussion (Hardin & Higgins, 1996), which in turn facilitates other members responding as a coordinated coalition (Lyons, Mickelson, Sullivan, & Coyne, 1998). In sum, we delimit our focus to the small group simply because it is "where the action is" – where a negative group member will have an increased impact, but also where the group will have stricter standards, social norms about appropriate behavior, and the potential to build coalitions. While chronically dysfunctional people may have impacts in many settings, small groups are a particularly appropriate venue for investigating their effects.

We also limit our focus to a subset of the behaviors, which might be considered "negative". A dysfunctional member's behavior inhibits essential group functions, processes, and goals. As such, we chose a pan-group definition of a bad apple member as *individuals who chronically display behavior which asymmetrically impairs group functioning*. Three parts of this definition bear noting. First, for the purpose of this analysis, who counts as a bad apple is defined by their pattern of behaviors in a particular group setting. These negative behaviors might variously be a function of dysfunctional roles, dispositions, negative life events, substance abuse, some combination of these, or something else entirely. By defining negative team members in terms of clearly observable behavior – rather than these varied and more distal contributors – much more specific predictions can be made. Second, for the purposes of this paper, a group member is considered negative only to the extent that their behavior violates norms that are empirically

supported as necessary for effective group functioning. Specifically, we are investigating group members who violate norms of equity, positive affect, and appropriate social functioning. We will elaborate on the support and relevancy of these categories in our discussion on types of negative group members. Finally, we would assert that this definition is not tautological despite the fact that bad apple behaviors are defined as a function of their effects on group performance. Tautologies are redundant statements that do not add understanding and which are true by virtue of their logical form alone. In contrast, our definition of what would constitute bad apples is open to revision and disconfirmation and, as we will see, includes fairly elaborate predictions of unfolding effects and underlying processes. Moreover, we would argue that our definition is completely consistent with other prevalent theories. For example, work on organizational citizenship behavior is defined as a function of the contextual behaviors that contribute to organizational functioning, and even more broadly, personality (defined as tendencies to express behavior) is often empirically linked to expressions of behavior.

BAD APPLE TEAM MEMBERS

Types of Bad Apple Team Members

In researching dysfunctional group dynamics, we identified three categories of difficult team member behavior, which are especially likely to "spoil the barrel" if left unchecked: withholding of effort, being affectively negative, and violating important interpersonal norms. These categories emerged from an analysis of the major categories of behavior that are needed for a group to be successful. First, and most simply, members must contribute adequate effort by working towards group goals with intensity and persistence (Mitchell, 1997). Second, group members must perform "emotional labor" by regulating their expressions of feelings to facilitate comfortable and positive interpersonal interactions within the group (Hochschild, 1983; Morris & Feldman, 1996). Finally, members must perform "contextually", by not violating or detracting from the organizational, social, and psychological environment, which they inhabit (Motowidlo, Borman, & Schmit, 1997). Contextual performance is accomplished through expressions of interpersonal respect and adherence to interpersonal norms (Tyler & Blader, 2001). Our paper reviews evidence, which suggests that under certain circumstances, group members who persistently and consistently

under-perform these three types of behavior can have a severe impact on group functioning.

Withholders of effort intentionally dodge their responsibilities to the group and free ride off the efforts of others. Behavioral examples of withholding effort consist largely of not doing something – of not completing tasks or contributing adequate time, not taking on risks or responsibilities, or not disclosing aptitudes in the hope that others will compensate. While these behaviors have alternately been labeled *shirking* (by economists), *free riding* (by sociologists), and *social loafing* (by psychologists), Kidwell and Bennett (1993) convincingly argue that these terms just describe different reasons and contexts in which people withhold effort from the collective. We agree and refer to all three literatures when discussing withholders of effort.

Second, a person may continually express a negative mood or attitude. We call this kind of member *affectively negative*, employing the broad usage of *affect* to encompass the triumvirate of emotion, mood, and attitude (c.f. Brief, 1998). To assess this construct, Furr and Funder (1998) combined measures of depression, happiness, satisfaction, and self-esteem. Then, from an analysis of a series of dyadic interactions, Furr and Funder constructed behavioral profiles of this sort of individual, who they call personally negative. They found that "personally negative" individuals were more likely to exhibit an awkward interpersonal style and to more frequently express pessimism, anxiety, insecurity, and irritation. Diverging from Furr and Funder, we are interested in those individuals who are especially high in these dimensions. Moreover, as noted previously, the focus is behaviors rather than the personality variables that underlie those behaviors, since it is behavioral expressions rather than internal states that will impact other group members.

Finally, those that detract from the group's contextual environment by violating interpersonal norms of respect are called *interpersonal deviants* (Robinson & Bennett, 1995; Bennett & Robinson, 2000). Bennett and Robinson have conducted a series of studies to try to understand which workplace behaviors are consistently considered deviant. They have found seven common behaviors which are reliably assessed as deviant: making fun of someone, saying something hurtful, making an inappropriate ethnic or religious remark, cursing at someone, playing mean pranks, acting rudely, and publicly embarrassing someone. For our purposes, these seven behaviors define the category of interpersonal deviance.

Note that these three categories are not all encompassing – not everyone considered an "undesirable" group member is eligible for "negative member" status. For example, many characteristics like shyness, lacking a sense

of humor, or being unpredictable do not enter into our definition because they are unlikely to seriously disrupt important group processes. Instead, the focus is on negative interpersonal behaviors, whose persistence would have important harmful effects on the dynamics, processes, and team outcomes. Other harmful behaviors like theft, cheating, sabotage, or vandalism are excluded since they affect the organization rather than teammates (c.f. Robinson & Bennett, 1995). Similarly, we do not include group members with distinctive demographic backgrounds or those who have divergent opinions about the best way to accomplish group goals (O'Leary-Kelly, 2005). Although some group members may consider these characteristics difficult to deal with, both demographic diversity and divergent opinions may improve group functioning, and are consequently of a qualitatively different variety than our three destructive behaviors (e.g. Nemeth & Kwan, 1987). Further, we omit individuals who are motivated to achieve group goals but do not have the requisite ability. While poor performance can certainly diminish group performance, this low performance does not depend on negative interpersonal reactions for its effect, and indeed tends to evoke sympathy and compensation from teammates (Jackson & Lepine, 2003; Taggar & Neubert, 2004). Moreover, to the extent that these individuals have negative effects, they are likely to be additive rather than asymmetric. Finally, given the focus on "spoiled barrels", there is little reference to whistleblowers, positive deviants, change leaders, or exceptional individuals who carry the group (c.f. Warren, 2003).

At this point, we can display Fig. 1, which depicts the organization of this paper. We have described above the three categories of behavior that define what we call a bad apple group member. Initially, when these behaviors surface or are noticed they might be described as episodic (box 1). Our next section described how the group will try to change the behavior or perhaps oust the negative member. If that does no't work, we are left with a more persistent and chronic problem (box 2). It is at this point where negative psychological reactions become more apparent (box 3) and we will discuss the factors that may make this situation better or worse (the moderators in box 4). The negative psychological states will lead to defensive behaviors by group members (box 5) and through the mechanisms of aggregation, spillover, and sensemaking, these behaviors will come to influence group processes (box 6) and group outcomes (box 7).

Note again that the underlying message and contribution of this paper is *not* that one bad group member can cause groups to fail or disband. We already know that a bad apple can sometimes spoil the barrel (see Barrick et al, 1998; Chen & Bachrach, 2003; Camacho & Paulus, 1995; Dunlop &

