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Evaluating expert advice in forecasting: Users' reactions to presumed vs. experienced credibility

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ABSTRACT

In expert knowledge elicitation (EKE) for forecasting, the perceived credibility of an expert is likely to affect the weighting attached to their advice. Four experiments have investigated the extent to which the implicit weighting depends on the advisor's experienced (reflecting the accuracy of their past forecasts), or presumed (based on their status) credibility. Compared to a control group, advice from a source with a high experienced credibility received a greater weighting, but having a low level of experienced credibility did not reduce the weighting. In contrast, a high presumed credibility did not increase the weighting relative to a control group, while a low presumed credibility decreased it. When there were opportunities for the two types of credibility to interact, a high experienced credibility tended to eclipse the presumed credibility if the advisees were non-experts. However, when the advisees were professionals, both the presumed and experienced credibility of the advisor were influential in determining the weight attached to the advice.

1. Introduction

The incorporation of experts' knowledge and judgments into forecasting processes poses a number of challenges, many of which are known to researchers who are seeking to improve expert knowledge elicitation (EKE) methods (e.g., Aspinall, 2010; Bolger & Rowe, 2014, 2015; Budnitz et al., 1995; Cooke, 1991; Goodwin & Wright, 2014; Meyer & Booker, 1991; Morgan, 2014 and Morgan & Henrion, 1990). One of these challenges is the need to assess the extent to which credence should be attached to an expert's forecasts. Concerns like this are relevant to the stages of EKE that involve the selection of experts, and to the subsequent aggregation of their judgments when multiple experts are available. For example, either implicit or explicit differential weights may be attached to individual experts' judgments, depending on assessments of the probable accuracy of their forecasts. Errors made at either the selection or aggregation stages have the potential to harm the forecast accuracy. This raises the question of what determines the level of credibility that is associated with an expert's forecast.

This paper investigates the extent to which two attributes of experts – their track record of accuracy and their apparent status – influence the credibility of their forecasts. It does so by measuring how much either non-experts or other experts revise their own forecasts after they have received an advisor's forecasts. Specifically, we investigate the influences of two types of credibility: the expert's track record as recalled by advisees (which

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we term 'experienced credibility') and the expert's status (which we term 'presumed credibility'). Our paper complements the work of Sah, Moore, and MacCoun (2013), who looked at the extent to which an advisor's track record and their confidence in their advice influenced opinion revision. The issues of presumed status and track records are also important because, as Armstrong suggested in his "seer sucker" theory, people are often motivated to pay large sums for forecasts elicited from people labeled 'experts', even when their forecasting accuracy is poor (Armstrong, 1980).

2. Relevant literature

Judgmental forecasts provided by experts are often used to inform people who are forming their own opinions of how the future will unfold (Gönül, Önkal, & Lawrence, 2006). The domain of stock price forecasting is a prime example, being a field where a multi-billion dollar industry exists, comprising both forecast providers and forecast users. This field contains a great deal of uncertainty, and choosing a relatively inaccurate advisor can have serious repercussions, particularly for investments such as retirement savings. Accordingly, the credibility of the source of advice is likely to be of paramount importance; but how does source credibility influence a user's assessment of possible future stock prices? Do experienced and presumed credibility impinge on these assessments to different degrees, and what happens when these determinants yield conflicting indications of credibility?

Source credibility is an area of active research in many disciplines, including psychology, business, marketing, finance, risk communication, and information and health sciences (e.g., Berry & Shields, 2014; Chen & Tan, 2013; Gönül, Önkal, & Goodwin, 2009; Sah et al., 2013; Willemsen, Neijens, & Bronner, 2012 and Xie, Miao, Kuo, & Lee, 2011). Expertise is argued to constitute a critical dimension of source credibility (e.g., Kelman & Hovland, 1953). In fact, users have been shown to prefer 'expert forecasts' over 'computer-generated forecasts,' even when they had no information about either the experts or the statistical models generating these (actually identical) predictions (Önkal, Goodwin, Thomson, Gönül, & Pollock, 2009).

