

Running head: HEAD ABOVE THE PARAPET

Head Above the Parapet: How Lone Dissenting Subordinates Influence Group Outcomes and  
the Consequences They Face for Doing So

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## Head Above the Parapet: How Lone Dissenting Subordinates Influence Group Outcomes and the Consequences They Face for Doing So

Powerholders — those with control over valued resources — have often been portrayed as immune to the influence of others, and especially immune to the influence of those who depend on them in order to access those resources (i.e., subordinates) (Handgraaf, van Dijk, & De Cremer, 2003; Nemeth, 2009; Oc & Bashshur, 2013; Oc, Bashshur, & Moore, 2015). Though, without doubt, subordinates can and sometimes do resist the decisions of those who hold power over them (Furst & Cable, 2008; Mumby, Thomas, Martí, & Seidl, 2017; Tepper, Duffy & Shaw, 2001; Yukl, Fu, & McDonald, 2003), dominant portrayals of the powerholder/subordinate relationship as well as theorizing about this relationship tend to take the view that influence flows downwards from powerholders to subordinates (Keltner, van Kleef, Chen, & Kraus, 2008; Nemeth, 2009; Shamir, 2007). This perspective is not unreasonable, given consistent findings that individuals with power tend to pursue their own self-interest at the expense of others, retain larger proportions of scarce resources for themselves (Oc et al., 2015; Piff, Kraus, Côté, Cheng, & Keltner, 2010; van Dijk & De Cremer, 2006), and feel entitled and legitimate as they do so (Blader & Chen, 2012; De Cremer & van Dijk, 2005; Keltner, Gruenfeld, & Anderson, 2003).

However, it is a mistake to assume that subordinates accept powerholders' decisions without questioning or reacting to them. Indeed, research on social movements provides compelling empirical evidence that when individuals feel deprived, or that their rights have been violated, they are motivated to voice their objections to those who hold power over them, even to the point of engaging in collective actions such as social protest (Dube & Guimond, 1986; Smith & Ortiz, 2002; van Zomeren, Postmes, & Spears, 2008; Wright, Taylor, & Moghaddam, 1990). Other recent work positions subordinates as an important source of social information for powerholders and shows that subordinate reactions to powerholders' decisions can weaken

powerholders' self-interested tendencies over time (Dana, Cain, & Dawes, 2006; Handgraaf, van Dijk, Vermunt, Wilke, & De Dreu, 2008; Oc et al., 2015; Scott, Colquitt, & Paddock, 2009).

Although this body of work helps us better understand how influence can flow upward from subordinates to powerholders, most studies on subordinate influence to date have treated them as an undifferentiated mass. Subordinates' influence is typically operationalized in terms of their aggregated reactions (e.g., Oc et al., 2015; Scott et al., 2009), or simply as a function of their presence or absence (e.g., Dana et al., 2006; Handgraaf et al., 2008). It is perhaps unsurprising that someone in a position of power would respond to the influence efforts of a unanimous chorus of voices. Yet, how often do these occur? We well know that there are strong pressures to conform to the preferences of those in positions of authority (Milgram, 1974), and the perceived consensus of groups (Asch, 1951), even when doing so leads to negative outcomes (Janis, 1983). And work on employee voice and silence provides compelling evidence that it is extremely difficult to tell individuals in positions of power that they are behaving in a self-interested fashion, making silence the dominant organizational response to abuses of power and mistreatment (Bashshur & Oc, 2015; Morrison, 2014).

Where does this leave us? Popular sentiment often alludes to the power of the individual in creating positive social change. But we actually know very little about whether one person can actually change the behavior of those with power. Empirical research has largely neglected the potentially critical possibility that subordinates who express a lone dissenting opinion within a group shape their own and others' outcomes. We ask the question: *can* one person make a difference in changing the behavior of those with power over them?

Drawing on existing work on power (Dana et al., 2006; De Cremer & Van Dijk, 2005; Oc et al., 2015; Samuelson & Allison, 1994), as well as research on social influence (Latané, 1981,

1996; Latané & Wolf, 1981), minority<sup>1</sup> influence (Moscovici & Lage, 1976; Nemeth, 1986, 2009), and devil's advocacy (Schwenk, 1990), we examine how a lone dissenting subordinate can influence the patterns and trends of powerholders' allocation behavior over time. We focus on an ongoing resource allocation process between powerholders and their subordinates and argue that a subordinate who provides powerholders with feedback, even as a lone dissenting voice, *will* have an effect on powerholders' allocation behavior in the direction of their feedback.

Specifically, we predict that a lone dissenting subordinate who provides powerholders with negative feedback (whom we label a "candid" subordinate) causes powerholders to restrain their self-interested tendencies. Conversely, we predict that a lone dissenting subordinate who provides powerholders with positive feedback (whom we label a "compliant" subordinate) makes it easier for the powerholder to make more self-interested allocations over time.

We extend these arguments by exploring group identification as a moderator of the influence of these lone dissenting subordinates (Brewer, 1979; Brewer & Schneider, 1990; De Cremer & Van Vugt, 1999; Messick & Brewer, 1983; Van Vugt & De Cremer, 1999). Given the substantial evidence that an individual's influence is amplified when he or she shares an important social identity with their influence target (Abrams, Wetherell, Cochrane, Hogg, & Turner, 1990; Postmes, Spears, Sakhel, & de Groot, 2001), we predict that a lone dissenting subordinate will have a stronger effect on a powerholder's allocations when he or she shares a salient group membership with the powerholder.

Lastly, we explore the consequences that subordinates face when they act alone in expressing a dissenting opinion. Specifically, we explore whether powerholders reward lone compliant subordinates in groups of otherwise candid subordinates, and whether they penalize lone candid subordinates in groups of otherwise compliant subordinates. Finally, we examine

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<sup>1</sup> Though the term minority is often used to refer to individuals as a function of their demographic characteristics such as race or sex, this paper uses the term minority to refer to individuals who express opinions unexpressed by the majority of the group's other members, in the tradition of research on minority influence (Nemeth 1986, 2009).

whether group identification affects the extent to which these lone dissenting subordinates are rewarded or punished.

### **The Role of Subordinate Feedback in Powerholders' Allocation Decisions**

Unfortunately, those with power over valued resources tend to tip the scales in their own favor, especially in the absence of incentives to consider others' interests, and feel legitimate in violating equity or equality norms (Dawes, 1980; Kabanoff, 1991). For example, simply being appointed to a powerful position appears to license individuals to exploit their power and violate equal division rules in resource allocations (e.g., De Cremer & Van Dijk, 2005; Samuelson & Allison, 1994). Nevertheless, like any other individual, powerholders are strongly motivated to maintain a positive self-image, both for themselves (privately), and in terms of how they are seen by others (publicly).

It is important for individuals to see themselves as ethical, likeable, and, in general, not self-interested (Allison, Messick, & Goethals, 1989; Blasi, 1984; Lerner, 1980; Messick, Bloom, Boldizar, & Samuelson, 1985), as well as to believe that others also see them that way (Dana, Weber, & Kuang, 2007; Franzen & Pointner, 2012). As Barclay, Bashshur, and Fortin (2017) point out, seeing oneself (and being seen) as a fair person "is a desired social identity and managers are motivated to engage in behaviors that will establish and maintain this identity" (p. 877). Indeed, studies show that powerholders prefer to remain ignorant of the effects of their self-interested decisions on others (Dana et al., 2007), ostensibly because these negative effects are difficult to reconcile with a positive private self-image. Powerholders are also willing to sacrifice some of their potential earnings in order to hide the fact that they are being selfish from their subordinates (Dana et al., 2006), presumably because they are motivated to maintain a public self-image as a fair person.

Powerholders thus care about how subordinates respond to their choices, and, as a result, subordinate reactions have implications for powerholders' subsequent choices. For example, in a series of experiments using a multi-round allocation paradigm, when subordinates expressed feedback that accurately reflected the self-interested nature of a powerholder's allocations—in other words, when they received more negative feedback after making more self-interested allocations—powerholders responded with less self-interested allocations in subsequent rounds (O'Connell et al., 2015). Furthermore, the feedback that they were being perceived as unfair caused powerholders to feel more guilt, which led to more generous subsequent allocations. This connection between negative feedback, guilt and changes in powerholders' behavior makes sense, given that guilt is a self-conscious emotion (Tangney, Stuewig, & Mashek, 2007) that is triggered when one's self-image has been tarnished, and motivates reparative action “to alleviate the guilt [and] gild the image” (Carlsmith & Gross, 1969, p. 236).

Together, these findings suggest that while powerholders act in self-interested ways, they are still constrained by the desire to maintain a public and private self-image as a fair person and will, “change their behaviors to be seen as fair and to maintain their self-image” (Barclay et al., 2017, p. 878). However, to date, these effects have only been studied in contexts where a group of subordinates expresses a unanimous opinion to someone who holds power over them, and is thus difficult to ignore (O'Connell et al., 2015). The question of whether a lone dissenting subordinate can exert influence over powerholders' allocation decisions remains open. In this paper, we address this open question.

### **The Influence of Lone Dissenting Subordinates on Powerholders' Allocations**

Why should we care about the role of a lone dissenter? Research documents that numeric minorities in groups can disproportionately affect outcomes, as long as their behavior is consistent and they remain committed to their views (Moscovici & Nemeth, 1974). However,

most studies in this area have focused on how a minority group member can shape other group members' behaviors and attitudes in groups of relative equals, often leading to better group outcomes. For example, earlier research on decision making showed that individuals who take the role of a devil's advocate helps groups arrive at higher quality decisions; this is because devil's advocates introduce dissent into the decision-making process, challenge others' assumptions, and ensure other alternatives are considered (Schwenk, 1990). In a similar vein, Weber and Murnighan (2008) showed how one individual who consistently contributes to the common good (despite risking personal financial loss) increases the average payout for all group members. And, of course, as the Asch (1951) studies on group conformity demonstrated, the presence of a lone group member who states opinions counter to the majority can seriously increase the likelihood that other group members will also contravene group norms.

How a lone dissenting group member shapes the behavior of those in positions of power is less well understood. Our first two hypotheses build on prior findings about minority influence to claim that a lone dissenter will have an effect on powerholders, even from a subordinate position. They draw from research on social influence, which suggests that even as a lone dissenting voice, a single subordinate will influence other members of their group (e.g., Latané & Wolf, 1981; Moscovici & Lage, 1976; Nemeth, 1986). While one might argue that a lone voice in a chorus of otherwise undifferentiated positive (or negative) voices could be easily ignored (Seifert, Yukl, & McDonald, 2003), such a voice would be conspicuous, and likely attended to, precisely because it is unique (Latané & Wolf, 1981). As Latané and Wolf state, "by standing out against the crowd, the minority gains visibility and becomes the focus of attention in the group" (1981, p. 440).