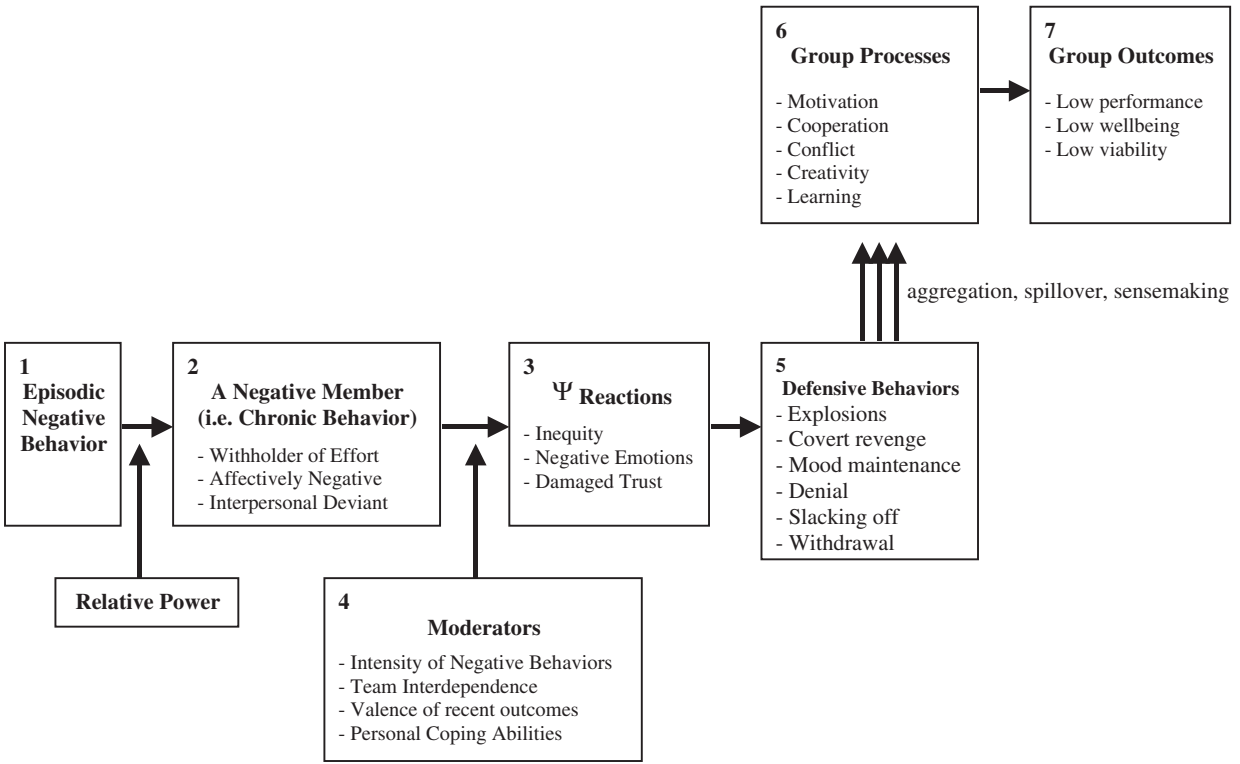

Fig. 1. The Bad Apple Phenomenon Aggregation, Spillover, Sensemaking.

Lee, 2004; Haythorn, 1953; Neuman & Wright, 1999). Instead, our analysis shows how this process evolves over time, how individual reactions become group dysfunction, and describes the major steps involved. It confronts the questions of why, when, and how this happens. And in the process we will discover some research areas where our knowledge is solid and some other areas where more work needs to be done. These are the focus and contribution of the paper.

Responses to Negative Members

Several research efforts have investigated initial responses to the sort of people we designate as withholders of effort, affectively negative, and interpersonal deviants. The following section concerns itself with a description of these responses.

Across disparate literatures, the same reactions to negative behavior crop up again and again under different labels. We believe that these reactions can be parsimoniously collapsed into three classes of teammate response – motivational intervention, rejection, and defensiveness. Each of these three responses have a common foundation; the desire to improve an aversive experience. However, where these responses differ is in their aims – e.g. towards either changing the negative person's behavior (motivational intervention), removing negative people (rejection), or protecting one's own self (defensiveness). If either the motivation intervention or rejection is successful, the negative member never becomes a bad apple or spoils the barrel. But it is still important to review these three responses in greater detail.

We define the motivational intervention as *those acts of teammates which intend to change negative behavior though the application of influence tactics* (Orcutt, 1973). The literature provides evidence that the motivating response is a common reaction to both withholders of effort (Jackson & Lepine, 2003) and interpersonal deviants (Taggar & Neubert, 2004; Schachter, 1951), but is used less frequently with affectively negative individuals. It seems as though teammates lack efficacy in boosting a teammate's negative moods, and so tend to reject affectively negative individuals rather than attempt to motivate them (Helweg-Larsen, Sadeghian, & Webb, 2002). This is an example of the broader finding from the attributional research literature that motivating responses are particularly likely when the focal person's behavior is ascribed to controllable causes (Jackson & Lepine, 2003; Green & Mitchell, 1979; Sampson & Brandon, 1964; Taggar & Neubert, 2004; Weiner, 1993).

In any case, when team members do believe change is possible, motivating actions may include the withholding of praise, respect, or resources until behavior changes (Hackman, 1976), subtle and not so subtle confrontations (Lepine & Van Dyne, 2001; Lubit, 2004), formal administration of punishments (Liden et al., 1999; Hackman, 1976), or demands of apology and compensation (Bies, Tripp, & Kramer, 1997). A classic example of teammates motivating a negative member can be found in the Hawthorne studies (Homans, 1950). When a person was not working hard enough (what the men at the plant called a ''chiseler'') co-workers would ''bing'' the man on the upper arm and criticize his laziness. This was remarkably effective, more so than managerial supervision or incentives. In another early ethnography, Rosabeth Moss Kanter (1972) reviews how the Oneida community used ''public criticism'' as a formal mechanism to ensure that those who deviated from the norm were provided ''enlightening'' feedback. Of course, these formal and informal punishments might be coupled with positive reinforcement for more desirable behaviors. Whether explicit or implicit, punishments or rewards, a motivational response means that teammates will try to bring negative members back into the fold by changing their behavior.

Multiple taxonomies also identify *rejection* as a common response to negative members, especially after motivational attempts fail (Orcutt, 1973). For our purposes, rejection can be defined as *those acts which intend to minimize or eliminate interaction with the negative member*. There is evidence that rejection is a common response for withholders of effort (Lepine et al., 1997), for affectively negative individuals (Coyne, 1976; Furr & Funder, 1998; Helweg-Larsen et al., 2002), and for interpersonal deviants (Taggar & Neubert, 2004; Schachter, 1951). Like motivational responses, research on attributions has been instrumental in predicting when rejection will occur – namely when negative behavior is ascribed to stable and uncontrollable causes (Jackson & Lepine, 2003; Green & Mitchell, 1979; Sampson & Brandon, 1964; Schachter, 1951; Taggar & Neubert, 2004; Weiner, 1993).

The most prototypical example of rejection would involve ejecting a negative individual from the group. Lacking this option, members of groups with a fixed constituency will change the ''psychological composition'' (Festinger, 1950) of the group by ostracizing negative members, reducing social interaction, talking at rather than with, exclusion from decisions, or removing responsibilities that require them to interact with others (Hackman, 1976; Lepine et al., 1997). Alternately, when ostracism is unfeasible due to organizational constraints such as seniority or formal role sets, the difficult person may be ''rejected'' in more subtle ways. Teammates can restructure work to decrease task interdependence, or segment responsibilities so that goals and

rewards are less interdependent. As a concrete example, faculty at a university might decide to forego an integrated curriculum in order to avoid having to interact with a frustrating individual. In summary, this response type entails rejecting the negative individuals through expulsion, psychological distancing, or altering task interdependence to reduce the impact of the negative behavior.

If they work, both motivational interventions and rejection are fairly constructive responses to a negative individual. They represent what is probably a minor distraction from task performance; a bump in the group's unfolding path towards goal attainment. It could even be argued that these two responses might serve as mastery experiences (Bandura, 1986) that could strengthen members' efficacy in dealing with difficult social situations, and reaffirm the group's normative order (Dentler & Erickson, 1959). While little empirical evidence exists about the net effect of motivating or rejecting a negative individual, we would suggest that the ultimate consequence will be modest, either way. However, more severe effects can be expected if motivation or rejection isn't possible – that is if the social context is constrained in such a way that group members are powerless to motivate or reject.

Accordingly, the final category of response is defensiveness. For our purposes, defensiveness is defined as *those acts which intend to protect and repair one's own sense of autonomy, status, self-esteem, or wellbeing*. Manifestations of defensiveness can include lashing out, revenge, unrealistic appraisals, distraction, various attempts at mood maintenance, and withdrawal. When motivation and rejection fail, groups are faced with the dilemma of a negative member who they cannot change or get rid of, the primary condition under which a "bad apple" might "spoil the barrel". As such, defensiveness will be a major focus of our analysis and is discussed in much greater detail as we proceed.

Antecedents to Defensiveness

As mentioned above, a motivation intervention or rejection requires that teammates have some power. When unempowered, teammates become frustrated and defensive. According to Janis and Mann's (1977) model of decision-making, members of groups become defensive when all decision alternatives have low probabilities for success. In the case of the bad apple, frustration is caused by an individual who behaves in dysfunctional ways, has a negative impact on personal well-being, impedes performance – and yet, due to organizational constraints on acceptable social action – cannot

be easily reformed or rejected. When there's no viable way to deal with a harmful person, but members are still strongly influenced by them, the only recourse is defensive self protection.

The inclusion of defensiveness as a reaction to a negative member recognizes that peoples' reactions to difficult circumstances (especially if attempts to change the situation fail or cannot be tried) are often less than rational. Moreover, in contrast to responses like rejection or motivation, defensiveness does not resolve the negative member problem; rather, it can intensify the problem as teammates either withdraw or lash out in emotionally motivated attempts to protect themselves. In the following section, we discuss the two key factors that promote defensiveness: a lack of power and the basic psychological tendency to react strongly to negative behavior. In conjunction, these two answer the question of *why* bad apples can have asymmetric negative effects on others.