In most situations, the greater the perceived expertise of the source of advice, the more persuasive the advice will be (Hovland & Weiss, 1951; Johnson & Izzett, 1969; Kelman & Hovland, 1953; Lirtzman & Shuv-Ami, 1986; McKnight & Kacmar, 2007; Pornpitakpan, 2004; Tormala & Clarkson, 2007). Furthermore, sources with high credibility have been found to be more persuasive than those with low credibility (e.g., Rhine & Severance, 1970), although there have been contrary findings (e.g., Dholakia, 1986 and Dholakia & Strenthal, 1977).

The suggested link between the credibility of a source of advice and the resultant change in an advisee's attitudes and judgments is also acknowledged by research on advice-taking (e.g. Bonaccio & Dalal, 2006; Sah et al., 2013; See, Morrison, Rothman, & Soll, 2011 and Yaniv, 2004). Van Swol and Sniezek (2005) investigated five factors that may affect the acceptance of advice: advisor confidence, advisor accuracy, the advisee's trust in the advisor, the advisee's prior relationship with the advisor, and the advisee's power to pay for the advisor's recommendations. Of these five factors, advisor confidence was found to have the most significant impact. An advisor's recommendations are more likely to be accepted if he/she has confidence in them. However, if feedback on advisor accuracy is also available, that cue will dominate, so that confident but inaccurate advisors will be perceived to be less credible (Sah et al., 2013).

Surprisingly little research has focused on the different forms of credibility and the potential interactions between them. One form is *presumed* credibility (Bonaccio & Dalal, 2010; Harvey & Fischer, 1997; Harvey, Harries, & Fischer, 2000; Soll & Larrick, 2009; Tseng & Fogg, 1999), which is based on stereotype**s** and assumptions about the source of the advice. For instance, we may assume that a financial advisor will understand more about stocks and shares than, say, a taxi driver. *Experienced* credibility, on the other hand, is based on direct experience of the advisor, and results from interactions with them over time (Lim & O'Connor, 1995; Soll & Mannes, 2011; Tseng & Fogg, 1999). For example, financial advisors who have proved to be highly proficient in the past should eventually attain high credibility in the minds of their clients.

Previous studies that have investigated advisor credibility have involved general judgment tasks such as quizzes on computer knowledge (e.g., Sniezek & Van Swol, 2001 and Van Swol & Sniezek, 2005), movie reviews (e.g., Van Swol, 2011), historical events/almanac items (e.g., Yaniv, 2004 and Yaniv & Kleinberger, 2000), estimating alumni salaries (e.g., Bonaccio & Dalal, 2010 and Soll & Larrick, 2009), predicting the outcomes of sports events (e.g., Soll & Mannes, 2011), and even estimating people's weights from photographs (e.g., Sah et al., 2013).

To add to this literature, we examine the specific influences of presumed and experienced credibility, both separately and jointly, on advisees – who may be either non-expert or expert – who are faced with the task of forecasting stock market prices. Two experiments were used to investigate the effects of high and low presumed and experienced credibility, separately, on the extent to which forecasting advice is influential. Our third and fourth experiments then investigated the effects of their interactions on non-experts and professionals, respectively. For example, how influential is advice when it is associated with high presumed but low experienced credibility? The influence of the advisor was measured by the extent to which people changed their initial forecasts in the light of the advice. The next sections describe the designs and results of these studies. This is followed by an overall discussion which considers the implications of the findings and provides suggestions for future research.

3. Experiment 1—experienced credibility

Some researchers have argued that experienced credibility is the most complex and reliable way of making credibility judgments (Fogg, 1999; Tseng & Fogg, 1999; Wathern & Burknell, 2002), and indeed, there is considerable evidence that the accuracy of prior stock price forecasts is a key element of provider credibility (e.g., Hirst, Koonce, & Miller, 1999 and Lev & Penman, 1990). However,

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