**Lone subordinate positive feedback licenses more self-interested allocations.**

Certainly, if a powerholder hears nothing but positive feedback about how they are treating their subordinates, their actions are unlikely to change. Indeed, when powerholders hear unanimously

positive feedback from their subordinates about how they are allocating resources, they become increasingly more self-interested over time (Ocasio et al., 2015). But would a lone voice expressing compliant, positive feedback be enough to license powerholders to grant themselves increasingly self-interested allocations, even when the rest of their subordinates are providing candid feedback about how self-interested they are being?

We argue that even a lone positive voice may be enough to grant the powerholder permission to continue behaving more self-interestedly, even when the rest of their subordinates unanimously disagree with that positive assessment. A lone positive voice will receive attention not only because of its uniqueness and visibility within a group (Latané & Wolf, 1981), but also because individuals tend to interpret information in ways that benefit them (Pyszczynski, Greenberg, & LaPrelle, 1985; Schulz-Hardt, Frey, Lüthgens, & Moscovici, 2000). A lone compliant voice will help powerholders continue to pursue their self-interest, as it confirms what powerholders prefer to hear even when others (in this case, other subordinates) provide them with candid feedback that is potentially threatening to their self-image (Nickerson, 1998). We argue that the positive, compliant feedback of the lone subordinate can alleviate (although not completely eliminate) the threat to their positive self-image that negative feedback from others in the group elicits. Thus, we propose that the presence of a lone subordinate expressing compliant, positive feedback about a powerholder's allocations in a group of subordinates expressing more negative feedback about those allocations will be enough to provide powerholders with the license they need to increase how self-interested their allocations are, leading them to keep more for themselves over time. Hence, we hypothesize the following:

*Hypothesis 1:* If a lone subordinate provides compliant feedback about a powerholder's allocation decisions (in a group where other subordinates are providing candid feedback



about how self-interested those allocations are), powerholders will show a significant upward trend in self-allocations over time.

**Lone subordinate negative feedback curbs self-interested allocations.** On the other hand, in a group of subordinates providing positive feedback to powerholders, a lone dissenting subordinate who provides feedback that accurately reflects how self-interested the powerholder's allocations are will also likely have an effect on powerholders' behavior. Again, this will be due to the uniqueness and visibility within a group of this dissenting voice (Latané & Wolf, 1981), although in this case in a different manner and for a different reason. As Smither, London, and Richmond (2005) showed, when an individual receives negative feedback from some sources but positive feedback from others, they are more mindful of the negative feedback and strive to make sense of it. In addition, the fact that candid, negative feedback of a lone subordinate has the potential to threaten powerholders positive self-image (Barclay et al., 2017; Epley & Dunning, 2000; Kaplan, 1993; Thompson & Loewenstein, 1992) means that his or her feedback should still influence the powerholder to become less self-interested (Oc & Bashshur, 2013). Hence, we argue that the presence of even one candid subordinate in a group of otherwise compliant subordinates will increase powerholders' responsiveness to the candid subordinate's feedback, which we predict will be enough to cause powerholders to regulate their self-interested tendencies over time.

*Hypothesis 2:* If a lone subordinate provides candid feedback about how self-interested a powerholder's allocation decisions are (in a group where other subordinates provide consistently positive feedback about those allocations), powerholders will regulate their allocation behavior. That is, powerholders will keep less (more) of the resource for themselves after receiving more negative (positive) feedback from a lone candid subordinate.

These two hypotheses reflect the primary focus of this paper: that powerholders' allocation decisions will be influenced by the feedback of a lone dissenting subordinate, in the direction of their feedback. We next examine whether powerholders' responses to this feedback differs depending on whether or not they share a salient group membership with the dissenter.

### **The Moderating Role of Group Identification**

Subordinates differ in more ways than just the type of feedback they provide to powerholders. They also differ in their relevant knowledge or experience, as well as their values, beliefs, and attitudes. These differences likely affect how influential their feedback is likely to be. Social impact theory (Latané, 1981) argues that subordinates' influence over powerholders will increase as their status or social similarity with the powerholder increases. Group identification as a function of shared group membership is a primary trigger of similarity attributions. Thus, the extent to which powerholders identify with others in their group is likely especially important.

Research on social dilemmas provides compelling evidence that when individuals share membership in salient social groups, they are motivated to pursue collective gains rather than individual self-interest (Brewer, 1979; Brewer & Schneider, 1990; De Cremer & Van Vugt, 1999; Messick & Brewer, 1983; Van Vugt & De Cremer, 1999). In a series of studies, De Cremer and colleagues (De Cremer, Van Knippenberg, Van Dijk, & van Leeuwen, 2008; De Cremer & Van Vugt, 1999) offer two theoretical explanations for why shared group membership inspires individuals to behave more generously to each other. First, they point out that one reason individuals limit their cooperation with others in social dilemmas is because they fear their contributions will not be reciprocated (Pruitt & Kimmel, 1977; Yamagishi, 1986). They argue, however, that group identification may moderate this tendency because high group identification increases trust in others and supports the belief that they will cooperate (Brann & Foddy, 1987; Brewer, 1981; Kramer, Brewer & Hanna, 1996; Kramer & Goldman, 1995).

Second, and more relevant to our research, they argue that when individuals strongly identify with others in their group, they perceive those group members as having similar goals and achievements to their own and become more likely to cooperate with them (Tajfel & Turner, 1986; Turner, 1982; Turner, Hogg, Oakes, Reicher & Wetherell, 1987). De Cremer and Van Vugt (1999) demonstrated across three experimental studies that individuals contributed more to the collective when their group identification was high. These studies show, as Brewer and Kramer reason, that “inclusion within a common social boundary acts to reduce psychological distance among group members, making it less likely that they will make sharp distinctions between their own and others' welfare” (1986, p. 545).

Considering that group identification can influence the allocation of resources, the question then becomes how the identity of a subordinate, and in particular those expressing a lone dissenting voice, influences powerholders' allocations. Existing empirical research on intergroup relations has shown repeatedly that individuals' feeling of group identification can increase simply when they know they and others share group membership (Abrams et al., 1990; Kramer & Brewer, 1984; Turner et al., 1987). Importantly, this type of identification does not require formal group membership, but can be based on membership in many types of groups, including political parties, colleges, or sport teams (Cohen, 2003; Murrell & Dietz, 1992; Smith, Seger, & Mackie, 2007). Group identification can even be triggered using minimal group paradigms, which can elicit identification as a function of one's preferences or physical features (Tajfel, Billig, Bundy, & Flament, 1971).

We argue that when a powerholder shares an identity or salient group membership with a subordinate, the feedback from that subordinate will exert greater influence over that powerholder's allocation decisions. Hence, we expect that feedback from a lone dissenting subordinate, whether candid or compliant, will be more influential when it comes from a subordinate who shares a salient group membership. Therefore, we hypothesize:

*Hypothesis 3:* The extent to which a powerholder shares a salient group membership with the lone dissenting subordinate will moderate the influence of that subordinate, such that: (a) the upward trend in self-allocations over time will be stronger when a lone compliant subordinate and the powerholder share a salient group membership, and (b) powerholders will regulate their allocation behavior more strongly when a lone candid subordinate and the powerholder share a salient group membership.

### **Consequences for Lone Dissenting Subordinates**

So far, our hypotheses have focused on the effect of feedback from lone dissenting subordinates on powerholders' allocations (Hypotheses 1 and 2) and the amplification of that effect as a function of powerholders' shared group membership with the subordinate (Hypothesis 3). In essence, these hypotheses posit that having one compliant subordinate in a group of candid subordinates will help the powerholder pursue his or her own self-interest at the expense of subordinates, while having one candid subordinate in a group of compliant subordinates will make it more difficult for the powerholder to act self-interestedly, helping subordinates receive more favorable outcomes. We further hypothesize that these outcomes will be amplified when the powerholder and the lone dissenting subordinate share a salient group membership.

Given these expected effects on everyone else's outcomes, another relevant question (with practically important implications) is whether lone dissenting subordinates are uniquely penalized or rewarded for putting their "head above the parapet". Given the opportunity, will powerholders specifically reward a lone compliant subordinate in a group of candid subordinates for their positive feedback, and be even more generous when they share the same group membership? In contrast, will powerholders punish a lone candid subordinate in a group of compliant subordinates for their challenging negative feedback, but less so when they share a salient group identity?

Recent work on upward feedback provides some insight into how this treatment may unfold. Refraining from negative feedback can make subordinates appear less disrespectful to higher-ups (Atwater & Waldman, 2008), increase powerholders' liking of the subordinate (Baron, 1996), and engender positive attitudes towards them (Atwater, Waldman, Atwater, & Cartier, 2000). Given powerholders' limited resources and the need to be selective when distributing them, powerholders may favor subordinates whom they regard as more respectful and whom they like more. Hence, we predict that powerholders will reward lone subordinates who provide consistently positive feedback with preferential allocations, especially when they are in groups of subordinates who do not provide similarly positive feedback.

*Hypothesis 4:* A lone subordinate who provides compliant feedback in a group of candid subordinates will be awarded more of the common resource than the candid subordinates of their group.

In contrast, it is less clear what to hypothesize about the outcomes for lone candid subordinates. On one hand, the literature on whistleblowing and employee voice suggests that voicing a lone negative view to those in power is fraught with risk. For instance, in one study of 161 whistle-blowers, only 5% reported experiencing no retaliation for their actions (Jos, Tompkins, & Hays, 1989). Similarly, employee voice—proactively bringing up concerns to management—can be detrimental to the individual, particularly if it is perceived as challenging, as it can make a subordinate look disloyal or threatening (Burris, 2012). As such, negative feedback may cause powerholders to hold negative attitudes towards the lone dissenting subordinate who provided it (Burris, Detert, & Romney, 2013; Seibert, Kramer, & Crant, 2001), and ultimately cause powerholders to penalize them.

On the other hand, research on upward feedback suggests that providing negative feedback to powerholders may not be as risky as is often thought. Although, in general, individuals may dislike when others disagree with them (Phillips & Loyd, 2006), there is some evidence that

powerholders react more positively to negative feedback than those with less power (Baron, 1996). They also sometimes act on negative feedback, going so far as to seek additional feedback in an effort to identify changes they need to enact (Ashford & Cummings, 1983; Taylor, Fisher, & Ilgen, 1984; Waldman & Atwater, 2001). Hence, powerholders may be able to withstand negative feedback from candid minorities, see value in it, and refrain from punishing them. Since the literature does not provide a clear direction for this hypothesis, we propose two exploratory, competing hypotheses:

*Hypothesis 5, Option A:* A lone candid subordinate in a group of subordinates providing compliant feedback will be awarded *less* of the common resource than others in their group.