Low Power Situations

Group members can be relatively powerless either because the negative member has power or because the group member in question does not. The negative member's power may originate from social resources, such as personal connections to higher ups, prestigious degrees, or knowledge of "where the skeletons are buried" (Morrill, 1995). Power could also originate from structural characteristics, such as instances when others are highly dependant on the negative individual for unique knowledge or skills (Robinson & O'Leary-Kelly, 1998), or when the negative individual is placed at a critical juncture in workflow (i.e. a secretary or facilitator) (Doerr, Mitchell, Schriesheim, Freed, & Zhou, 2002). Finally, power can be formal, such as whenever the negative individual has direct control over the allocation of rewards and punishments. Whether leaders are more or less likely to be bad apples is an unanswered empirical question. Organizations will probably attempt to avoid hiring or promoting difficult individuals for leadership positions, but research suggests that dysfunctional people do hold leadership positions with some frequency (Ashforth, 1994; Pearson, Andersson, & Porath, 2000).

Finally, teammates themselves may not have the power needed to respond to a negative member. In many cases group members may look to their leader to punish a deviant group member (Butterfield, Trevino, & Ball, 1996). Poor leadership may allow a negative person to persist in their destructive activity. Relatedly, the group members may lack the resources or empowerment to enact change. Kirkman and Rosen (1999) suggest that members of the groups with low empowerment will not have the

decision-making authority, responsibility, adequate experience, or confidence to take decisive action. Thus, powerlessness constrains the available response behaviors. But paradoxically, this powerlessness in the face of threat is also extremely frustrating and is actually likely to intensify psychological reactions to bad apple behavior.

Bad is Stronger than Good

As reviewed by Baumeister, Bratslavsky, Finkenauer, and Vohs (2001), "bad is stronger than good" in many areas of human psychology. Negative cognitions, feelings, and events will usually produce larger, more consistent, and long-lasting effects as compared to equivalent positive thoughts, feelings, and events. Manifested in varied and subtle ways, this pervasive phenomenon holds across information interpretation, impression formation, relationship maintenance, experiencing emotions, memory, learning, and health (Baumeister et al, 2001; Lewicka, Czapinski, & Peeters, 1992; Rozin & Royzman, 2001; Taylor, 1991). Lewicka et al. (1992) and Skowronski and Carlston (1989) have found that the strength of bad over good also holds in social environments, where negative interpersonal interactions elicit uncertainty, anxiety or fear, such that processing these events becomes a high priority.

Adaptability is the rationale underlying Baumeister's arguments for the relative salience and influence of negativity. Generally, negative events have greater survival implications and denote more information than positive events about the environment. According to Baumeister et al., the strength and salience of bad over good "may in fact, be a general principle or law of psychological phenomena possibly reflecting the innate predispositions of the psyche or at least the almost inevitable adaptation of each individual to the exigencies of life" (p. 323).

The "bad is stronger than good" effect is especially noticeable in the social realm. Studying romantic relationships, Gottman and coworkers (Gottman & Krokoff, 1989; Levenson & Gottman, 1985) found that the frequency, intensity, and reciprocity of negative interactions are much more predictive of marital satisfaction and divorce than are positive interactions. Gottman's (1994) rule of thumb is that positive interactions must outnumber negative ones by a ratio of 5:1 if the relationship is to have a good chance of success. Additionally, Baumeister et al. (2001) review nine studies which compare the effects of social support and social undermining across diverse populations. They summarize their findings by saying that "[t]aken together, these studies suggest that helpful aspects of one's social network bear little or no relation to depression, well-being, and social support

satisfaction, while upsetting or unhelpful aspects do … . Bad interactions have stronger, more pervasive, and longer lasting effects'' (p. 340).

Recent research in organizations has also explored the topic of negative relationships and behavior, confirming that bad is often stronger than good in this setting. Gersick, Bartunek, and Dutton (2000) conducted numerous interviews with academics about relationships that influenced their careers. While positive relationships were more frequent according to the academics' self-reports, the negative ones were reported to be very important with a substantial impact on career success. A recent paper by Labianca and Brass (in press) finds that while negative relationships may be rare (constituting between 1–8% of ties), they have greater impact on job satisfaction and organizational commitment than do positive or neutral associations. These scholars also find that negative effects are most pronounced in high density, high interdependence situations (e.g. teams). Finally, in a study of fast food restaurants, Dunlop and Lee (2004) compared the effects of organizational citizenship behaviors and deviant workplace behaviors. They found that deviant behaviors explained considerably more of the variance in subjective and objective work group outcomes than did the citizenship behaviors.

A lack of power is what prevents reform or rejection, and the ''bad is stronger than good phenomenon'' is what allows negative team members to have an asymmetrically strong effect on others. By extension, this asymmetric effect explains why dysfunctional individuals are an important concern for groups. In interdependent teams where people depend on each other, these intense psychological reactions are more likely to spillover beyond dyadic interactions to influence the broader social environment. As noted by Baumeister et al. (2001), ''in order for a system to function effectively, each component of the system must do its part.'' At the level of the individual's relation to the group, bad is undeniably stronger than good; any individual part can prevent the system from functioning; but no individual part can by itself cause the system to succeed. This is especially true of social groups … marked by a division of labor'' (p. 358). In summary, the conjoint of intense psychological reactions at the individual level, and spillover effects onto group dynamics underlies the assertion that a ''bad apple can spoil the barrel''.

NEGATIVE PSYCHOLOGICAL STATES

In this case, we are confronted with a situation where a member's behavior is persistently and consistently negative. The bad behavior is noticed and

influential in its effects on group members who do not have the power or wherewithal to enact change. What happens now? We will review the likely psychological states that emerge in response to each of the three negative member behavioral categories.

The Withholder of Effort. A bad apple who withholds effort from the collective triggers some undesired cognitions. If free riding persists, teammates face the challenge of correcting equity imbalances in input to outcome ratios relative to others (Adams, 1963). Research finds that the most common referent that people look to for social comparison (the "other" in the equity formulation) are the peers one works with every day (Kulik & Ambrose, 1992). It follows that social loafing by a teammate can be a major source of distress, as it violates effort norms and takes advantage of other members' good-faith contributions. It is also important to note that being under-rewarded, as is the case here, produces stronger psychological effects than being over-rewarded (e.g. Bloom, 1999) – another example of "bad being stronger than good". As such, perceptions of inequity will arise when group members compare their own contributions to those of a withholder of effort in their team, and will result in a desire to restore equity by reducing contributions (Jackson & Harkins, 1985; Schroeder, Steel, Woodell, & Bembenek, 2003). However, due to task interdependence, this scenario creates a dilemma for contributing group members in which they are motivated to avoid being a "sucker" and decrease their own contributions to the group – but in doing so they risk rupturing relations with other members and compromising group outcomes themselves. Thus, withholders of effort produce feelings of inequity with no easy resolution in a team environment.

The Affectively Negative Individual. Affectively negative individuals influence their teammates' affect (including attitudes, moods and emotions). Empirical work has shown that simply observing another person's expressions of affect can generate those feelings in others. Hatfield, Cacioppo, and Rapson's (1994) book Emotional Contagion describe how the diffusion of affect is "unintentional, uncontrollable and largely inaccessible to awareness" (p. 5), picked up unconsciously through facial expressions, vocalizations (e.g. tone, intensity, volume), postures, and movement. Using a confederate trained to display positive and negative affect, Barsade (2002) found that subjects working together on a task partially adopted the confederate's mood. Even more simply, subjects observing angry facial expressions quickly become angry themselves (Dimberg & Ohman, 1996). The negative emotions engendered by bad apple behavior may also be long lasting. Whereas a positive emotion (i.e. compassion) wears off relatively quickly, researchers find that when they give someone a negative feeling

(i.e. anger) to concentrate on, the physiological effects last over 5 h (Rein, McCraty, & Atkinson, 1995). An extension of the negativity bias would suggest that individuals will pay more attention to negative others and are therefore prone to use negative others as a referent for social comparisons, give negative emotional information more credibility, experience negative emotions for a longer period, and ruminate more on negative events (Baumeister et al., 2001; Rozin & Royzman, 2001). However, this hypothesis is tempered by the lack of support for Barsade's (2002) hypothesis that negative affect would spread more completely through the group than positive affect. Clearly, more research is needed to understand if and when negative affect will have an asymmetric effect.

The Interpersonal Deviant. As described earlier, the interpersonal deviance category is defined by seven behaviors (e.g. making fun of a teammate, acting rudely, saying something hurtful, etc). It is therefore somewhat broader than the withholding effort and affectively negative categories. Despite that breadth, we believe that these behaviors have similar goals and mort importantly, similar consequences. More specifically, the main effect of an interpersonal deviant is to undermine trust in that individual. In teams, this can be problematic, since members depend on each other to take advantage of division of labor efficiencies or develop transactive memory models (Wageman, 2000). Conversely, distrust in a group member requires increased monitoring of the interpersonal deviant, and can distract from task performance. Like inequity and negative emotions, trust is also asymmetric, easier to damage than it is to build (Lewicki & Bunker, 1995).

