

Incentivizing Optimal Forecasting Groups in Prediction Markets

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Abstract

I. INTRODUCTION

Wisdom of crowds describes a phenomenon in which a group of individuals perform a task or make a decision with an acumen greater than any single individual. Oftentimes, the disparity between a single individual performing a task and the collective is stark. Possibly the most quoted and most widely referenced single instance of wisdom of the crowds is attributed to Sir Francis Galton's observations of a crowd estimating the weight of an ox.¹ He noted that the crowd's average prediction was within 1 percent of the oxen's true weight. Since then, wisdom of the crowds has garnered interest from various industries and academic fields as more individuals try to ascertain what makes a crowd intelligent and how crowd intelligence be utilized to perform tasks that would be difficult for any single individual. The most prevalent example of crowds being used to accomplish tasks comes in the form of markets, where groups of individuals contribute their private information and perspective for personal gain, and in so doing, help to attain an accurate estimation of a quantity. This quantity could be the value of a particular company's stock or the likelihood of some event happening in the future.

A prediction market acts as a vehicle for obtaining likelihood estimates of a particular event or set of events occurring.² Participants in the market pay for a contract that is tied to a

particular probability distribution over the set of events in question. The market determines both how to aggregate information elicited from market participants as well as how to reward individual contracts according to some payoff function.

II. BACKGROUND

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¹His original paper, *Vox Populi*, was published in *Nature* in March of 1907. doi:10.1038/075450a0

²See [1] for more details.

Table 1: *Example table*

Name		
First name	Last Name	Grade
John	Doe	7.5
Richard	Miles	2

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Text requiring further explanation³.

III. RESULTS

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$$e = mc^2 \quad (1)$$

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³Example footnote

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IV. DISCUSSION

i. Subsection One

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ii. Subsection Two

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- [1] J. Wolfers and E. Zitzewitz. Prediction markets. *The Journal of Economic Perspectives*, 18(2):107-126, 2004.
- [Figueredo and Wolf, 2009] Figueredo, A. J. and Wolf, P. S. A. (2009). Assortative pairing and life history strategy - a cross-cultural study. *Human Nature*, 20:317–330.