*Hypothesis 5, Option B:* A lone candid subordinate in a group of subordinates providing compliant feedback will *not* be awarded less of the common resource than others in their group.

We also expect that the type of feedback lone dissenting subordinates provide to powerholders will interact with the powerholder's group identification to shape how they are rewarded or punished. Research on minority influence in decision-making contexts makes clear that the identity of the influencer affects targets' feelings, behaviors or reactions to them (Phillips & Loyd, 2006), because individuals care about the social approval they receive from others, especially from similar others or those with whom they share group membership (Turner, 1985). Individuals are aware that they risk social disapproval when they act in ways that are not accepted by similar others (Wood, Lundgren, Ouellette, Busceme, & Blackstone, 1994) and will conform to their expectations in an effort to avoid this.

For this reason, we believe powerholders' reactions to lone dissenting subordinates who provide them with either compliant or candid feedback will depend on whether that subordinate and powerholder share a salient group membership. Specifically, we expect lone subordinates who

express compliant feedback (in groups of candid subordinates) to be awarded even more than their peers when they share a salient group membership with the powerholder (as opposed to when they are from a different group), because their positive feedback will communicate social approval and acceptance from a similar other. Conversely, when a lone candid subordinate and the powerholder do not share a salient group membership, we expect powerholders to penalize them (or award them less than compliant minorities from the same group), given powerholders will not see the candid subordinate as a similar other and be more likely to punish them for their dissenting negative voice. Therefore, we hypothesize the following:

*Hypothesis 6a:* The amount that a powerholder will award to a lone subordinate who provides *compliant* feedback in a group of candid subordinates will be moderated by whether the powerholder and the subordinate share a salient group membership, such that a lone compliant subordinate will be specifically *rewarded* if they share (vs. do not share) a salient group membership with the powerholder.

*Hypothesis 6b:* The amount that a powerholder will award to a lone subordinate who provides *candid* feedback in a group of compliant subordinates will be moderated by whether the powerholder and the subordinate share a salient group membership such that a lone candid subordinate will be specifically *penalized* if they do not share (vs. share) a salient group membership with the powerholder.

### **Overview of Studies**

We examine whether subordinates who express a lone dissenting voice in a group can influence powerholders' allocation decisions over time. Specifically, in Study 1, we provide initial evidence that a lone dissenting subordinate who provides consistently positive feedback to powerholders about their allocation decisions ("compliant" subordinates) facilitates powerholders' increasingly self-interested allocations over time (Hypothesis 1), while a lone dissenting subordinate who provides candid feedback to powerholders about their allocation

decisions increases the extent to which powerholders regulate their allocation behavior and resist making increasingly self-interested allocations over time (Hypothesis 2). In Study 2, we explore whether sharing a group identity with the powerholder moderates the influence of lone dissenting subordinates (Hypothesis 3). In Study 3, we replicate our results for Hypothesis 3 using a different group identity and explore how powerholders punish or reward lone dissenting subordinates as a function of their feedback and the degree to which they share a group identity with the subordinate (Hypotheses 4-6).

## Study 1

### Sample

We recruited seventy-seven participants from a paid, community-based subject pool in London, U.K. Participants were paid £10 for their participation, with the possibility of earning up to another £10 depending on the decisions they made in the study. Sixty-three percent of the sample was female with an average age of 26.97 years ( $SD = 11.72$ , Min = 18, Max = 59).

### Experimental Setting and Procedure

In order to establish a causal relationship between a lone subordinate's feedback and changes in powerholders' subsequent allocations, and to eliminate possible alternative explanations, we used a multi-party, multi-round dictator game (Forsythe, Horowitz, Savin, & Sefton, 1994). We used the experimental procedure introduced by O'Connell et al. (2015), with one key difference. In this study, instead of receiving feedback from a group of subordinates who all provided the same feedback (all "compliant" or all "candid"), powerholders received feedback from both candid and compliant subordinates within the same group. Specifically, groups varied in terms of whether they contained two compliant and one candid subordinate or two candid and one compliant subordinate. We explored powerholders reactions to feedback from each of their subordinates and whether the feedback of lone dissenting subordinates shaped the way powerholders allocated resources over time.



As in Oc et al. (2015), upon arrival to the laboratory, participants were seated at computer cubicles, each containing a personal computer. Participants' identities were anonymous. We informed them that they would take the role of a powerholder (i.e., dictator) or a subordinate (i.e., recipient). However, all participants were actually assigned the role of the powerholder and a computer program (z-Tree; Fischbacher, 2007) simulated subordinate feedback. During each round, the group was given an initial resource of 100 experimental points to be distributed by the powerholder to his or her three subordinates. Powerholders kept the amount of points they chose for themselves and the remainder of the points were equally distributed by the computer program to the subordinates. We informed participants that their bonus earnings (up to an additional £10) would depend on the amount of experimental points they kept over the course of the study: the more points they kept, the higher their earnings would be. During the debriefing, we checked whether participants understood the dynamics of the game and probed them for suspicion that the subordinates were fake. Four participants failed to correctly answer questions designed to check whether they understood the game or reported suspicion that the subordinates were fake. Three participants also failed at least one of three embedded attention check items. Together these seven participants were excluded from the analyses, leaving us with seventy participants in the final sample.

**Conditions.** In their study, Oc et al. (2015) showed that feedback from groups of all candid subordinates made powerholders regulate their allocation behavior, and feedback from groups of all compliant subordinates made them make increasingly more self-interested allocations over time. Our interest here was to test whether a lone dissenting subordinate could shift powerholders' allocation decisions in the direction of their feedback. Hence, we examined two lone dissenting subordinate conditions. In the "lone candid subordinate" condition, powerholders were in a group with two compliant subordinates (who reacted in a consistently positive manner) and one candid subordinate (who reacted more or less positively based on how

self-interested the powerholders' allocation had been in the previous round). In the "lone compliant subordinate" condition this situation was reversed and powerholders were in a group with two candid subordinates and one compliant subordinate.

Our groups were comprised of one powerholder and three subordinates for three reasons. First, as Asch (1951) showed, the effect of adding additional group members beyond three generates relatively less influence for each member added. Second, given that any one individual exerts less influence as groups grow larger (Latané & Wolf, 1981), we reasoned that using groups comprised of one lone dissenting subordinate with two others offered the clearest first step to determine whether the lone dissenter would influence their powerholder. Third, in order to contrast our findings with theirs, we kept the same number of subordinates in each group as Oc et al. (2015) did.

### **Measures and Operationalization**

**Classification of powerholders' allocation behavior.** In order to manipulate subordinate feedback in the two conditions, we first had to classify powerholders' allocation behavior (as in Oc et al., 2015). In line with previous research (e.g., de Kwaadsteniet, Rijkhoff, & van Dijk, 2013), we used an equal division rule as the reference to define powerholders' allocations as more or less self-interested. In the first round of the study, when powerholders kept more than an equal share of the common resource (more than 25%), their allocation was defined as negative. In contrast, when they kept an equal or less than an equal share, their allocation was defined as positive. After the first round, we used the *change* in the powerholder's allocation from the previous round in addition to the absolute level of their allocation to classify their allocation behavior. Specifically, when powerholders kept more than an equal share and took more or an equal amount of resources compared to the previous round, their allocation was defined as "very negative" (--); and when they kept more than an equal share but took fewer

resources compared to the previous round, their allocation was defined as “negative” (-). In contrast, when powerholders kept an equal share or less than an equal share but took more resources compared to the previous round, their allocation was defined as “positive” (+); and when they kept an equal share or less than an equal share and took fewer resources compared to previous round their allocation was defined as “very positive” (++)).

**Subordinate feedback.** Subordinate feedback was computationally modeled and reported back to powerholders as individual evaluations (rather than in an aggregate, as in Oc et al., 2015). Specifically, powerholders received computer-generated evaluations from their subordinates on a scale from 1 (*very unfair*) to 5 (*very fair*) depending on their allocation decisions in the previous round. To increase the realism of the feedback, candid subordinates provided powerholders with evaluations below 3 when their previous allocations were either “very negative” or “negative” and above 3 when their previous allocations were either “positive” or “very positive”. Conversely, compliant subordinates provided powerholders with evaluations between 3 and 5 irrespective of how the powerholders’ previous allocations were classified. We further manipulated the feedback powerholders received from each of the subordinates in their group by varying the composition of the group (so that the type of feedback varied within the group of subordinates). As an example, a powerholder in the lone compliant subordinate condition behaving negatively (that is, allocating a less than an equal share to subordinates but allocating more than they had in the previous round) would receive two ratings varying between a score of “2” and “3” from two candid (majority) subordinates and one rating varying between “3” and “5” from the (lone) compliant subordinate, as a function of the algorithm used by the program. In addition to the individual ratings powerholders received, they also saw the average of the three ratings as well as the standard deviation of those ratings.

## Results

**Analytic strategy.** We are interested in (1) the changes powerholders make in their allocations from one round to another (i.e., whether the allocation in a given round is significantly different than the prior round, as a function of subordinate feedback), as well as (2) whether the trend of their allocation behavior over time is increasingly self-interested (i.e., if the slope of self-allocations across rounds for the powerholder significantly different from zero) and as such it is not appropriate to analyze the data from this experiment using typical analytic approaches (such as analysis of variance). Traditional experimental analytic strategies do not provide appropriate tests for these questions. Instead, we employ a random effects panel data approach (e.g., Liang, Farh, & Farh, 2012; Oc et al., 2015). This approach allows us to exploit the statistical power resulting from these panel data, and provides a way to test both of these primary interests while accounting for the fact that the data include multiple observations nested within individuals and are therefore non-independent. All the analyses were performed in STATA 13.0 (StataCorp, 2005) and using the *xtreg.re* command for random-effects models.

**Hypothesis tests.** Recall that Hypotheses 1 and 2 propose that a lone subordinate will affect powerholders' allocation behavior in the direction of their feedback such that a lone compliant subordinate (in a group of otherwise candid subordinates) will make powerholders become increasingly self-interested over time (Hypothesis 1) while a lone candid subordinate (in a group of otherwise compliant subordinates) will make powerholders regulate their allocation behavior over time (Hypothesis 2). Table 1 (Study 1) presents the results of a random-effects model that tests whether there was a significant trend in powerholders' self-allocations across rounds, testing Hypothesis 1. Powerholders in groups of two candid subordinates and one compliant subordinate kept increasingly more resources over time ( $\beta = .10, p < .001$ , see Table 1 [Study 1] and Figure 1).