More Complex Psychological Effects of Negative Teammates

The above discussion suggests some simple, direct effects of each type of negative behavior – namely that withholding effort produces perceptions of inequity, affective negativity spreads contagiously to teammates, and interpersonal deviance engenders distrust. However, beyond direct effects, each of these states can also have a secondary impact on the other two. With respect to inequity, although Adams' original focus was on cognition, other research has clearly demonstrated that inequity also produces strong emotional reactions (Goodman, 1977), and one can expect trust in a difficult team member to deteriorate. With respect to emotions, negative feelings trigger the search for mood-congruent cues (Meyer, Dayle, Meeham, & Harman, 1990), and ambiguous social information is more likely to be interpreted as inequitable or signaling untrustworthiness. Finally, since

trustworthy behavior is generally expected, a secondary consequence of distrust is negative feelings such as anger, anxiety, and fear (Kramer & Wei, 1999). The ''collateral damage'' is potentially extensive.

Moreover, to fully consider the effect of any one specific negative member requires other considerations. For example, imagine a person who is severely depressed. They are highly likely to be affectively negative, but they might also be unmotivated to put forth much energy into tasks – e.g. withholding effort from the group. Or consider the interpersonal deviant who yells and bullies at the slightest provocation while concomitantly expressing pessimistic attitudes. A benefit of understanding the primary and secondary effects of each class of bad apple behavior is that these combinations can be addressed. At the current time, little evidence exists to guide predictions of how these behaviors might interrelate. However, at least three theoretical possibilities exist. One alternative is that multiple behaviors will be largely independent (i.e. be additive) such that someone who displays two categories of behaviors will have double the impact of a member who engages in only one. Another possibility is that there is a limit to how upsetting one individual can be, with multiple types of negative behavior drawing from the same reservoir of defensiveness. A third option is that different types of negative behavior will interact to reinforce and compound each other, resulting in ultimately larger impacts on teammates.

Finally, it seems to us that while negative affect can definitely cause unconstructive outcomes, the withholding of effort and particularly interpersonal deviance can cause even more acute negative effects. The interpersonal deviant directly and powerfully threatens other members and challenges the normative integrity of the group as a whole. Given the interdependence of groups, the sense of inequity produced by a withholder of effort will likely also be quite distressing. In contrast, affective negativity may have a smaller effect size since it operates through the less direct (and arguably less powerful) mechanism of contagion. But again, these are conjectures for future research. To the best of our knowledge, no studies have compared the effect sizes of these negative behaviors against each other. Next, the discussion elaborates on the consequences of teammate psychological states on behaviors.

Defensive Behavioral Reactions

Generally, defensive responses are self-protective efforts to cope with a negative internal state. This negative state might arise from threats to autonomy (Ashforth, 1989), identity (Aquino & Douglas, 2003), self-esteem

(Baumeister, Dale, & Sommer, 1998) or general well-being (Berkowitz, 1989). Persistent and consistent harmful behavior by a negative member challenges these core concerns and leads to ongoing perceptions of threat. These threats can be countered in two ways – externally or internally. Externally directed responses include acting against the negative member to restore feelings of autonomy, identity, self-esteem, and well-being. Internally directed responses involve taking steps to change one's own moods, emotions, or appraisals. Our subsequent discussion will include external forms of defensiveness, such as emotional explosions or revenge, as well as more internally focused efforts, such as mood maintenance, distraction, denial, and withdrawal from the group. However, while different, both types of defensiveness are caused by the same psychological states, and both lead to dysfunctional group processes and outcomes.

When experiencing aversive events, people often react emotionally (Berkowitz, 1989). Following Bies et al. (1997), we call this defensive response "exploding". Exploding is a direct and intense release of negative feelings, and is usually motivated by the desire to dominate or attack a frustrating person (Aquino, Galperin, & Bennett, 2004). However, explosions often lead to retaliation from those who are the target of these emotional releases. As such, they can sometimes result in an escalating tit-for-tat spiral of retaliation (Andersson & Pearson, 1999).

Additionally, rather than emotionally exploding, a person can defend themselves through the more controlled act of *revenge*. Revenge is motivated by a desire to restore perceptions of equity and justice. As noted by Bies et al. (1997) "Any perceived inequities on the job or violations of fairness norms can motivate revenge" (p. 21). Using their extensive interviews, they go on to note what kinds of things provoke revenge and uncover precisely what we would call bad apple behaviors. "Violations include bosses or co-workers who shirk their job responsibilities, take undue credit for a team's performance, or outright steal ideas" (p. 21). Morrill's (1995) ethnography, The Executive Way documents that managers are often loath to confront each other directly, but are still ingenious in the ways they sabotage those who frustrate them. For example, Morrill tells of coworkers who enact revenge by giving the "perpetrator" wrong information, distorted files, or sending them on "wild goose chases". However, experiments in the lab point out an inherent difficulty of revenge in the team settings. Using a social dilemma framework, Chen and Bachrach (2003) found that when a single individual free rides across experimental trials it led to an asymmetric and precipitous decline in teammate contributions. One interpretation of this finding is that offended members wanted to restore equity perceptions,

but could not get even without also harming themselves and their group. This prevented the group as a whole from provisioning the social good and meant that all members were worse off. Chen and Bachrach's study underscores that in interdependent teams, confining the effect of revenge acts is often difficult. Next, we turn to internal manifestations of defensiveness.

When feeling emotionally negative, people often take action to improve their mood. *Mood maintenance* behaviors are efforts to improve one's affect and can be either consciously or unconsciously motivated (Baumeister, Heatherton, & Tice, 1994; Thayer, 1996). For group members, examples may include the seeking out of positive social interactions – i.e. lunch outings, happy hour, etc. – or more individual mood elevators like taking breaks, eating, or smoking. While perfectly functional for the individual, mood maintenance may have an adverse affect on the group. Indeed, a laboratory study by Tice, Bratslavsky, and Baumeister (2001) found that repairing negative emotions takes precedent to considerations of task performance when people are emotionally depleted. As such, people at their wits end might socialize with others, eat a treat, or surf the internet, but tend to direct attention away from the task performance.

Said another way, a negative member can be a *distraction*. In an article by Andrews (2004), one interviewee stated: "If you've ever been in a situation where you feel offended by the behavior of a coworker – you know that you can't bring your best effort to work. Emotionally, intellectually and behaviorally, you're just not going to be all there" (p. 45). Supporting this assertion, field work by Pearson et al. (2000) found that over one half of those who experienced incivility at work reported that they lost time worrying about the uncivil incident and its future consequences. Other research on affect also confirms that feelings of anxiety, anger, or sadness tend to distract and demotivate (George & Brief, 1996).

A fourth form of defensiveness is *denial*, a strategy by which an individual avoids dealing with negative events by behaving as if group problems are not occurring, significant, or the result of the negative member. Denial has been evocatively described as "a primitive and desperate method of coping with otherwise intolerable conflict, anxiety, and emotional distress or pain" (Laughlin (1970, p. 57), originally cited in Brown (1997)). However, the interdependence of group work and the persistence of negative behavior conspire to make denial at best only a temporary stop-gap to the negative group member problem. One can only override genuine emotions for so long before becoming emotionally depleted (e.g. Baumeister et al., 1994) and suffering the explosive effects mentioned above.

The final defensive response we will explore is *withdrawal* from the group. Social interactions are often stressful, and are likely to be more so in the presence of a negative teammate. As such, a particularly easy, and hence probable, response is to *withdraw* into oneself by not fully engaging in the group (Bergman & Volkema, 1989; Bies et al., 1997). Pearson and Porath (2005) document that 20% of the workers they interviewed report that they reduced their rate of work as a result of incivility and 10% said they deliberately cut back the amount of time they spent at work. Pearson et al. (2000) find that over 25% of individual who were targets of incivility acknowledged withdrawing from work situations. They summarize their findings by noting,

> Through all phases of our study, people told us that after being targets they ceased voluntary efforts. Some stopped helping newcomers; others stopped offering assistance to colleagues. Additionally, targets reduced their contributions to the organization as a whole, whether by pulling themselves off task forces and committees, or by reducing efforts to generate or inspire innovation (p. 130).

More extremely, teammates might even exit the group to escape the negative thoughts and feelings induced by a negative member. Pearson et al.'s data is instructive, finding that half of the individuals interviewed contemplated leaving their jobs after being the target of incivility, and a full 12% reported actually quitting.

We have reached a point in our discussion where the negative members' behaviors have undermined perceptions of equity, mood, and trust. Members may respond defensively to these psychological states via explosions, revenge, mood maintenance, distraction, denial, and withdrawal. In sum, withholding effort, affective negativity, and interpersonal deviance can each trigger defensive thoughts and behaviors with powerful consequences.

MODERATORS OF THE BAD APPLE EFFECT

Thus far, we have reviewed the factors that motivate members of teams to respond defensively to a difficult individual. However, this response is moderated by several factors, which influence *when* bad behavior will impact the psychological reactions and subsequent actions of teammates. Specifically, four variables emerge from the literature that seem especially important in determining perceived impact severity – (1) intensity of the negative behaviors exhibited, (2) the group's interdependence,

(3) whether outcomes are successes or failures, (4) and the teammates' coping abilities.

