

Too Many Cooks in the Kitchen: Group Proficiency as a Function of Social Boldness and Reticence

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Abstract

Despite the fitness benefits associated with high rank in a dominance hierarchy, the tendency toward leading or following might be subject to frequency-dependent selection if groups with many leadership-seeking individuals fail to coordinate their activities as well as groups with a mixture of leaders and followers. To test this idea, we administered to 81 research participants a multi-scale personality questionnaire that included a 10-item measure of social boldness. Individuals with the highest and lowest scores on social boldness were identified, and six five-person teams were formed, consisting of 0, 1, 2, 3, 4, or 5 individuals with high social boldness. Each team was given the task of crossing an imaginary river by placing wooden planks over squares representing stepping stones. As predicted, the group with 5 socially bold individuals squabbled the most and took the longest time to cross the river.

The Riddle of Following

When our ancestors on the African savanna were first developing intricate and communication-driven social hierarchies, leadership had vast reproductive benefits for the individual who could claim it. These included broader mating rights, freer access to material resources, and the power to direct the volition of the group. With all the advantages inherent to leadership one would intuit that practically all people should be striving for leadership roles by this point in our evolution. Why is this clearly not the case? Such is the "riddle of following" as Van Vugt Hogan and Kaiser (2008) have phrased it.

A related riddle is the prevalence of **reticence**—a reluctance to speak out in groups. Reticence can be observed as part of a temperamental disposition toward extremely shy, fearful, wary, inhibited behavior in about 15% of young children (Kagan, Reznick, & Snidman, 1987). This sort of extreme social inhibition manifests in adulthood as the clinical condition known as *social phobia*. The lifetime prevalence of social phobia is 13.3%, making it the third most prevalent psychiatric disorder (Henderson & Zimbardo, 1998). The prevalence of ordinary shyness—a less extreme but still debilitating form of social phobia—is 40-50% of the adult population (Henderson & Zimbardo, 1998). Data from the National Comorbidity Survey Replication show that fear of public speaking affects 21.2% of adults—more than any other category of fears, including fear of meeting new people and fear of talking to strangers (Ruscio, et al., 2008). Whereas certain fears (e.g., claustrophobia, agoraphobia, and arachnophobia) are easily seen as adaptive mechanisms for avoiding genuine dangers (Gaulin & McBurney, 2004), fear of public speaking is not so easily understood as a behavioral adaptation. In fact, reticence, although widespread, is apparently maladaptive. This is perplexing, as natural selection usually decreases the frequency of maladaptive traits. Given the disadvantages of reticence and the advantages of social boldness, why are so many individuals predisposed toward reticent following instead of socially bold leadership?

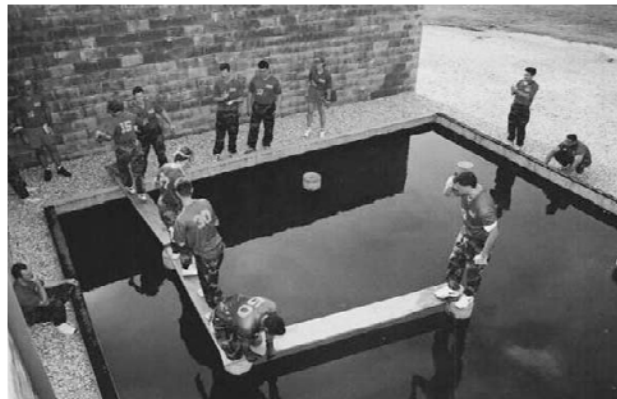
Hypotheses on the Riddle of Following

Possible answers to the riddle of following can be found at both the level of individuals and the level of groups. Although individuals who were successful in obtaining leadership roles enjoyed advantaged access to mates and resources, there were almost certainly disadvantages to competing for a leadership role. An individual vying for a leadership role becomes a visible target to competitors. Failure to beat rivals could have resulted in banishment from the group or premature death (Van Vugt, Hogan & Kaiser, 2008). Seeking leadership is therefore a highly risky strategy.

- A much safer strategy would be to remain relatively invisible within the group by refusing to compete for leadership roles. A fear of speaking out may have served as a mechanism for reducing the risks associated with competing for leadership.
- In addition to the advantages of reticence to the individual, groups with a mixture of socially bold and reticent individuals may have advantages over groups comprised of primarily bold individuals. Thus, social boldness and reticence might be subject to multilevel selection (O'Gorman, Sheldon & Wilson, 2008). To the degree that inter-group competition was an important factor in the evolution of hominids, the frequency dependence of the advantages of the boldness and reticence strategies suggests a stable optimum in the frequency of these strategies. The hypothesis tested in the current study is that groups with too many socially bold individuals, all of whom predisposed toward leading, tend to suffer from disharmony and squabbling, which undermine the ability of the group to solve problems.

METHOD

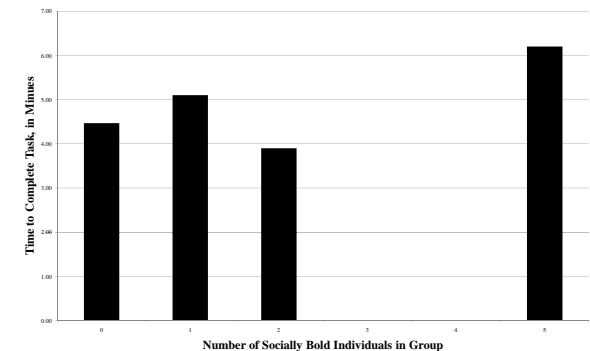
- 81 undergraduate students agreed to complete a representation of Lee and Ashton's (2004) Social Boldness scale, built from 10 items from the International Personality Item Pool (IPIP; Goldberg, et al., 2006). This scale, with an alpha reliability of .86, contains items such as "Don't mind being the center of attention" and "Have leadership abilities" (+ keyed) and "Would be afraid to give a speech in public" and "Keep in the background" (- keyed). 30 students were identified—15 among the highest scores and 15 among the lowest scores—who were willing to participate in a group task called "crossing the river." Six teams of five individuals were created, with 0, 1, 2, 3, 4, or 5 socially bold individuals in each group. Participants were unaware of that the groups were created according to social boldness scores.
- The original crossing the river task (see below) requires teams to place boards over pylons protruding from a body of water to get to the other side. This task requires participants to coordinate their movements to solve a physical puzzle—one that we feel closely mirrors a problem that might have been encountered by our Pleistocene ancestors. In our version, teams were asked to cross an area designated as a "river" in the gym using 3 8'x6"x1" boards to make bridges between "boulders" outlined by tape in order to get each team member and the boards to the other side. Teams were timed with a stopwatch.



Team Members Completing a Physical Task Exercise (Figure 2 from Jordan, et al., 2002).

RESULTS

- No-shows in the 3-bold and 4-bold person teams eliminated them from the results. As predicted, the team with 5 bold persons was significantly slower than teams with 0, 1, or 2 bold persons. Informally, we noticed substantially more squabbling in the team with 5 bold persons.



DISCUSSION

- Although the small number of groups engaging in one physical task precludes strong conclusions, the results of the study support the hypothesis that too many socially bold persons in a group causes a decrement in group performance such that multilevel selection would produce balanced frequencies of socially bold leaders and reticent followers.

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