That is, the slope of the line representing their allocations across rounds was significantly different from zero and positive. The presence of a lone subordinate providing compliant (consistently positive) feedback to a powerholder was enough to make the powerholder make increasingly more self-interested allocations over time. This effect is similar to that found by Oc et al. (2015), except in that case the significant trend was found in groups of all compliant subordinates, where here just one compliant subordinate in a group of otherwise candid subordinates was enough to trigger a significant, increasing trend in the powerholder's self-interested allocations over time.

----- Insert Figure 1 and Table 1 about here -----

Table 2 (Study 1) presents the results for the effect of subordinate feedback on powerholders' self-regulation across rounds, testing Hypothesis 2. Findings indicate that powerholders in groups of two compliant subordinates and one candid subordinate were responsive to subordinate feedback and regulated their allocation behavior over time, such that they took less (more) of the common resource after receiving more (less) negative feedback ( $\beta = .30, p < .001$ , see Table 2 [Study 1]). Specifically, the presence of a lone subordinate providing candid feedback was enough to cause the powerholder to adjust his or her allocations in the direction of the subordinate feedback, regulating their allocations over time. This effect consistent with that found by Oc et al. (2015), except in their case self-regulation was observed in groups of all candid subordinates, where here just one candid subordinate in a group of otherwise compliant subordinates was enough to elicit powerholders' self-regulatory tendencies.

To ensure that it was the lone dissenter's feedback that drove this self-regulatory effect, we performed a separate random effects panel data analysis with compliant feedback of the majority subordinates and candid feedback of the lone subordinate at previous round as the two independent variables and the change in powerholders' allocation decision at the current round as the dependent variable. In other words, we decomposed the differential effects of the lone candid

subordinate from the pair of compliant subordinates on powerholders' self-regulation. While the coefficient for the compliant feedback of the majority subordinates was non-significant ( $\beta = .02, p = .66$ ), the coefficient for the lone dissenting subordinate's candid feedback was positive and significant ( $\beta = .31, p < .001$ ), providing evidence that the lone subordinate's candid feedback is driving powerholders' self-regulation their allocation behavior over time (see Table 3 [Study 1]). These results provide support for both Hypotheses 1 and 2.

----- Insert Tables 2 and 3 about here -----

## Study 2

Study 1 provided initial evidence for the effect of lone dissenting subordinates on powerholders' allocation behavior. In Study 2, we extend the findings of Study 1 by focusing on the moderating role of group identification, and examine whether the feedback of lone dissenting subordinates who share a salient group membership with the powerholder is more influential than the feedback of those who do not (Hypothesis 3).

### Sample

One hundred and forty-five MBA students at a major business school in the U.K. participated in this study as part of a class exercise (37% female). The average age of participants was 28.80 years ( $SD = 2.42$ ,  $Min = 24$ ,  $Max = 39$ ). Participants had held an average of 3.22 full-time ( $SD = 1.23$ ) and 3.20 part-time jobs ( $SD = 1.81$ ) in a number of industries, including but not limited to consulting (29%), finance (28%), energy (7%), and the public sector (6%). Participation was voluntary, and participants earned a 2% bonus on their final grade.

### Experimental Setting and Procedure

The experimental setting and procedure was similar to Study 1, with four exceptions. First, we contacted participants by email inviting them to take part in an online simulation and included a link to the study that was programmed in Qualtrics. Second, due to time constraints,

we limited this study to five allocation rounds (instead of ten, as in Study 1). Third, instead of a financial allocation, students allocated a proportion of the 2% bonus they could earn for participating. This represented a more meaningful reward to this population. However, everyone who participated was awarded the 2% bonus at the end of the session, regardless of how they made their allocations. Fourth, in order to explore whether the influence of lone dissenting subordinates is stronger when they share a salient group membership with the powerholder, we varied the subordinates' university affiliations. Specifically, we told our participants (students from a London-based business school, henceforth referred to as "London") that they would be participating in a simulation with a group of four participants, either from their home school ("London") or another major business school in Europe (henceforth referred to as "Europe").

To ensure that their identity as a student at "London" was a meaningful one on which to base a manipulation of group identification, we measured the extent to which participants identified with the university, using Smith et al.'s (2007) 4-item measure of group identification ( $\alpha = .83$ ), on a 7-point scale (higher values refer to stronger identification). Three students reported extremely low levels of identification with "London" (lower than 3). Consistent with previous research on group identification (Cohen, 2003; Smith et al., 2007), we excluded these students from the analysis, to ensure that our sample consisted only of students who strongly identified with their school (i.e., those for whom "London" was a meaningful group identity).<sup>2</sup>

As in Study 1, we included questions to check participants' understanding of the rules of the experimental game and their role within it. Four participants failed to answer the questions correctly. We also included three attention check items in the study, which seven participants failed. Finally, at the end of the study, three participants reported that they had misunderstood the manipulation. Thus, we report results for the 128 participants who had paid attention, identified with their school and understood the task correctly.

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<sup>2</sup> We also re-analyzed our data including these participants. The results were unchanged.

## Conditions

There were four conditions in the study. In the *high identification candid* condition, powerholders (who were all “London” students) had one candid “London” subordinate and two compliant “London” subordinates; while, in the *low identification candid* condition, powerholders had one candid “Europe” subordinate and two compliant “London” subordinates. In contrast, in the *high identification compliant* condition, the group included one compliant “London” subordinate and two candid “London” subordinates; while, in the *low identification compliant* condition the group included one compliant “Europe” subordinate and two candid “London” subordinates. The school affiliations of each group member (“London” or “Europe”) were shown to participants before and during the simulation. Hence, in each round, powerholders were aware of the school affiliations of the subordinates who were providing them either candid or compliant feedback.

## Measures and Operationalization

**Classification of powerholders’ allocation behavior.** We classified powerholders’ allocation behavior the same way as in Study 1.

**Subordinate feedback.** Reactions of both candid and compliant subordinates were modeled in the same way as in Study 1, irrespective of their group membership. As in Study 1, powerholders observed both individual ratings of their subordinates along with the average rating and standard deviation of the three subordinates’ ratings.

**Identification.** As a manipulation check, we measured the extent to which participants identified with each of three subordinates using three items of Hafer’s (2000) identification measure ( $\alpha = .97$ ), on a 7-point scale ranging from 1 (not at all) to 7 (to a very great extent) (e.g., “Overall, how much do you identify yourself with Subordinate 3?”).



## Results

**Manipulation Check.** A two-tailed t-test confirmed that participants (i.e., “London” students) in the lone compliant conditions identified more with the lone compliant subordinate when that subordinate was a “London” student than a “Europe” student ( $M_{\text{London}} = 4.33$ ,  $SD_{\text{London}} = 1.27$  vs.  $M_{\text{Europe}} = 3.60$ ,  $SD_{\text{Europe}} = 1.32$ ,  $t(63) = -2.27$ ,  $p = .03$ ) while the differences in participants’ identification with the majority candid subordinates (all of whom were “London” students) in both conditions were not statistically significant ( $ps > .50$ ). Similarly, participants in the lone candid conditions identified more with the lone candid subordinate when the subordinate was a “London” student than a “Europe” student ( $M_{\text{London}} = 3.65$ ,  $SD_{\text{London}} = 1.32$  vs.  $M_{\text{Europe}} = 2.90$ ,  $SD_{\text{Europe}} = 1.14$ ,  $t(61) = -2.42$ ,  $p = .02$ ) while there were no statistically significant differences in the extent to which participants identified with the majority compliant subordinates (all of whom were “London” students) in both conditions ( $ps > .30$ ). These results indicate that our manipulation of (group) identification was successful.

**Hypothesis Tests.** Similar to how we tested Hypotheses 1 and 2 in Study 1, we tested Hypothesis 3 using the *xtreg, re* command in STATA. Hypothesis 3 predicted that the upward trend in powerholders’ self-allocations will be more positive (i.e., steeper) in the presence of a lone compliant subordinate who shares a salient group membership with the powerholder (i.e., a “London” lone subordinate) compared to when the lone compliant subordinate does not (i.e., a “Europe” lone subordinate) (Hypothesis 3a) and that powerholders would regulate their allocation behavior (i.e., adjust their next round’s allocation in the direction of the lone subordinate’s feedback) to a greater extent when they shared a salient group membership with the subordinate (i.e., a “London” lone subordinate) compared when they did not (i.e., a “Europe” lone subordinate) (Hypothesis 3b).

To compare regression coefficients from the high identification (“London”) and low identification (“Europe”) regression equations within the lone candid and the lone compliant subordinate models, we used a formula developed by Cohen (1983) and used in previous research (Judge, Rodell, Klinger, Simon, & Crawford, 2013) which results in a  $z$ -value that tests whether the regression coefficients across the models are significantly different. Providing support for Hypothesis 3a, the regression coefficient representing the upward trend in powerholders’ self-allocations over time was significantly more positive (i.e., the upward trend was stronger) for powerholders with compliant “London” lone subordinates ( $\beta = .09, p = .04$ ) than it was for powerholders with a compliant “Europe” lone subordinate ( $\beta = -.05, p = .22, z = 2.34, p = .01$ ) (see Table 1 [Study 2]). Providing support for Hypothesis 3b, powerholders with a candid “London” lone subordinate ( $\beta = .28, p < .001$ ) regulated their behavior more strongly than powerholders with a candid “Europe” lone subordinate ( $\beta = .05, p = .60, z = 2.00, p = .02$ ) (see Figure 3 and Table 2 [Study 2]).

Finally, we again tested whose feedback drove the changes in powerholders’ allocations. A second panel data regression with the lone subordinate’s candid feedback and the majority subordinates’ compliant feedback as separate independent variables revealed a positive and significant coefficient for the candid feedback ( $\beta = .18, p = .02$ ) but a non-significant coefficient for the compliant feedback ( $\beta = .02, p = .81$ ) (see Table 3 [Study 2]).

### Study 3

Studies 1 and 2 show that a lone dissenting subordinate can influence how powerholders allocate resources over time (Hypotheses 1 and 2) and Study 2 shows that their influence becomes stronger when the lone dissenting subordinate and the powerholder share a salient group membership (Hypothesis 3). In Study 3, we replicate our findings for Hypothesis 3 using a different social group to manipulate identification and further examine whether powerholders

individually reward or penalize the lone dissenting subordinate as a function of the feedback they provide (Hypotheses 4 and 5) and the extent to which the powerholder and subordinate share a salient group membership (Hypothesis 6).