Intensity of Negative Behaviors. The potency and frequency of negative behavior will determine its perceived intensity. First, of the three classes of behavior that have been identified as likely to elicit a group response (e.g. withholding effort, affective negativity, and interpersonal deviance), each has a range of severity. One affectively negative individual might be extremely pessimistic, while another might be only mildly depressed. Indeed, the widely employed "circumplex" model of emotion is based on an intensity dimension (Larsen & Diener, 1992), as is Ajzen's (2001) conceptualization of attitude. Similarly, the withholder of effort might slack off a little or do next to nothing. The literature on social loafing recognizes this and measures free riding as a continuous variable (Karau & Williams, 1993). Further, the interpersonal deviant might purposefully sabotage other's efforts or display the milder behavior of mean-spirited criticism. Robinson and Bennett's (1995) inductive typology of interpersonal deviance is supportive, finding that people naturally categorize deviance from mild to severe. In sum, potency is a central part of theories of effort, affect, and deviance. Second, in addition to the behaviors exhibited, the frequency of those actions is likely to play a role in perceptions of intensity. In an interesting analogy, Cunningham, Barbee, and Druen (1997) suggest that aversive behaviors can be thought of as "social allergens", where increased exposure leads to increased sensitivity. However, this fascinating hypothesis has yet to be tested. Regardless, more potent and frequent negative member behaviors will have a greater impact on teammates.

Interdependence. If the group is highly interdependent, then dysfunctional behavior is of more consequence. Groups can be interdependent to varying degrees in terms of tasks, goals, feedback, or rewards (Wageman, 2000). Highly interdependent groups have more interaction and the content of that interaction is more central to accomplishing the work task. As such, high interdependence means there are more opportunities for affect to contagiously spread to others and a greater chance for interpersonal attacks. In addition, the inequity caused by shirking is more noticeable and meaningful when members are interdependent and receive rewards based mainly on group accomplishment. Whereas a group that is not interdependent allows members to "do their own thing", a highly interdependent group provides less opportunity for avoidance. The experience of threat is ever-present, and so is the chance of acrimonious interpersonal conflict. This is especially problematic since interdependent tasks necessitate that a group maintains higher quality social relationships in order to effectively coordinate their activities (Gittell, 2003).

Outcomes. Work team outcomes can exert a powerful influence on the perceived severity of negative member behavior. After a team failure occurs, the negative member behaviors are more salient, and thus more influential. According to attribution theory (Weiner, 1980, 1995), failure triggers the process of determining causal factors, and relatively innocuous behavior can be reclassified as a significant threat to team functioning. If unchangeable, this newly salient dysfunction provokes the defensive reactions we have detailed. In addition the severity of the outcome can influence the response. This assertion is supported by Mitchell and Wood's (1980; Mitchell, Green, & Wood, 1981) research, which gave nurse managers scenarios of offenses that nurses had actually committed. In one condition, the nurse had left down a bed rail and the patient fell out and broke a hip, while in another the nurse had made the same mistake, but the patient did not fall. The punishments that managers recommended in the first condition were quite severe, including dismissal and probation. The punishments were much milder in the second condition, with the most common response being a verbal reminder of hospital procedure. Accordingly, reactions by group members to negative behavior will be more extreme when the behavior results in failure outcomes, and when those failure outcomes are more consequential.

Coping Skills. Finally, individuals are also likely to differ in their personal coping skills. A high locus of control would lead to beliefs that life events and reactions to life events are controlled internally. If teammates have high self-esteem, they know that their essential needs will be met. If they have high generalized self-efficacy, then they are likely to have confidence that either the negative member or the situation can be changed. Further, if they are calm (low neuroticism), then their reactions will be extreme. Notably, the work by Judge and his coworkers on core self-evaluations integrates and aggregates these four classic psychological variables – providing compelling reasons and evidence for conceptualizing and measuring a single underlying construct (Erez & Judge, 2001; Judge, Locke, Durham, & Kluger, 1998; Judge, Van Vianen, & De Pater, 2004). These self-attributes are useful because they change the meaning of threatening situations. For example, someone with a highly positive core self-evaluation might interpret interpersonally deviant behavior as merely a nuisance rather than a substantial threat. Or they might find a silver lining to the situation, such as a chance to learn conflict management skills. Using such mental techniques, those with high core self-evaluations are likely to be motivated and able to reconstruct the meaning of the bad apple's behaviors to be less negative. In summary, if a teammate has extensive coping resources then negative behaviors will have less intense psychological impact.

GROUP TRANSITION MECHANISMS

Thus far, we have defined the behaviors that make someone a negative group member and described how chronic display of those behaviors can subsequently influence other individuals to feel and act defensively. So far, this description has been initially unidirectional, then dyadic. However, we mentioned at the beginning of this paper that most of the research on team effectiveness has focused on how team attributes and processes result in effective team performance. At this point in our analysis, we will explore how individual states and actions transition to group constructs and behavior, and move from one conceptual level to the next.

One of the major shifts in team research documented by Ilgen et al. (2005) is that more emphasis is being placed on multilevel theoretical and analytical contributions. Ilgen elaborates on the fact that organizations are multilevel and that many of the variables central to understanding teams appear at the group level as well as the individual level. He also points out that there are many parallel constructs, ones that have both an individual and team counterpart. For example, motivational constructs such as efficacy and emotional constructs like mood can be construed at both these levels. Theoretically, these collective constructs are usually assembled from individual interactions. When A talks to B, and B responds in some way, we have what Weick (1979) calls a "double interact". It is the structure and function of these double interacts that are the building blocks of collective constructs. These "[c]ollective structures emerge, are transmitted, and persist through the actions of members of the collective" (Morgeson & Hofmann, 1999, p. 53). We support Morgeson and Hofmann's notion that "[i]ntegrating across levels may provide a more veridical account of organizational phenomena" (p. 249). The question for the moment is how these individual interactions, which we have described are translated into group constructs and then into group action. We describe three mechanisms below: addition, spillover, and sensemaking.

Additive Defensiveness. The simplest and most obvious transition occurs using an additive mechanism. Obviously, the more types of negative behavior, and the more interactions with team members, the more negative psychological states and defensive behaviors will accrue. Brass, Butterfield, and Skaggs (1998) discuss how the impact of a negative member on a team depends on the ratio of contacts the person has with group vs. non-group members. Duffy, Ganster, and Pagon (2002) summarize their discussion of social undermining behaviors by commenting that "their efforts add up over time" (p. 233).

Spillover Effects. A different mechanism for moving from dyadic exchange to group level constructs is caused by what we call a *spillover effect*. The subtle and automatic form of spillover occurs through the process of modeling behaviors. Seeing others act antisocially makes those behaviors more mentally accessible and lowers inhibitions about behaving in a similar fashion. Bandura's famous "Bobo the Clown" studies demonstrate that even strangers can be influential models of antisocial behavior (Bandura, Ross, & Ross, 1963). These social learning effects are likely to be even stronger in groups. Indeed, a paper entitled "Monkey See, Monkey Do" by Robinson and O'Leary-Kelly (1998) found precisely that; the more interdependent the social context, the greater the effects of social learning. Keaton (1999) even suggests that these other team members can become "secondary provokers" or negative members themselves. In short, through mimicry and modeling, spillover effects of negative thoughts, feelings, and actions can move from individual to group level characteristics.

Spillover can also be seen in the phenomenon of displaced aggression. While we are often able to use regulatory skills to control frustration in the moment, as those resources are expended, group members become more likely to lash out at others (Muraven & Baumeister, 2000). Sometimes those others are entirely removed from the situations and people who are the source of frustration (Marcus-Newhall, Pederson, Carlson, & Miller, 2000). Research shows that provoked participants readily displace aggression onto blameless individuals (e.g. Worchel, Hardy, & Hurley, 1976), especially when social and status hierarchies constrain direct expression of aggression – e.g. in comparatively low power situations (Marcus-Newhall et al., 2000). Folger and Skarlicki (1998) describe this sort of spillover as a "popcorn model" of aggression, where aggression or violence can ricochet throughout a group; setting off one individual after another and lowering everyone's inhibitions.

Just as contagion serves as a mechanism for spreading mood from A to B, it can also spread from B to C, C to D and so on; spillover occurs when team members' individual responses to the bad apple start to have an impact on other team members, an "interaction breeds similarity" effect (Brass et al., 1998, p. 25). In one of the more definitive pieces of evidence to date, Barsade's (2002) article on the "ripple effect" found that a confederate displaying physical manifestations of negative affect (e.g. posture, mannerisms, facial expressions) was able to engender negative moods in groups, and multi-level modeling techniques (HLM) affirmed that these effects permeated the group above and beyond dyadic contagion. Bartel and Saavedra (2000, p. 197) describe this effect in their research, stating that "Group

members come to develop mutually shared moods and emotion''. Evidence of these affective spillover effects has accumulated in recent years (Bakker & Schaufeli, 2000; George, 1990; Totterdell, Kellett, Teuchmann, & Briner, 1998). The transfer of affect is largely automatic and subconscious, occurring through mimicry and psychological feedback (Hatfield et al, 1994).

