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#### 1. Introduction

#### ABSTRACT

We examine the roles and values of honesty and advocacy in communication by studying two closely-related variants of the standard cheap-talk game. In the honesty model, the sender is behavioral and honestly reveals the state with a positive probability. In the advocacy model, the sender is strategic but has no bias with a positive probability. In each model, the sender is strategic and has some bias with the complementary probability. We identify the effects on communication of commitment by the honest type to telling the truth and well-intentioned manipulation of the strategic type with no bias. We also show that neither characteristic uniformly dominates the other from the viewpoints of both the receiver and the biased sender: each player's maximal expected utility can be larger or smaller in one model than in the other, depending on parameter values.

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of communication. It then seems reasonable to think that an *advocate* who shares the same objective of his counterpart but also takes into consideration his counterpart's discounting would be preferable to an honest agent who does not make such consideration. The goal of this paper is to obtain insights on a natural but non-trivial question: which characteristic one should seek from an advisor, honesty or advocacy? Both characteristics are desirable, but for different reasons. An advocate has the *flexibility* to distort the truth when it is beneficial to the listener. He may choose not to tell the truth when he knows that his words will not be taken at face value. On the other hand, an honest agent is committed to telling the truth and, as in other contexts, this ex ante *commitment* may be valuable.

Honesty is thought to be an important virtue in many contexts. In politics, voters often care more about politicians' honesty than about their rationality or policy preferences. In recruiting, candidates are assessed not only by their abilities and skills but also by their characters, and presumably honesty is one of the most crucial characteristics. However, it is not at all obvious why honesty should be preferred over other characteristics. Whenever communication occurs between agents and one agent is not so certain over the motivations of the other, the former will necessarily discount the informativeness

We study two closely-related variants of the standard cheap-talk game á la Crawford and Sobel (1982) (CS, hereafter). In the honesty model, the sender is honest with a positive probability. The honest sender is behavioral and always reports the

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true state. With the complementary probability, the sender is of the type in CS. Namely, he is strategic and has preferences that are not perfectly aligned with those of the receiver (we call this type the biased sender). In the advocacy model, the sender is always strategic but there is uncertainty over the sender's bias. The sender has no bias with a positive probability and a positive bias with the complementary probability. We call the former type the advocate, because he may strategically manipulate information but will choose to do so only when it is in the interest of the receiver.

We first identify the effects on communication of commitment by the honest type to telling the truth and well-intentioned manipulation of the advocate. They are highlighted by the additional equilibrium conditions relative to CS.

In the honesty model, the new condition (mass balance condition), which is unique to this paper to our knowledge, concerns the lower bound of information transmission due to the behavior of the honest type. It stems from the fact that distinct messages are sent at each state by the honest sender and, therefore, each message is endowed with an intrinsic meaning. To see this more clearly, suppose there are two states (high and low) and two messages (also high and low), with each state realized with equal probability. If the probability of the honest type is equal to 0.5, then it is possible for the biased type to wash out the information from the honest sender by simply reporting high when the state is low and vice versa. A similar strategy can be used to wash out the information delivered by the honest sender whenever the probability of the honest type is greater than 0.5, then the receiver always obtains some useful information from communication, independently of the biased type's strategy: whenever the receiver gets the high message, the state is also high with probability greater than 0.5. The mass balance condition is a generalization of this result into the case with continuous state and message spaces. When the relevant spaces are continuous, the lower bound of information transmission is affected by the mapping between the biased type's state space and the message space (the honest type's state space) as well as the probability of the honest type. The mass balance condition captures both effects in a simple fashion in the uniform-quadratic environment.<sup>1</sup>

In the advocacy model, the additional condition (no arbitrage for the advocate) is essentially identical to the no arbitrage condition in CS. It states that at the boundary state of two partition elements, the advocate must be indifferent between the two induced actions. This condition must hold in equilibrium precisely because the advocate is a strategic player and, therefore, can always adjust his message. Combined with the corresponding condition for the biased sender, this condition imposes rather severe restrictions on equilibrium outcomes.

We then compare the welfare consequences of the two models. In a nutshell, we show that neither characteristic uniformly dominates the other from the viewpoints of both the receiver and the biased sender. Formally, each player's maximal expected payoff can be larger or smaller in one model than in the other, depending on parameter values. Importantly, we trace this mixed result to the trade-off between commitment and flexibility.

The honest sender's commitment is valuable in communication for two reasons. First, it prevents opportunistic behavior on the part of the sender and, therefore, reduces the loss due to strategic considerations. To see this point, suppose the sender is the benevolent type with a high probability or the biased sender's preferences are very closely aligned with those of the receiver, so that potential loss due to the conflict of interest between the biased sender and the receiver is fairly limited. In the honesty model, the honest sender's strategy is fixed. This allows the receiver to take the sender's message nearly at face value, thereby limiting the loss of information in communication. In the advocacy model, the advocate suffers from an irresistible temptation to adjust his strategy, no matter how small the associated gain is. Consequently, messages cannot be taken at face value to the same extent. In the presence of the biased sender, these strategic considerations amplify the players' expected losses in communication.

Second, commitment has the effect of enriching language used in communication. In the honesty model each message might be sent by the honest sender, and thus the receiver interprets each message differently.<sup>2</sup> Therefore, different from CS and the advocacy model, all messages are fully used in the honesty model, which allows freer communication between the receiver and the *biased* sender.<sup>3</sup>

The advocate's flexibility contributes to efficiency in communication in two, rather subtle, ways. First, it allows the advocate to more efficiently pool with the biased sender. The honest sender's commitment to sending different messages at different states imposes a lower bound on the set of states for the honest sender that need to be pooled with the biased sender. In particular, as discussed above, the set of pooling states must respect the mass balance condition. To the contrary, the advocate's flexibility nullifies such a restriction. This increases the potential of separation between the advocate and the biased sender, thereby contributing to both players' payoffs.

To understand the second advantage of advocacy, consider a world with 10 states where the receiver and the biased sender prefer higher actions at higher states and the biased sender prefers higher actions than the receiver. Suppose the biased sender most prefers action 4 on state 1, and there is an equilibrium in the honesty model where the biased sender never sends messages 1, 2, and 3. In the equilibrium, it is clearly the case that the receiver perfectly trusts those three

<sup>&</sup>lt;sup>1</sup> We derive the condition only for the case where the state is drawn from the uniform distribution. In Appendix B, we explain why this restriction is essentially unavoidable.

<sup>&</sup>lt;sup>2</sup> In the honesty model, even though the receiver takes a constant action on a set of messages, her posterior over the set of states is not constant over those messages. Only her conditional expectation is constant.

<sup>&</sup>lt;sup>3</sup> This effect is similar to the one generated by "noise" in communication. Blume et al. (2007) show that adding noise to communication can improve welfare. With noise, as in this paper, the interpretation of messages becomes crucial, which is the key reason why welfare can improve. The exact connection between the two effects is beyond the scope of this paper and left for future research.

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