### **Sample**

We recruited one hundred and sixty-five U.S. residents through Amazon's Mechanical Turk. Participants earned \$1.50 for their participation and up to an additional \$1.00 depending on the allocation decisions they made. Participants were full-time working adults (48% female). The average age of the participants was 33.22 years ( $SD = 11.01$ , Min = 18, Max = 74), and their average tenure in their current position and in their current organization was 3.25 years ( $SD = 3.19$ ) and 4.53 years ( $SD = 4.54$ ) respectively. Our participants occupied different hierarchical levels in their organizations: upper-management ( $n = 10$ ), middle-management ( $n = 34$ ), first-line supervisors ( $n = 39$ ), and non-management ( $n = 82$ ).

### **Experimental Setting and Procedure**

The experimental setting and procedure of this online study was same as Study 2, with two exceptions. First, we manipulated subordinates' identification with the powerholder using participants' political party affiliation rather than their university affiliation. At the beginning of the experiment, participants indicated whether they identified more as a *Democrat* or *Republican* (1: I identify as a Democrat, 2: I identify as a Republican, 3: I feel no meaningful ties to either party). Six participants who reported no meaningful ties to either party were not allowed to continue in the study. Second, we included an 11<sup>th</sup> allocation round, in which powerholders allocated resources to subordinates individually rather than as a group. This gave us the opportunity to see whether powerholders used their power to punish or reward specific subordinates after having received their individual feedback for the prior 10 rounds. We also returned to a financial allocation, in this case up to \$1.00 in additional financial compensation.

As in Studies 1 and 2, participants were given detailed information about the study's design and procedure and responded to questions to check their understanding of the rules and their roles in the study. Participants who failed any of these questions were allowed to re-read the rules once and respond to the questions again, but failing any of these questions a second time disallowed participants from continuing. We also included three attention check items throughout the study. Six participants failed at least one of these attention checks and were also excluded from the analyses. In addition, out of the remaining 153 participants, only 36 indicated identifying as a Republican. Previous research has shown that MTurk samples tend to be more Democratic than national samples obtained by the American National Election Studies (ANES), Cooperative Congressional Election Survey (CCES), and Current Population Survey (CPS) (Berinsky, Huber, & Lenz, 2012; Huff & Tingley, 2015). As we did not have enough power to analyze the Republicans in the sample, we restricted our analyses to individuals who identified as Democrats. Thus, in this study, our participants identify strongly with Democrats, and do not identify with Republicans (Cohen, 2003; Smith et al., 2007). Our final sample included the 117 participants who both passed the attention checks and identified as Democrats.

### **Conditions**

As in Study 2, we randomly assigned participants to one of four conditions: two lone candid conditions and two lone compliant conditions, that varied as a function of whether the lone subordinate shared group membership with the powerholder (i.e., high identification/*Democrat*) or did not (i.e., low identification/*Republican*). In the *high identification/lone candid* condition, the group included one candid Democrat and two compliant Democrats. In the *low identification/lone candid* condition, the group included one candid Republican and two compliant Democrats. In contrast, in the *high identification/lone compliant* condition, the group included one compliant Democrat and two candid Democrats, and in the *low*

*identification/lone compliant* condition the group included one compliant Republican and two candid Democrats. As in Study 2, the identities of each group member (Democrat or Republican) were shown to participants before and during the simulation. Hence, in each round, powerholders were aware of the party affiliations of the subordinates who were providing them either candid or compliant feedback.

### Measures and Operationalization

**Classification of powerholders' allocation behavior.** We classified powerholders' allocation behavior the same way as in Studies 1 and 2.

**Subordinate feedback.** The feedback of the majority and lone subordinates was computed the same way as in Study 1 and 2. As in Studies 1 and 2, we provided powerholders with individual feedback from each of their subordinates after each round, as well as the average and standard deviation of the group.

**Identification.** We used the same three items from Hafer's (2000) identification measure ( $\alpha = .97$ ) as in Study 2.

### Results

**Manipulation Check.** As in Study 2, in order to examine whether our manipulation of group identification was successful, we conducted a two-tailed *t*-test that confirmed that participants (i.e., Democrat powerholders) in the lone compliant subordinate conditions identified more strongly with the compliant Democrat than the compliant Republican ( $M_{\text{Democrat}} = 4.48$ ,  $SD_{\text{Democrat}} = 1.37$  vs.  $M_{\text{Republican}} = 3.38$ ,  $SD_{\text{Republican}} = 1.23$ ,  $t(58) = -3.30$ ,  $p < .001$ ) while in both conditions the differences in the extent to which participants identified with the majority candid subordinates (all Democrats) were not statistically significant ( $ps > .60$ ). Similarly, participants in the lone candid conditions identified more strongly with the candid Democrat than the candid Republican ( $M_{\text{Democrat}} = 3.49$ ,  $SD_{\text{Democrat}} = 1.59$  vs.  $M_{\text{Republican}} = 1.92$ ,  $SD_{\text{Republican}} = .89$ ,

$t(55) = -4.60, p < .001$ ) while in both conditions there were no statistically significant differences in the extent to which participants identified with majority compliant subordinates (all Democrats) ( $ps > .60$ ).

**Hypothesis Tests.** Recall that Hypothesis 3 predicted that the influence of the lone dissenting subordinate will be stronger when the powerholder and the lone subordinate share a salient group membership. As in Study 2, we used Cohen's (1983) formula to compare regression coefficients across models. A comparison of the regression coefficients in Table 1 (Study 3) revealed that the upward trend in powerholders' self-allocations was significantly stronger in the lone compliant Democrat condition ( $\beta = .24, p < .001$ ), than in the lone compliant Republican condition ( $\beta = .10, p < .001, z = 2.56, p = .01$ ). In addition, a comparison of the regression coefficients in Table 2 (Study 3) revealed that powerholders with a lone candid Democrat ( $\beta = .20, p < .001$ ) responded significantly more strongly to subordinate feedback than powerholders with a lone candid Republican ( $\beta = .07, p = .26, z = 2.29, p = .01$ ), providing additional support for Hypotheses 3a and 3b.

Again, to confirm that the changes in powerholders' allocations were driven by the lone candid subordinate's feedback, we ran a random panel data regression with the lone subordinate's candid feedback and the majority subordinates' compliant feedback as separate independent variables. It revealed a positive and significant coefficient for the candid feedback ( $\beta = .11, p = .03$ ) but a non-significant coefficient for the compliant feedback ( $\beta = .06, p = .27$ ) (see Table 3 [Study 3]).

Hypotheses 4, 5 and 6 focus on the individual consequences lone dissenting subordinates face as a function of their feedback, and whether the extent to which the powerholder shares a salient group membership with the dissenter moderates this relationship. Specifically, we examine whether a lone compliant subordinate is individually rewarded (Hypothesis 4) and

whether those rewards are amplified when the powerholder and subordinate share a salient group membership (Hypothesis 6a). Additionally, we test whether or not a lone candid subordinate is individually penalized (Hypothesis 5, Option A or Option B) and whether those penalties are attenuated when they share a salient group membership with the powerholder (Hypothesis 6b).

Since there is only one observation for individual resource allocations per participant, we tested these hypotheses using a mixed ANOVA, with two between-subjects factors (whether the lone dissenting subordinate was compliant vs. candid and whether the lone dissenting subordinate was Republican vs. Democrat), and the recipient (the lone dissenting subordinate vs. the majority) as a within-subjects factor. Results confirmed a main effect for recipient,  $F(1, 113) = 4.33, p = .04, \eta^2_p = .04$ , meaning that powerholders did not allocate resources equally across their subordinates in the 11<sup>th</sup> round. This main effect for recipient was qualified by a significant interaction with the type of feedback the lone dissenting subordinate had provided (compliant vs. candid),  $F(1, 113) = 15.56, p < .001, \eta^2_p = .12$ , as well as a significant interaction with the subordinate's political affiliation,  $F(1, 113) = 9.04, p = .003, \eta^2_p = .07$ , indicating that powerholders allocated different amounts to lone and majority subordinates as a function of their group's composition (whether the lone subordinate was candid vs. compliant as well as whether he or she was a Republican or a Democrat) (see Figure 3).

----- Insert Figure 3 about here -----

Hypothesis 4 predicted that lone compliant subordinates would be awarded more of the common resource than the candid subordinates of their group. Lone compliant subordinates in groups of candid subordinates were allocated 8 more experimental points, on average, than their candid peers ( $M_{\text{Lone Compliant}} = 21.16, SD = 14.76$  vs.  $M_{\text{Candid Majority}} = 12.99, SD = 10.39, F(1, 113) = 18.63, p < .001, \eta^2_p = .14$ ). Thus, Hypothesis 4 is supported. In contrast, lone candid subordinates in groups of compliant subordinates were not allocated significantly fewer

experimental points, on average, than their compliant peers ( $M_{\text{Lone Candid}} = 15.40$ ,  $SD = 17.24$  vs.  $M_{\text{Compliant Majority}} = 17.89$ ,  $SD = 15.48$ ,  $F(1, 113) = 1.69$ ,  $p = .19$ ,  $\eta^2_p = .02$ ). While we acknowledge the difficulty and danger in drawing conclusions from a null effect, this finding suggests that individuals can provide accurate feedback to those with power over them without being overtly penalized for doing so (providing support for Option B of Hypothesis 5 rather than Option A).

Hypothesis 6 predicted that (6a) the amount that a lone compliant subordinate would be awarded and that (6b) the penalty a lone candid subordinate would suffer would be moderated by the extent to which the powerholder identified with the lone dissenting subordinate. Supporting Hypothesis 6a, powerholders only allocated significantly more of the common resource to lone compliant subordinates when they shared a political affiliation: a lone compliant Democrat was awarded more than his candid Democratic counterparts ( $M_{\text{Lone Compliant Democrat}} = 23.93$ ,  $SD = 16.51$  vs.  $M_{\text{Candid Majority Democrats}} = 11.62$ ,  $SD = 10.37$ ,  $F(1, 113) = 19.82$ ,  $p < .001$ ), but a lone compliant Republican received no statistically significant benefit for his compliance ( $M_{\text{Lone Compliant Republican}} = 18.56$ ,  $SD = 12.63$  vs.  $M_{\text{Candid Majority Democrats}} = 14.27$ ,  $SD = 10.40$ ,  $F(1, 113) = 2.57$ ,  $p = .11$ ), compared to his candid Democratic counterparts.

