



Communication and commitment in contests[☆]



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ABSTRACT

Players often engage in high-profile public communications to demonstrate their confidence in winning before they carry out actual competitive activities. We investigate players' incentives to engage in such pre-contest communication. Our key assumption is that a player suffers a cost when he sends a "message of confidence" but later loses the contest. Sending a message thus increases one's incentive to win. For the favorite, this has the beneficial strategic effect of decreasing the underdog's equilibrium effort. In a standard Tullock contest model, however, with no costs of entry and complete information, this strategic advantage is not strong enough to outweigh the cost of sending the message. Therefore, communication can only be beneficial if it deters the rival's entry into the contest, and under asymmetric information.

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1. Introduction

Many competitive events resemble contests in that economic agents forfeit scarce resources to compete for a limited number of prizes. One example would be an R&D race in which firms attempt to develop new technology before their competitors. Other examples of such contests include the rivalry between firms who increase their marketing budgets to become market leaders, politicians who strive to win votes during political campaigns, rent-seekers who make political contributions so as to influence policy or secure the patronage of powerful politicians, and parties involved in legal disputes who incur great costs gathering evidence so that they can prevail in court. Other examples include war and international conflict, sports competitions and the market for internal labor.³

Whatever the context, contenders often conduct high-profile communications in public before the actual contest takes place. During a 1961 mission statement before the U.S. Congress, President John F. Kennedy expressed his goal of beating the Soviet Union in the race to reach the moon by the end of the 1960s: "I believe that this nation should commit itself to

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³ See Konrad (2009) for a survey of the literature.

achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the Earth.” The goal was ultimately achieved by the crew of the Apollo 11 in 1969. Similarly, Intel’s president and chief executive, Paul Otellini, took a high-profile stance when he announced Intel’s entry into the unfolding tablet market: “We are going to utilize all the assets at our disposal to win this segment” and “We will win in the tablet market.” Such widely publicized statements are also made in the world of sports. Former boxing world champion Mike Tyson famously demonstrated his confidence in winning his next fight by making statements such as, “It’s no doubt I am going to win this fight and I feel confident about winning this fight.”

The many incidents of high-profile pre-competition communication have led to extensive discussions of this phenomenon in research on business strategy.⁴ As Porter (1980) argues, a competitor sends a verbal message as “a direct or indirect indication of its intentions, motives, goals, internal situations.” Such a “message” is intended to modify the structure of subsequent competition and to trigger a favorable reaction from rivals. Porter broadly defines such actions as “market signals,” and regards them as a critical element of competitive strategies. Despite this, the economics literature has contributed little in the way of formal modeling to understand players’ incentives to engage in such communications. We attempt to close this gap by developing a formal model to shed light on the strategic effects of public communications that precede a winner-take-all contest.

To fully understand the strategic trade-offs involved in pre-contest communications, it is worth noting that such activities can be costly. High-profile communications focus public attention on the ultimate performance of the participant who is sending the message. If the person does not achieve his stated goal (winning the contest), he risks public embarrassment and reputational damage. In the event of such a failure, the “message of confidence” or publicly stated resolve would be read by the public or press as a bluff (Kreps and Wilson, 1982; Milgrom and Roberts, 1982a,b) that amplifies the player’s failure, jeopardizes his credibility, and handicaps him in future strategic maneuvers. For instance, before Germany’s federal elections in 2002, Guido Westerwelle of the Free Democratic Party (FDP) initiated the ambitious so-called “project 18” and committed publicly to an objective of winning 18% of the votes. When the FDP won only 7.4%, Westerwelle was taunted by the media and public. This tarnished his reputation as an effective political leader.

While the message sender bears additional costs when he misses the stated goal, these costs enlarge the stake he places in the contest, and thus allows him to credibly commit to a tougher stance in the competition. This commitment could eventually pay off because it might discourage competitors and thus attenuate their incentive to exert effort. We label this strategic effect as the “discouragement effect.”

To provide an account of such communications prior to contests, we consider a model in which two players compete for a prize and the players are allowed to send a public “message of confidence” prior to the contest. Our analysis demonstrates that the discouragement effect alone is insufficient to overcome the cost of sending the message of confidence, i.e., the cost when the stated goal is missed. Consequently, in a standard complete-information contest, in which players’ “strengths” (valuations for the prize) are commonly known, there exists no equilibrium in which either player sends a message of confidence.

Our subsequent analysis, however, identifies two main contexts in which pre-contest communication arises. First, we provide an “entry deterrence” argument and demonstrate that the discouragement effect plays a more significant role when the contest involves endogenous entry. Continuing in a complete-information setting, we allow contenders to decide whether to participate in a contest, with participation involving a fixed entry cost. We show that communicative activities arise in equilibrium if the entry cost is sufficiently high. When entry costs are high enough, one player’s commitment of a tough stance (through communication) could effectively prevent another’s entry. Note that these arguments may explain Paul Otellini’s statements when Intel decided to enter the tablet market. By stating that Intel was trying to win in the tablet market by all available means, he may have discouraged other firms from entering the market.

Second, we demonstrate that high profile pre-contest communications can arise when the contest involves incomplete and asymmetric information. This would occur even if entry was free, in which case pre-contest communication would not serve as an entry-deterrence device. To illustrate this point, we allow one player’s strength (i.e., his valuation of the prize) to take either a high or a low value, which is privately known. The presence of asymmetric information breeds rich strategic trade-offs. The uninformed player, whose strength is commonly known, never conducts the communication. However, the informed player may send a message of confidence, which functions not only as a commitment device but also as a signaling device that conveys private information. Communicative activities are revived in this context through two possible avenues.

1. There could exist a separating equilibrium that demonstrates a “confirmation effect.” In the equilibrium, the player with private information sends a message of confidence if and only if he has a high valuation of the prize. The separating equilibrium is made possible because the stronger player incurs a lower cost in sending the message of confidence, as he stands a lesser chance of losing. In this case, the uninformed player discerns the true strength of the other party by observing his communicative activity. The informative signal allows the stronger player to credibly convince his rival of his superior strength. The confirmed advantage of the stronger party, together with the discouragement effect of his commitment to the tough stance, successfully weakens the rival’s incentive to put forth effort.

⁴ See Heil and Robertson (1991) for a review of the literature.

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