Sensemaking Effects. More conscious processes can occur as well. In many cases a negative member may act out in a public context (e.g. bully a teammate, refuse to contribute in a social problem solving context) or behave so egregiously that it requires sensemaking by one or more team members (Weick, 1995). The recipient of an attack, or an observer of one, may seek out the advice and interpretation of other team members or even outsiders. Social communication can be an important part of individual sensemaking (Hardin & Higgins, 1996). Pearson and Porath found that over 90% of people who were treated badly (i.e. uncivilly) say they sought the counsel of someone else. Moreover, research by Rime, Finkenauer, Luminet, Zech, and Philippot, (1998) describes the process of ''secondary social sharing'' where those who have heard about frustrating interactions themselves share it with others. Rime's research indicates that this secondary social sharing occurs with surprising frequency – around two thirds of the time negative events are shared a second time. Finally, their studies show that such sharing is especially likely to happen when the event is intense or negative (Christophe & Rime, 1997; Luminet, Bouts, Delie, Manstead, & Rime, 2000).

An obvious outcome of this sensemaking process is that people agree that the negative member is different and dysfunctional and the group tries to change or reject this person. However, it is also possible that neither response is viable (described earlier), and under these circumstances the negative effects are likely to have a wider and more substantial impact on the team. Lacking power to enact change prompts group member sensemaking about one's own relationship to the group. When a group has lost its instrumental ability to effectively enforce norms, elicit cooperation and achieve goals, members may no longer recognize the team as a desirable entity with which to be associated. When members loose faith in the groups of which they are a part, it is called de-identification (Dutton, Dukerich, & Harquail, 1994). One of the major drives behind identifying with a collective is the desire to be part of something positive that enhances one's own self concept (Dutton et al., 1994). As the group loses its positive ethos, members de-identify from the collective and categorize themselves more as an individual and less as a part of the group. As members physically and psychologically disengage, the character of the group is marked by decreasing

commitment to group goals and dissatisfaction with team membership (Ouwerkerk, Ellemers, & de Gilder, 1999). In closing, it is sufficient to say that the individual actions of a negative member can spread in various ways to the group – through aggregation, spillover, and sensemaking – and that it is through these transformational mechanisms that dyadic effects come to be a group level phenomenon – i.e. a spoiled barrel.

GROUP CONSTRUCTS

We have argued that the individual and dyadic effects of the negative member can be transmuted into group constructs – what Cohen and Bailey (1997) call group psychosocial traits – through the mechanisms off aggregation, spillover, and sensemaking. In the abstract, group constructs are mental heuristics to think about qualities of a collective (Morgeson & Hofmann, 1999). However, when recognized and internalized by group members, group psychosocial traits come to have a life of their own and exist apart from individuals. As Weick and Roberts (1993) point out, people "construct their actions while envisaging a social system of joint action" (p. 363). In short, we act as if social groups have a character of their own, and so, in a way, it comes to be true.

NEGATIVE MEMBER'S EFFECTS ON GROUP PROCESSES AND OUTCOMES

Effective groups have two meta-skills – their members produce as individuals, and together as a group they effectively coordinate and integrate individual action into a coherent whole constituting a group output (Hackman, 1987). This first skill, the ability to produce, depends on having a team that is motivated, capable, and able to learn and change. These are the basic building blocks for performance, without which there would be little to integrate. The second skill, group integrative actions, includes the group processes of productive conflict and cooperation (Smith et al., 1994). Having a bad apple in a group will have a negative impact on the group production related processes of motivation, creativity, and learning and on the integrative processes of cooperation and conflict. Without these processes in place, groups fail.

Motivation. Motivation to perform is central to work behavior (Mitchell, 1997). We have already discussed how motivation at the individual level

could suffer and, in addition, influence collective motivational constructs such as group efficacy (Gully et al., 2000). Teams with lower efficacy exert less effort, set lower goals, and perform less well than group with higher efficacy (Gully et al., 2000). Beyond efficacy, a negative group affective tone also has a deleterious affect on group performance (George, 1990). Negative moods and emotions engendered by the negative member will distract other team members from focusing on the task. This distraction might take the form of ruminating on the negative interactions or gossiping about them with others (Burt & Knez, 1995; Rimes et al., 1998). This assertion is consistent with the findings of Grawitch, Munz, and Kramer (2003) that negative group moods focus attention on interpersonal issues and away from task concerns. Lastly, recent work by van Knippenberg (2000; van Knippenberg & van Schie, 2000) suggests that since the prototype of a "good" employee is usually a motivated employee, group members who categorize themselves as part of a healthy group will conform to that identity by displaying more task motivation. Thus, if a destructive group member causes de-identification, there is likely to be a decrease in task effort and persistence as the team members deviate from the "good worker" prototype (see also Hogg, 2000 and Shamir, 1990). In summary, having a negative member in the group will decrease motivation through the processes of lowered efficacy, distraction (e.g. gossiping, affective rumination, and mood maintenance), and de-identification.

Creativity and Learning. Creative problem solving is seen to be increasingly important in groups (Paulus, 2000). In a recent article (Amabile, Barsade, Mueller, & Staw, 2005) shows that positive affect facilitates cognitive variation and yields new associations, thereby enhancing creativity in a linear fashion. But creativity also depends on several fragile conditions, including the free exchange of ideas, confidence that innovation is possible, and the motivation to create (West, 2002). Further, the creative process of coming up with new ideas is intimately related to the group's ability to learn. The same safe and motivated environment that allows groups to come up with new ideas also allows them to learn and remember effective methods of action (West, 2002). While learning and creativity are not synonymous, both involve an intellectual openness to new possibilities, and are consequently coupled together here.

The negative member's behavior can have a major effect on the creative and learning processes in groups. In inequitable situations, such as with a withholder of effort, teammates are unlikely to be motivated to contribute to the collective pool of ideas or to teach and learn from others (West, 2002). In addition, numerous empirical studies have found that negative feelings

have a chilling effect on creativity for individuals (see for a review Isen, 2000) and on groups (Grawitch et al., 2003). Specifically, research exploring the contagion of the negative emotion of social anxiety has discovered that the worst (i.e. most socially anxious) group member exerts a powerful asymmetric effect on team creativity (Camacho & Paulus, 1995). Similar to our affectively negative individual, the most socially anxious person paralyzed other members' ability to creatively perform. Finally, threat generally hinders inventiveness by restricting one's behavior to well-established patterns (West, 2002; Staw, Sandelands, & Dutton, 1981). A similar logic holds true for learning in groups. A perception of threat triggers defensive reactions aimed towards self-protection (Aquino & Douglas, 2003). Groups composed of self-protective members will not feel safe, and so will be reluctant to do things like admit a knowledge deficit or ask for help in developing competencies (Edmondson, 1999, 2002), which will impede learning. Finally, given that knowledge can be a source of power, those who do not identify with the group are more likely to hoard information and ideas for political purposes (Jones & George, 1998). If, by engendering a hostile atmosphere, a negative member may cause the group to be mute about problem areas and engage in political use of knowledge. Again, group learning is likely to suffer. In sum, equity perceptions, group affective tone, feelings of safety, and identification each play an important role in prompting creativity and learning but will be undermined by the behaviors of a negative group member.

We now shift our attention to the ways that a negative member may influence the integrative processes necessary to coordinate various members' efforts. These integrative processes may be especially compromised as team members rush meetings to hasten their escape from negative interactions, and succumb to the common bias of coordination neglect (Heath & Staudenmayer, 2000).

Cooperation. Cooperation is perhaps the most quintessentially "integrative" component of group work. One way bad apples inhibit cooperation is by undermining what has been called "depersonalized trust" or the "positive expectation or presumption that interpersonal risks can be assumed with a reasonable degree of confidence that others [in the group] will not betray or violate the trust" (Kramer & Wei, 1999, p. 146). A central facet of depersonalized trust is the knowledge that others will abide by norms of civil behavior. When a negative member steals credit or spreads negative gossip, other employees' begin to lose confidence (i.e. decrease their expectations) that cooperation will result in mutually beneficial outcomes. Kramer and Wei note that a violation "may create problems that undermine the smooth

exchanges, disclosures, affirmations, and validations associated with group-based trust (p. 147). According to rational models of human behavior, as expectancies worsen, so will the motivation to cooperate (Bommer, Miles, & Grover, 2003). Identity theory makes similar predictions along less calculative premises of human behavior. Lind and Tyler's (1988) group value model of behavior argues that cooperation is an expressive sign of feeling respected and respecting others. When people identify with the group, they feel a moral duty to cooperate (Kramer & Goldman, 1995) and sometimes do so even when it is not in their best interest (Brann & Foddy, 1988; Dawes, van de Kragt, & Orbell, 1990). On the other hand, when people categorize themselves as individuals rather than as members of a group, they withdraw from collective life by thinking and acting more selfishly (Kramer, Brewer, & Hanna, 1996). In sum, decreased perceptions of depersonalized trust provide an instrumental rationale for avoiding cooperation; and de-identification produces expressive reasons for eschewing cooperation.