Supporting Hypothesis 6b, powerholders only allocated significantly less of the common resource to lone candid subordinates when they did not share a political affiliation: a lone candid Democrat was *not* significantly penalized for his candor, compared to his compliant Democratic counterparts ( $M_{\text{Lone Candid Democrat}} = 19.76$ ,  $SD = 14.40$  vs.  $M_{\text{Compliant Majority Democrats}} = 18.05$ ,  $SD = 10.32$ ,  $F(1, 113) = .38$ ,  $p = .54$ ), though a lone candid Republican was significantly penalized for his ( $M_{\text{Lone Candid Republican}} = 10.89$ ,  $SD = 18.97$  vs.  $M_{\text{Compliant Majority Democrats}} = 17.73$ ,  $SD = 19.66$ ,  $F(1, 113) = 5.90$ ,  $p = .02$ ). These results add nuance to the basic test of Hypothesis 5, and suggest that powerholders' rewards or penalties for their subordinates' compliance or candor vary as a function of their identification with those subordinates.



### General Discussion

Dominant portrayals of the powerholder/subordinate relationship as well as the theorizing about this relationship often take the view that influence flows unidirectionally from powerholders to subordinates, and that subordinates merely accept the outcomes they are allocated (Handgraaf et al., 2003; Nemeth, 2009). However, recent research challenges this approach and assigns a more agentic role to subordinates, showing that they can, in fact, influence how powerholders make the tradeoff between their own self-interest and the interest of their subordinates as they allocate resources (Oc et al., 2015). Nevertheless, in these literatures to date, subordinates have been treated as an undifferentiated mass, despite the fact that subordinates often vary widely in their characteristics and likely have different reactions to powerholders' decisions (Weber & Moore, 2014).

In this paper, we focused on one important type of unique subordinate: those who are willing to express a singular view within the group, when all the others express a different view. We explored whether these lone dissenting subordinates influenced how powerholders allocated their resources. In Study 1, we tested the influence of lone subordinates when they provided powerholders with candid or compliant feedback that differed from the feedback provided by other group members. We demonstrated that one compliant subordinate in a group of candid subordinates was enough to make powerholders allocate resources in an increasingly self-interested manner over time, and that one candid subordinate in a group of compliant subordinates was enough to make powerholders regulate their allocation behavior in line with the feedback they received from the lone subordinate. Our results in Studies 2 and 3 advanced these findings by exploring the moderating role that group identification has in this relationship. We showed that the influence of a lone dissenting subordinate increases when he or she shares a salient group membership with the powerholder.

Finally, we examined the consequences lone dissenting subordinates face as a function of the feedback they provide and whether they share a salient group membership with the powerholder. We showed that while powerholders do reward lone compliant subordinates in groups of candid subordinates, on average, lone candid subordinates in groups of complaint subordinates were not penalized by powerholders. However, the individual outcomes that lone compliant and candid subordinates received depended on powerholders' identification with the lone subordinate. Specifically, lone compliant subordinates were rewarded with more resources by the powerholder, even more so when they shared group membership with the powerholder. In contrast, lone candid subordinates were *only* penalized and given fewer resources than the other compliant group members when they did not share group membership with the powerholder.

### **Theoretical Contributions**

Our research is relevant to a number of domains. First of all, this research extends our understanding of how to contain the (often) self-interested inclinations of powerholders (Kipnis, 1972) and represents a rare effort to consider whether differences among subordinates matter in their influence over powerholders. In this regard, this work speaks to previous research on power, especially to research on whether subordinates can influence powerholders' decisions or behaviors (e.g., Handgraaf et al., 2003), and if so, what factors might make some subordinates more influential than others (Oc & Bashshur, 2013; Oc et al., 2015). Importantly, we are able to show that dissenting subordinates influence how powerholders allocate resources, even when these subordinates are a lone voice, and thus take on individual risk (Asch, 1951).

This work also contributes to the existing literature on social and minority influence. The majority of research in this area examines whether the verbal and behavioral reactions of numeric minority in a group influence the opinions, beliefs, decisions, behaviors or reactions of group majorities (David & Turner, 2001; Moscovici & Lage, 1976; Nemeth & Wachtler, 1974).

As useful as this literature is, it tends to focus on groups without power differentials among their members. It does not make specific predictions about whether lone subordinates can have an effect on those who hold power over them, or how the existence of power differentials among group members (which most groups have) might affect outcomes. This paper helps advance our knowledge on minority influence by considering power differentials embedded in group relations, and tests specific predictions about whether lone subordinates can elicit adjustments in powerholders' resource allocations. Our findings suggest that lone dissenting subordinates can be an important source of influence, even over those who are more powerful than they are.

Furthermore, most research on minority influence does not answer questions about the consequences minorities or dissenters face after their attempts to influence others. Our work integrates research on upward feedback (Ashford & Cummings, 1983; Atwater et al., 2000; Atwater & Waldman, 2008; Taylor et al., 1984; Waldman & Atwater, 2001) with work on minority influence (Phillips & Loyd, 2003; Turner, 1985; Wood et al., 1994) to argue that powerholders reward lone dissenting subordinates who provide them with constant positive feedback and reward them even more when they share group membership. More importantly, we theorize and show that powerholders only penalize lone dissenting subordinates who provide them with candid feedback when they do not share a salient group membership.

Finally, this research has implications for information flow within organizations. Indeed, competitive business environments require organizations to be more creative and innovative (Tushman & O'Reilly, 1997). While lower level employees can offer creative ideas for innovation (Amabile, Conti, Coon, Lazenby, & Herron, 1996; Axtell et al., 2000), it is powerholders who evaluate and decide whether or not to implement those ideas (Zhou & Shalley, 2003). A growing body of research focuses on the factors that influence how receptive powerholders are to subordinates' creative ideas (Detert & Burris, 2007; Sijbom, Janssen, &

Yperen, 2015a, 2015b). Our findings suggest that powerholders may be most open to the ideas of subordinates with whom they strongly identify, even when they express dissenting opinions.

### **Practical Implications**

Our research also has several important practical implications. Our findings suggest that lone dissenting subordinates who advocate for greater equality in how resources are allocated in groups will succeed: their voice makes powerholders adjust their allocations in line with their feedback. More importantly, lone dissenting subordinates who are candid about how unfair powerholders' allocations are do not appear to be penalized for expressing those views, as long as they share a salient group membership with the powerholder. In contrast, however, lone subordinates who may want to enjoy preferential treatment, and care less about what other subordinates receive, could support powerholder's allocations irrespective of how self-interested they are and will likely be rewarded for doing so.

Given these findings suggest that powerholders may be more susceptible to the influence of lone dissenting subordinates than previously understood and are more influenced by subordinates who share a salient group membership with them, formal feedback mechanisms that prevent powerholders from identifying which subordinates are providing the feedback they receive may be particularly important (Antonioni, 1994). Even with such systems in place, our findings suggest that powerholders should be made aware of the influence subordinate feedback has and the need to be responsive to it. Subordinate feedback can have a positive impact on powerholders' performance (Seifert & Yukl, 2010) and upward feedback is most powerful for receivers who discuss their ratings with their subordinates (Walker & Smither, 1999) or with an executive coach (Luthans & Peterson, 2003). Hence, involving neutral third parties (e.g., facilitators, ombudspeople) to handle the process of voice, and, if necessary, manage disputes that arise between subordinates and powerholders as a consequence (Harlos, 2001), might help

mitigate powerholders' tendencies to turn a deaf ear to their subordinates' reactions (Eaton & Keefe, 1999; Harlos, 2001).

A less expensive solution might include training for organizational powerholders to ensure they have the necessary skills and abilities to identify and respond appropriately to different types of subordinate feedback. Training focused on an individual's awareness as well as their abilities and skills, and employing different teaching techniques (group activities, reflection exercises, role plays, or group discussions) can improve powerholders' affect, cognition, and behavior when responding to subordinate feedback (Kulik & Roberson, 2008). In doing so, however, organizations should perform a needs analysis to accurately identify the goals they want to achieve and ensure the program has support from upper management, recognizing the program as part of its strategic goals (King, Gulick, & Avery, 2010).

### **Strengths, Limitations, and Future Directions**

The present research has several noteworthy strengths. First, in each of the three experimental studies, powerholders had no interaction with subordinates before the study and did not know who they were. Furthermore, powerholders were told that subordinate feedback would not impact powerholders' earnings, and thus they were not obliged to consider how satisfied subordinates were with their allocations. Despite this complete independence and anonymity, our participants still adjusted how they allocated resources as a function of the feedback they received from subordinates, even though those subordinates were voicing lone dissenting opinions. We also replicated our findings with different samples, participating for different stakes, and with different manipulations of group identification.

As with any study, ours is not without limitations. First, our participants were only involved in a short-term relationship with their subordinates, with no prospect for continued interaction. This is not the typical arrangement in a real organization. However, we would predict that when powerholders and subordinates have an ongoing relationship, the stakes for not

acting upon the view expressed by a lone subordinate might be even higher. When subordinate feedback is heard but ignored, it can lead to negative outcomes such as lower subordinate performance, voluntary turnover, or withdrawal (Bashshur & Oc, 2015). This makes the potential implications of subordinate feedback more important for powerholders in ongoing situations and the influence of lone subordinates potentially more powerful than demonstrated in our studies.

Second, we examined the influence of lone subordinates in groups of three. It is unclear whether they would retain this influence in larger groups. Their influence might change depending on how much of a minority they represent (i.e., a lone voice in a group of three compared to a lone voice in a group of five, or ten). While social impact theory proposes that the potential influence of each individual decreases as group size increases (Latané & Wolf, 1981), research on minority influence suggests that lone dissenting subordinates may actually gain strength as the group size increases, because they become even more distinct in larger groups (Nemeth, Wachtler, & Endicott, 1977). These conflicting perspectives make future research on how lone subordinates influence changes as a function of group size more critical.

Third, we examined the effect of subordinate feedback in a context where powerholders' decisions were visible to their subordinates. However, the social influence literature underscores the importance of studying private judgments (Cialdini & Goldstein, 2004). Publicly, our powerholders tended to move in the direction of the lone dissenting subordinate's feedback. However, we were unable to test whether these were sincere changes, or simply public compliance without private acceptance. This is an important area for future exploration, as public compliance without private acceptance is associated with superficial cognitive processing and only a temporary change in behavior. In contrast, public compliance with private acceptance can result in extensive cognitive processing and lasting attitude change (Wood, 2000).

Fourth, the social influence literature suggests that powerholders may be dependent on their subordinates for a number of reasons, including information that helps them make sense of

the environment, or simply to satisfy basic needs (Latané & Wolf, 1981; Oc & Bashshur, 2013). For instance, Oc and Bashshur (2013) argue that powerholders who are dependent on their subordinates for affiliation needs are more likely to be influenced by socially close subordinates, because what these subordinates think of their actions carries more weight. Future research could explore these needs and examine their interaction with identification to shed more light on the upward influence processes between subordinates and powerholders.

In a similar vein, recent research on power describes two distinct motivational strategies individuals use when they pursue or maintain a position of power: *dominance* and *prestige*. Powerholders motivated by dominance achieve or maintain power through force, coercion, or manipulation of group resources, while powerholders motivated by prestige do so by gaining subordinates' respect or by helping their group attain its goals (Maner & Mead, 2010; Mead & Maner, 2012). Powerholders with higher levels of dominance motivation might be not only less affected by what their subordinates think of their actions, but also more likely to force lone candid subordinates to fall in line. In contrast, lone candid subordinates may have more influence over leaders motivated by prestige, because these leaders will be more sensitive to decisions that will earn their subordinates' respect. In many ways, dominance and prestige motivation likely function analogously to power and status differentially affect how powerholders treat others (Blader & Chen, 2012). Examining such motives would be another area of "low hanging fruit" for future research.

Fifth, our study design and data do not allow us to test one more interesting question. One could still argue that group identification should play a less important role when the lone dissenting subordinate is compliant rather than candid. Indeed, our findings in Study 2 and Study 3 somewhat confirm this. In both studies, the coefficient values for lone candid subordinates are only significant in the high identification conditions and non-significant in the low identification conditions. In contrast, the coefficient values in lone compliant conditions are all significant,

except in the low identification condition in Study 3 ( $p = .26$ ). This suggests that the effect of group identification may indeed be stronger for the lone candid subordinate. Nevertheless, this does not mean that group identification should not matter when the lone subordinate is compliant. It still should. In groups where the majority of subordinates provide powerholders with challenging and negative feedback, the relatively more positive feedback they receive from the lone compliant subordinate should alleviate potentially self-threatening aspects of subordinate feedback. In fact, such compliant feedback should be more influential when it comes from someone who shares the group membership with the powerholder. In other words, it will be easier for powerholders to act in line with the positive feedback they receive from someone who belongs to the same group (than someone who belongs to another group) while others provide them negative feedback. As we used different analyses to understand the effect of the lone candid and lone compliant feedback, we are not able to go further in empirically testing these arguments with our data. We hope that future research will continue to apply theoretical arguments rooted in group identification to explain these complex relationships more precisely.

Sixth, this research examined the influence of lone compliant and candid subordinates on powerholders' allocation decisions exclusively in settings where every subordinate spoke up and communicated their fairness perceptions. Our effects might differ in settings where some subordinates choose to remain silent. Conceptually, speaking up is more than the opposite of silence, and the underlying processes, motives and consequences of voice and silence vary (Morrison, 2014; Van Dyne, Ang, & Botero, 2003). For instance, while voice is often a response to dissatisfaction, silence is often a response to fear (Morrison, 2014). Similarly, while employee silence is actually a fear of dissent, it is frequently misidentified as consent, which in turn can result in misunderstandings and unexpected and incongruent consequences for those who choose to remain silent (Van Dyne et al., 2003). Thus, future research would be well-served to explore



how the effects of candid and compliant subordinates are different in groups where some subordinates remain silent rather than express an opinion.

Finally, the absence of a mediating variable to help further unpack the process is a limitation. We argued that the effect of both compliant and candid feedback was mediated by changes in the powerholders' desired self-image or identity such that compliant feedback boosts their image and candid feedback threatens that image. Future research could draw from the earlier work on threats to intra-group position or status (e.g., Mead & Maner, 2012; Okimoto & Wenzel, 2011) to further theorize around and test the extent to which powerholders perceive the feedback of lone dissenting subordinates as threatening to their public or private self-image.

Overall, we believe our findings provide compelling evidence that subordinates function as an important source of influence over powerholders, even when they hold a lone dissenting position. Our evidence that a lone candid subordinate can influence how powerholders allocate resources is especially encouraging. In our studies, their singular voice prevented powerholders from sliding towards even more self-interested allocations over time. Moreover, as long as they shared a salient group membership with the powerholder, they were not penalized for doing so. Encouraging candid lone subordinates to speak up, especially those who share salient group identities with those who hold power over them, can help curb powerholders' self-interested tendencies, even in groups where everyone else unquestionably supports powerholders' actions. If more lone subordinates did put their head above the parapet and speak up when those with power over them behave unfairly, it would be a better world for many.

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**Appendix: Data transparency**

The data in this manuscript have not been published elsewhere. However, the data we collected for Study 1 in this manuscript originally included other conditions, and findings from that data collection were reported in a separate published manuscript. Both the published and current manuscript focus on *powerholders' allocation behavior* and *subordinate feedback*. Our action editor for the previous published manuscript asked us to drop the conditions included in the current manuscript to better streamline the contribution of that publication and we agreed with him/her. As we argue in the current manuscript, however, the effects of and on lone voices are important, and therefore we report results from the two conditions we were asked to drop from the now-published other manuscript as Study 1 in the current manuscript.

Table 1

*Panel Data Regressions on the Effect of Subordinate Feedback on Powerholders' Self-Allocations over Time*

	Trend of the average amount of resources powerholders allocate to themselves, across the rounds of the experiment				
	Study 1	Study 2		Study 3	
	Lone Compliant ( <i>N</i> = 35; 350 observ.)	Lone Compliant "London" [ <i>high identification</i> ] ( <i>N</i> = 33; 139 observ.)	Lone Compliant "Europe" [ <i>low identification</i> ] ( <i>N</i> = 32; 160 observ.)	Lone Compliant Democrat [ <i>high identification</i> ] ( <i>N</i> = 29; 290 observ.)	Lone Compliant Republican [ <i>low identification</i> ] ( <i>N</i> = 31; 310 observ.)
Time	1.06**	1.46*	-.87	2.75**	1.22**
<i>SE</i>	.30	.70	.71	.46	.38
$\beta$	.10**	.09*	-.05	.24**	.10**
<i>R</i> <sup>2</sup> Overall	0.010 <sup>1</sup> 0.038 <sup>2</sup>	0.007 0.033	0.002 0.012	0.058 0.121	0.010 0.036
Wald $\chi^2$	12.32	4.43	1.50	35.89	10.27

*Note.* "Time" refers to unstandardized coefficients for the rounds in the experimental game. *SE* refers to standard errors and  $\beta$  refers to the standardized coefficients. observ. = observations. <sup>1</sup>Upper *R*<sup>2</sup> values were calculated in the manner proposed by Snijders and Bosker (1994). <sup>2</sup>Lower *R*<sup>2</sup> values were calculated in the manner proposed by Raudenbush and Bryk, 1986 and Bryk and Raudenbush, 1992. \* *p* < .05, \*\* *p* < .01



Table 2

*Panel Data Regressions of the Effect of Subordinate Feedback on Round-by-Round Changes in Powerholders' Self-Allocations*

	Effect of prior round's feedback on the change in powerholders' allocation in the following round				
	Study 1	Study 2		Study 3	
	Lone Candid ( <i>N</i> = 35; 315 observ.)	Lone Candid "London" [ <i>high identification</i> ] ( <i>N</i> = 33; 132 observ.)	Lone Candid "Europe" [ <i>low identification</i> ] ( <i>N</i> = 30; 120 observ.)	Lone Candid Democrat [ <i>high identification</i> ] ( <i>N</i> = 29; 261 observ.)	Lone Candid Republican [ <i>low identification</i> ] ( <i>N</i> = 28; 252 observ.)
Feedback( <i>t</i> -1)	9.86**	9.02**	1.43	7.68**	1.55
<i>SE</i>	1.74	2.68	2.70	2.29	1.39
$\beta$	.30**	.28**	.05	.20**	.07
<i>R</i> <sup>2</sup> Overall	0.093 <sup>1</sup>	0.080	0.002	0.042	0.005
Wald $\chi^2$	32.08	11.36	0.28	11.28	1.25

*Note.* "Feedback(*t*-1)" refers to the unstandardized coefficients for the feedback given by subordinates in the previous round. *SE* refers to standard errors and  $\beta$  refers to the standardized coefficients. observ. = observations. <sup>1</sup>*R*<sup>2</sup> values were the same in this study, regardless of whether they were calculated in the manner proposed by Snijders and Bosker (1994), or in the manner proposed by Raudenbush and Bryk, 1986 and Bryk and Raudenbush, 1992. \* *p* < .05, \*\* *p* < .01

Table 3

*Panel Data Regressions of the Effect of Majority Compliant and Lone Candid Subordinate Feedback on Round-by-Round Changes in Powerholders' Self-Allocations*

	Effect of prior round's feedback on the change in powerholders' allocation in the following round					
	Study 1		Study 2		Study 3	
	Lone Candid ( <i>N</i> = 35; 315 observ.)		Lone Candid ( <i>N</i> = 63; 252 observ.)		Lone Candid ( <i>N</i> = 57; 513 observ.)	
	$\beta$	<i>SE</i>	$\beta$	<i>SE</i>	$\beta$	<i>SE</i>
Majority compliant feedback ( <i>t</i> -1)	.02	.05	.02	.07	.06	.05
Lone candid feedback ( <i>t</i> -1)	.31*	.05	.18*	.07	.11*	.05
<i>R</i> <sup>2</sup> Overall	0.096 <sup>1</sup>		0.036		0.023	
Wald chi <sup>2</sup>	33.41		9.29		11.93	

*Note.* “Majority compliant feedback (*t*-1)” refers to the feedback given by the majority compliant subordinates in the previous round. “Lone candid feedback (*t*-1)” refers to the feedback given by the lone candid subordinates in the previous round.  $\beta$  refers to the standardized coefficients and *SE* refers to standard errors. observ. = observations. <sup>1</sup>*R*<sup>2</sup> values were the same in this study, regardless of whether they were calculated in the manner proposed by Snijders and Bosker (1994), or in the manner proposed by Raudenbush and Bryk, 1986 and Bryk and Raudenbush, 1992. \* *p* < .05, \*\* *p* < .01