Conflict. Group conflict was once considered anathema (Robbins, 1974). However, recent thinking and research indicates that under certain circumstances, conflict can benefit groups. Specifically, a distinction is drawn between relational conflict (i.e. about the person) and task conflict (i.e. about how to work). While relational conflict indeed detracts and distracts, task conflict can actually serve to reinforce social responsibilities, enhance decision quality by checking assumptions, and clarify group members' mental models (Jehn, 1995; Tjosvold, 1998). It seems likely that the interpersonal deviant and the withholder of effort are likely to provoke both immediate and sustained relational conflict by breaking important norms such as mutual respect and parity of effort. Evidence suggests that even the affectively negative individual may prompt conflict by causing reactions of irritation, condescension, and humorlessness (Furr & Funder, 1998). And as other group members rebuke or retaliate against this member, relational tensions will escalate (Andersson & Pearson, 1999). Moreover, some of the resulting hostility is likely to be "displaced" towards other group members (Marcus-Newhall et al., 2000), increasing overall relational conflict. Finally, by creating a threatening psychological environment, a negative member could also cause people to retreat inwards, resulting in hesitance to engage in constructive task conflict, since it may result in unpleasant acrimony. As such, the groups with a negative member might experience relatively more interpersonal conflict along with relatively less task conflict – a doubly counter productive state of affairs. However, this is a place where our knowledge is somewhat speculative and more empirical evidence would be useful.

In conclusion, through various individual cognitions (e.g. inequity, negative mood, and distrust) and group level constructs (e.g. lower mood, potency, safety, and group-based trust), the key processes that make groups effective (e.g. motivation, creativity, learning, cooperation, and task conflict) will be undermined.

Group Outcomes. These individual and group effects mean that the ultimate outcomes for the group include poor performance, low viability (e.g. a weakened social structure), and an unhappy team. Group performance will suffer as measured in terms of quantity, quality, and timeliness. The link between group processes and group outcomes is a rich and well-researched topic (see Cohen & Bailey, 1997; Campion, Medsker, & Higgs, 1993; McGrath, 1984). So as not to reinvent the wheel, we will merely reiterate that group behavioral variables such as motivation, creativity, cooperation, and conflict are central mediators between inputs such as group member's abilities and the key outcomes of performance, worker well-being, and group viability. However, one interesting long-term consequence of the negative member invites further elaboration. Since members of dysfunctional groups are likely to be dissatisfied and to de-identify, we would expect increased absenteeism and turnover (Pelled & Xin, 1999), each of which have significant negative impacts on group functioning (Mitchell & Lee, 2001). In fact, the desire to avoid a negative member may even explain additional variance in turnover that would not surface in traditional predictors like job satisfaction. For example, Mitchell and Lee (2001) note that events like fights with a coworker may act as a "shock" that precipitates leaving. Moreover, since the best employees have greater job mobility, they are often the most likely to leave (Mitchell & Lee, 2001). As the best group members jump ship, one can imagine a downward spiral in group performance, unfolding over time.

DISCUSSION

Over the last half century, a clearer understanding has emerged about the power of collectives to reconstruct the goals, behaviors, and perceptions of the individual to serve the needs of the group. However, it is often overlooked that people conform and converge largely because they want to; they want to belong and have clear expectations about normatively appropriate behavior (Baumeister & Leary, 1995; Salancik & Pfeffer, 1978; Sherif, 1935). Sometimes individuals behave in ways that do not benefit the group; sometimes individuals are negative, refuse to contribute effort or break important

group norms. This behavior presents a challenge at both practical and theoretical levels. Practically, chronic expressions of harmful behaviors allow these people to become a figurative thorn in the groups' side – clearly a distraction and possibly a "destroyer" of the group itself (Wetlaufer, 1994). Theoretically, these negative behaviors threaten our standard assumptions about groups as homogeneous structures capable of cohesive action (e.g. Hackman, 1976). And yet, despite the importance of the topic, the field has yet to find the theoretical traction that would allow for a complete and coherent understanding of the key issues implicated by these negative group members.

Our analysis and review attempts to fill that gap. We present an unfolding model that describes the prototypical process by which one individual behaving badly might have a profoundly negative impact on the group. We suggest that the three most salient and important behaviors of a negative member are the withholding of effort, the demonstration of negative affect, and the violation of important interpersonal norms. At the beginning of this process, team members will react by trying to change this negative behavior. If that fails, the attribution becomes that the person's behavior is stable and intractable. Next, members will look to reject the person. But when this is not possible due to social constraints, more defensive psychological reactions and behaviors are likely to occur. Defensiveness is an especially intense experience due to two factors – the aversiveness of not having the control over the environment (i.e. low power), and due to the psychological principle that bad experiences are hard to ignore, require attention and sensemaking, and consume large amounts of time and energy (i.e. bad is stronger than good). The direct reactions to this persistent and unchangeable negative member are the feeling of inequity when confronted with someone withholding effort, the spreading of negative affect to other members through contagion, and the loss of confidence and trust in an interpersonal deviant. These negative states lead to defensive behaviors.

Defensiveness is associated with dysfunctional behaviors such as explosions, revenge, mood maintenance, distraction, denial, and withdrawal. These reactions are especially likely to occur when the negative behaviors of the negative member are intense, when the group is interdependent or experiences bad outcomes, and when group members lack the coping skills to deal with the situation. Moving forward in this unfolding process, it is through additive, spillover and sensemaking mechanisms that these behaviors come to influence group psychosocial constructs such as group mood, group potency, and psychological safety. As a result, group activities such as motivated effort, cooperation, coordination, creativity, learning,

and helpful conflicts are decreased and diminished, eventually resulting in poor group performance, lower well-being, and possibly team collapse.

It is important to note, however, that the negative member phenomenon does not explain every instance of group dysfunction. Other factors such as lack of organizational support, work-family issues, inadequate member competencies, or unclear directions provide a host of alternative causes. In other words, there is reason to be cautious in applying a bad apple label to a particular member when confronted with a dysfunctional group. The fundamental attribution error (Ross, Amabile, & Steinmetz, 1977) and the sinister attribution error (Kramer & Wei, 1999) both argue that people have a penchant for pinning ambiguous problems on an individual group member, particularly those that are disliked (Naquin & Tynan, 2003). By doing so, groups might incorrectly label someone a bad apple and blame them for negative outcomes. Moreover, a group may succumb to the cognitive ''performance-cue'' bias, where outcome success unduly influences judgment and recollection of the event (Staw, 1975). For example, if a group's project is unsatisfactory to members, they are likely to look backwards and judge ambiguous or marginal behavior as dysfunctional. Moreover, cognitive psychology research finds that when someone is in a negative frame of mind, negative behaviors will be more easily and clearly recalled (Meyer et al., 1990). Finally, in these same situations, there is a motivational bias to blame someone for bad outcomes. In order to protect the image of the group and the member's self-esteem, the least proto-typical member is often used as a scapegoat for what was really a collective failure (Eagle & Newton, 1981; Marques, Abrams, & Serodio, 2001).

This presents a troubling methodological conundrum – people who are ''positive deviants'' or ''devil's advocates'' will likely be resented for not conforming, and thus will be scapegoated and derided, particularly when negative outcomes have recently occurred. That is, dissent will likely lead to a negative halo which may increase reportage of the person as expressing bad apple behaviors of withholding effort, negative affectivity, and interpersonal deviance. This would seem to present a threat to the validity of survey measures of the effects of bad apples. So, how is a researcher to know if bad apples caused negative outcomes or if negative outcomes caused someone to be labeled a bad apple? One admittedly imperfect resolution would be to assess factors we already know to be associated with scapegoating – such as opinion deviance and recent negative feedback – and show that bad apple behaviors explain incremental variance. Another approach is to have a confederate display bad apple behaviors in a laboratory context and to show asymmetric effects in a context where the performance-cue bias in not

operable. We should also add that while opinion deviance may lead to some bad apple labeling, it is unlikely that such behavior will have the same extreme effects. First, opinion deviance may in fact lead to positive outcomes (Nemeth & Staw, 1989). Second, it is less likely to be taken personally and result in the same negativity caused by bad apple actions. But clearly, the relative effect of opinion deviants and bad apples is an issue needing more research.

Our initial examination of the frequency of spoiled barrels suggested that while negative members who persist over time and eventually produce dysfunctional groups are probably not ubiquitous,[1] their effects are substantial. Teams may identify negative members and their destructive behaviors – but organizational constraints may limit the group's ability to remedy the situation. We have suggested that the negativity bias and various processes of social interaction operate to make the negative member behaviors disproportionately recognized, informative and influential.