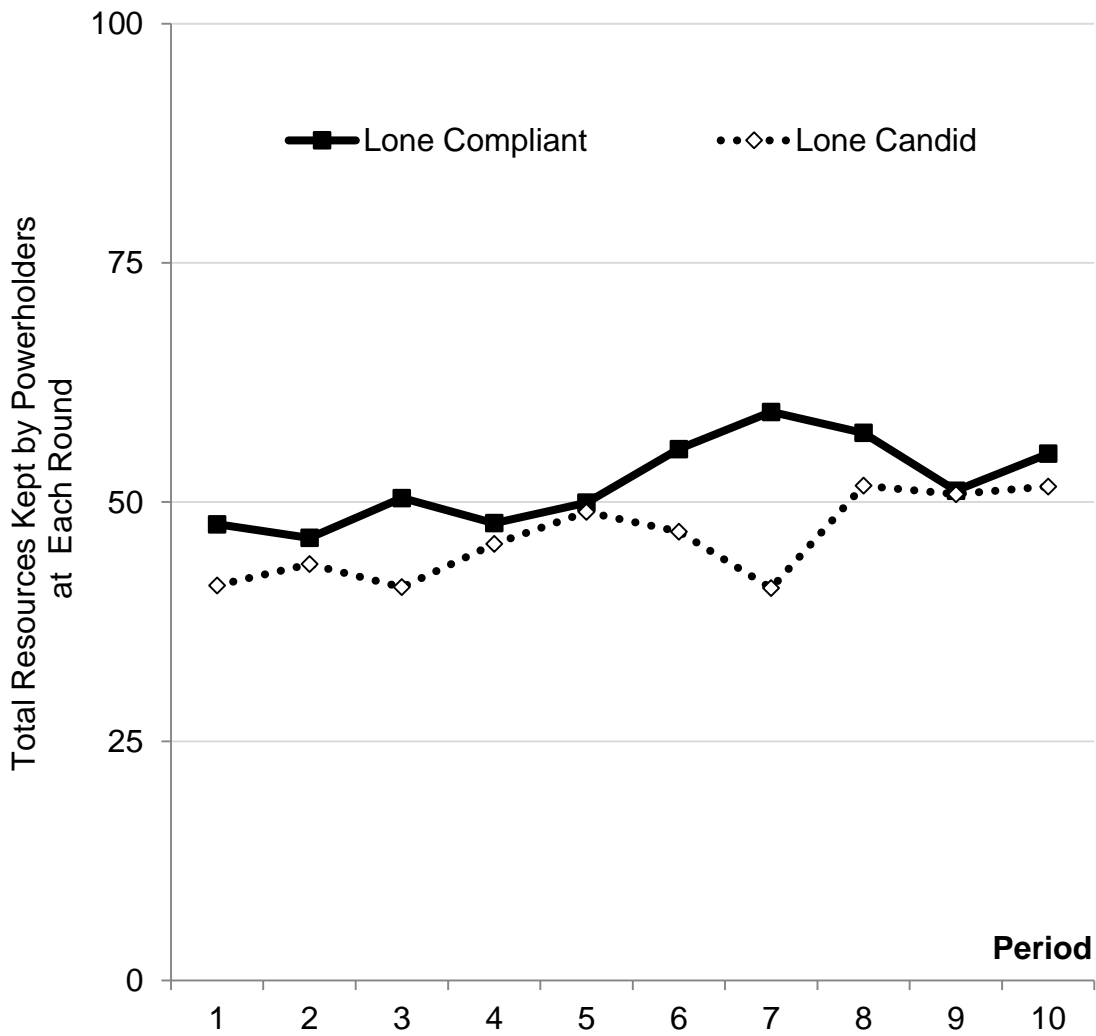


Figure 1. Allocations powerholders gave to themselves in the lone candid feedback and lone compliant feedback conditions, Study 1

Note. Total resources are measured in British cents; the total amount that could be allocated was £10.00.

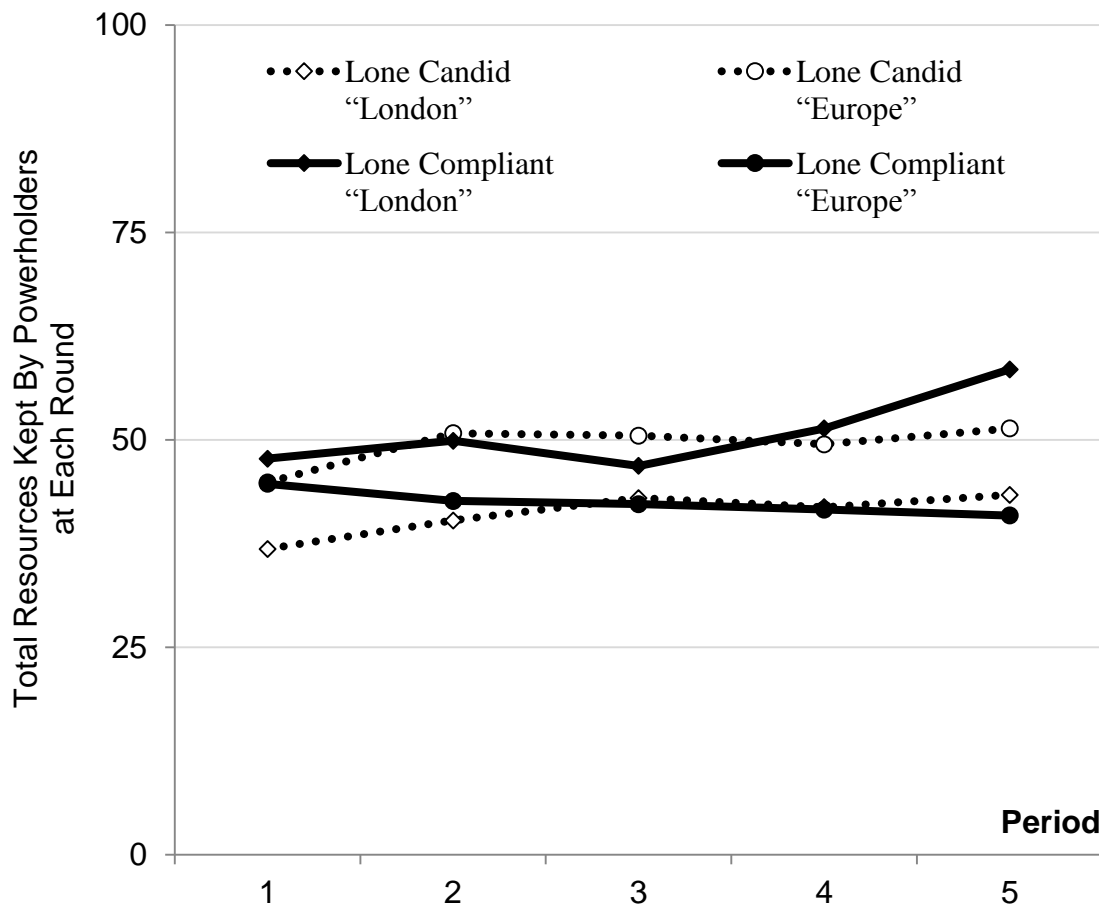


Figure 2. Allocations powerholders gave to themselves in the lone candid feedback and lone compliant feedback conditions, Study 2

Note. Total resources are measured as a proportion of the course participation bonus credits participants could allocate.

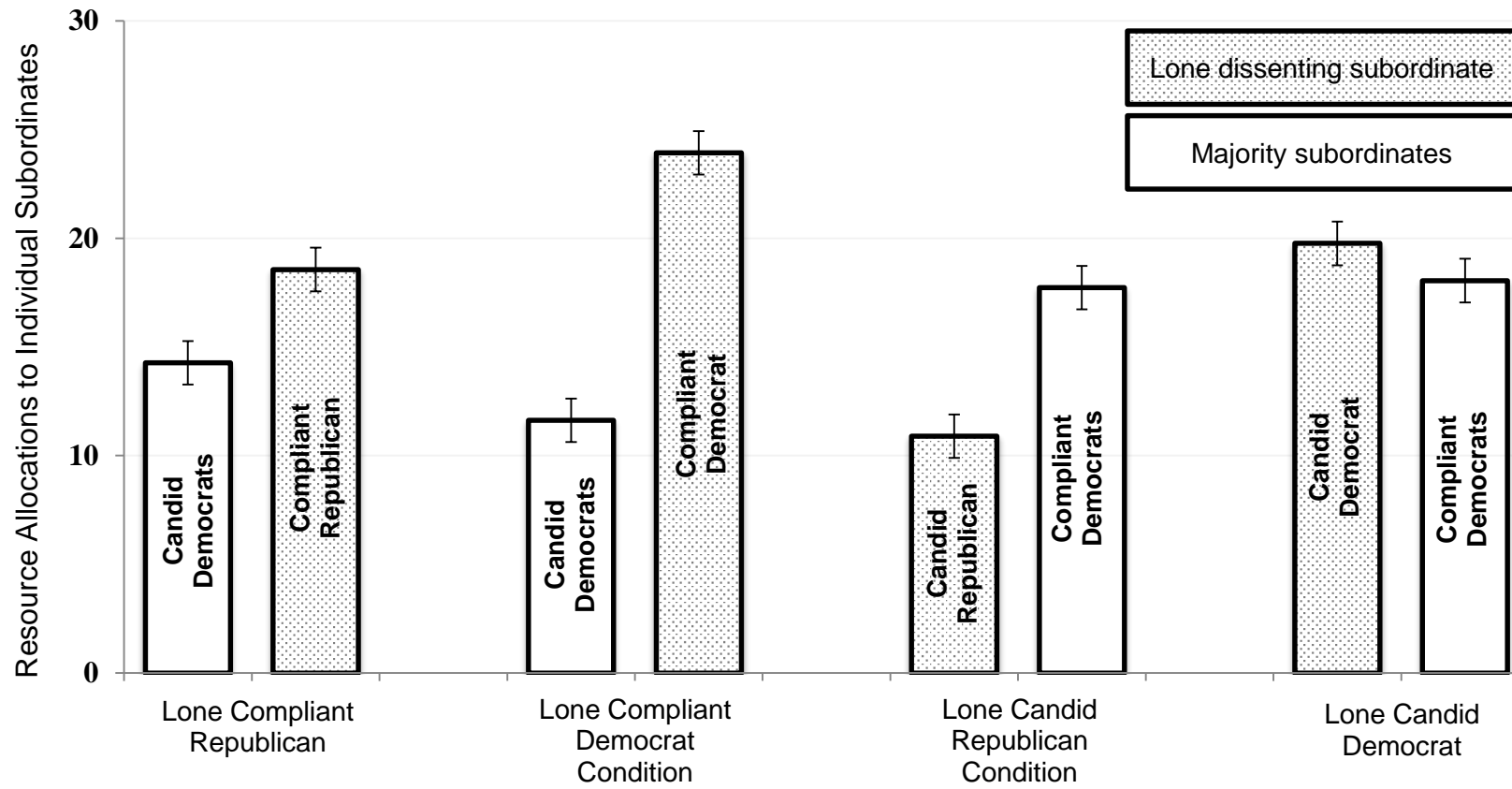


Figure 3. Powerholders' resource allocations to individual subordinates in the 11<sup>th</sup> round, by condition, Study 3

Note. Error bars indicate standard errors.