But what explains why theorists have overlooked this fundamental dynamic about responses to negative individuals? One reason seems to be that scholars have considered it "beyond the scope" of their own works. Mitchell's research looks at *leader's* responses to poor performing workers, and consequently did not need to contend with situations of low empowerment (Mitchell et al., 1981; Mitchell & O'Reilly, 1983; Mitchell & Wood, 1980). In addition, that research focused on individuals, not teams. Lepine and Van Dyne (2001) are more overt, explicitly assuming that "the peer who notices the low-performing coworker is competent and capable … is committed to the group and the group's goals … and that situational factors do not overly constrain peer responses" (p. 69). In short, they assume away the problem that we are interested in – e.g. when "bad apples might spoil the barrel". We relax those assumptions, and propose that there are hosts of situations when teammates are not powerful, competent, capable, committed, or unconstrained – in short, situations where teammates are unempowered.

A second reason is that most researchers have only examined parts of our overall picture and have captured just a small portion of what unfolds over time. The typical study may look at only two or three variables such as how negative affect can spread through a group (Barsade, 2002) or how a coworker who withholds effort causes other team members to have feelings of inequity (Jackson & Harkins, 1985). In addition, some authors focus on immediate individual reactions (the front end of our analyses) like motivational and isolation attempts by coworkers (Lepine & Van Dyne, 2001) while others focus on the relationships between group psychosocial traits like low-efficacy and outcomes like group motivation or performance

(Gully et al., 2002); relationships that are the last step in our analysis. Still others look at how personality variables (e.g. low conscientiousness or low agreeableness) affect the very distal dependant variable of team performance (Barrick et al., 1998; Haythorn, 1953), but confess ignorance when it comes to explaining *why* negative individuals have such a large asymmetric effect on the group.

In looking over the totality of our presentation we know that we have introduced a number of "sets" of states and behaviors at the individual and group level. Some things are included, some excluded. We have tried to be precise about what is in or out, partly through our definition of what constitutes a negative member (e.g. withholding effort, negative affectivity, and interpersonal deviance). These three sets of behavior drive much of what follows in terms of states and actions. However, it is also important to recognize that our guide for inclusion or exclusion was the research literature itself. We focused on phenomena that people have written about and empirically researched. Obviously, some things were omitted due to these judgment calls but we are fairly confident that we have not overlooked any *major* components for our review.

FUTURE RESEARCH

We have presented a model that captures how the effects of the behaviors of a negative group member unfold over time and across conceptual levels. While many of the pairwise relationships that adjoin neighboring stages of our analysis (see Fig. 1) are well documented; it is the distal and mediating aspects of our approach that need more work. In addition, we have little idea about the combinational properties of our states and behaviors at both the individual and group level. Which states are most important or when are they important? How do they combine: additively, multiplicatively? Are there thresholds which must be surpassed for effects to occur and if so what are they? In addition, we present our analysis in a lock step fashion over time. In reality both individual and group psychological actions and reactions may occur simultaneously and interact over time. Some stages may take longer, others shorter. There is lots of research left to be done.

However, there are major problems with conducting such research. Because we are describing offensive behaviors and intense reactions, field research would seem to be most appropriate. Also, the dynamic nature and extended time frame point to field investigation. Extreme behaviors and lengthy periods of interaction are hard to capture in the laboratory. However,

the chances of actually observing a bad apple spoil the barrel is low since such events are infrequent and organizations are not particularly likely to encourage or support such invasive research. Moreover, questionnaires are also problematic, given the retrospective biases discussed above. And, as we have suggested, the process is complex, especially with respect to identification of causal and mediating mechanisms. A more refined and detailed analysis would usually be most easily accomplished with laboratory research. However, the use of ad hoc groups, the lack of real world outcomes and the ethical problems with creating real negative experiences all mitigate against choosing to conduct this research solely in the lab. What is left?

We would suggest a combination of traditional research strategies along with some less frequently used methods. First, laboratory studies could be used to confirm some of the less emotionally charged and less temporally extended links depicted in Fig. 1. For example, we could demonstrate through manipulation (e.g. using a confederate) that certain bad apple behaviors cause negative psychological reactions and defensive behaviors. We could, for example, have one confederate embarrass or be rude to another confederate and observe the consequences for other team members in terms of perceived trust and defensive behaviors such as mood maintenance. We could also use scenarios or scripted film clips to obtain similar responses. Second, in the field, we could have employees respond to questionnaires describing bad apple experiences and how the person and their group responded.

Beyond these traditional strategies, we would suggest two other research techniques that could contribute to our understanding. We could use qualitative techniques to investigate groups struggling with a bad apple. In particular, a mainstay of the recent spate of reality TV shows (e.g. The Apprentice, Real World, Survivor, etc.) is the inclusion of a "bad apple" member with whom others are required to interact. These videos constitute a rich archive of real people coping with bad apples over time in interdependent circumstances. Finally, we should add that the bad apple phenomenon takes place at two levels – the individual and the group. Any research that attempts to encompass both parts of the process will require both measurement and the use of analytic techniques that are appropriate for these multiple levels. For example, one promising alternative is the use agent-based computer simulations, which allow for a better understanding of the dynamic and multi-level relations that occur in groups. Variables such as group size, empowerment, and negative relations could all be modeled in this context (Kitts, Macy, & Flache, 1999). In short, conducting bad apple research, because of the negative behaviors and emotions, extended time

dimension, and multiple levels presents a number of challenges. However, the problem is real, its effects can be dramatic, and it is worthy of study.

Our analysis also underscores the importance of practical responses to the bad apple phenomenon, such as selection, placement, and training. For example, it seems clear that to the extent management can identify people who deleteriously influence others with negative affective attributes and a damaging disregard for group norms (such as mutual respect and equality of effort), such people should not be hired, or at least not placed in groups. Letters of recommendation, psychological tests, and work group simulations can all help assess these attributes. Once the person is hired and placed in a group, then ways to attenuate a destructive group member's effects include structuring the task to minimize interdependence or, more plausibly, limiting the negative member's power by not selecting them as a leader or facilitator. In addition, groups can be trained in ways to handle destructive behaviors when they occur. Management may also work to minimize dysfunctional behaviors – for example by monitoring and punishing group members who consistently flout group norms or withhold effort. To do this requires expanding what is included in performance appraisals beyond task performance to including measures of the frequency and potency of negative behaviors.

Whether in organizations or other types of groups, our dynamic and unfolding perspective implicates two key leverage points for dealing with negative members. First, empowerment is critical to effective resolution of the difficult member dilemma (e.g. rejection or motivation). Groups can empower themselves by building coalitions or by reinforcing relationships threatened by spillover effects. Additionally, leaders with structural authority (i.e. a team coach or therapist) can intervene to motivate or expel a negative member, or they can provide tools to empower the team (e.g. Hackman, 2002). For example, a select group of progressive firms are using what is called 360-degree feedback, where peers formally comment on each other's behavior. However, at this point, we know very little about the effectiveness, or relative effectiveness, of selection, group training, interventions, placement, firing, or team empowerment, in resolving the bad apple problem.

Second, this model highlights how important it is to quickly mobilize a response. Rather than members remaining in a psychological state of defensiveness, a quick response minimizes the individual and group level effects of a negative member. Moreover, as we have touched on, there is some speculation that there may be some vicious cycles instigated by a negative member. Nipping this harmful behavior in the bud, so to speak, would avoid these downward spirals.

CONCLUSION

Over the last 20 years, the field of organizational research has seen a dramatic increase in the study of negative behavior at work. Some of these actions violate internal rules and external laws – e.g. discrimination, sexual harassment, violence, stealing, and dishonest reporting. Our focus is different. It is on legal, but negative, interpersonal behaviors within a team context. Almost all of us have either had the personal experience of working with someone who displayed bad apple behaviors or had a friend, coworker, or spouse who has shared such stories with us. When this process starts to unfold at work, it consumes inordinate amounts of time, psychological resources, and emotional energy. We believe that our personal and indirect experience with such circumstances underlie many people's reluctance to fully commit to teams, despite the enthusiasm of psychologists and proclamations of popular management authors.

We have presented an analysis of when, how, and why such reactions occur. We notice the behaviors, they offend us, reduce our enthusiasm, change our mood and may ultimately lead us to personally de-identify or leave the group, with a high likelihood that the group itself will perform poorly, fail, or disband. Hopefully, our description of this process can clarify our thinking, initiate research that confirms or disconfirms the relationships proposed, and eventually lead to strategies that decrease bad apple effects. In conclusion, we believe that the bad apple phenomenon is real and important, and that its inclusion in future organizational research will help us to understand and improve dysfunctional groups.

NOTES

1. While not ubiquitous, that does not mean bad apples are a rarity in groups. The reason is simple arithmetic. Since groups contain several people (for sake of example, let us say seven), even a small number of bad apples (say 2% of individuals) could produce a significant percentage of groups containing at least one bad apple (e.g. $7 \times 2\% = 14\%$).

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