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Pushing away from representative advice: Advice taking, anchoring, and adjustment

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ABSTRACT

Five studies compare the effects of forming an independent judgment prior to receiving advice with the effects of receiving advice before forming one's own opinion. We call these the independent-then-revise sequence and the dependent sequence, respectively. We found that dependent participants adjusted away from advice, leading to fewer estimates close to the advice compared to independent-then-revise participants (Studies 1–5). This "push-away" effect was mediated by confidence in the advice (Study 2), with dependent participants more likely to evaluate advice unfavorably and to search for additional cues than independent-then-revise participants (Study 3). Study 4 tested accuracy under different advice sequences. Study 5 found that classic anchoring paradigms also show the push-away effect for median advice. Overall, the research shows that people adjust from representative (median) advice. The paper concludes by discussing when push-away effects occur in advice taking and anchoring studies and the value of independent distributions for observing these effects.

1. Introduction

People often have to make decisions about topics on which they are not well informed, such as retirement, health care, or new work projects. Therefore, using advice from other people is an important life skill (Heath & Heath, 2013). Yet a large literature shows that people do not take advice particularly well, often overweighting their own opinions (Harvey & Fischer, 1997; Mannes, 2009; Yaniv & Kleinberger, 2000) or ignoring the advice that they receive (Soll & Larrick, 2009). In this paper we ask whether changing the way the advice is provided changes how much people use that advice. Specifically, we manipulate *when* the advice is received, relative to exposure to the decision problem, to test whether the timing of advice has an important influence on how much people take advice and on the accuracy of their final judgments.

The degree to which people take advice has important implications for judgmental accuracy. First, egocentric bias may cause people to underweight the opinions of others who are more accurate than they are (Yaniv & Kleinberger, 2000). Second, when individual abilities are not too different from one another, averaging quantitative judgments is typically superior to relying on one person's opinion (Armstrong, 2001; Clemen, 1989; Hastie, 1986; Yaniv, 2004). This benefit occurs for quantitative estimates because errors cancel out when estimates bracket the truth (i.e., fall on both sides of the truth). As long as bracketing is sufficiently frequent, averaging is a very powerful way to reduce judgmental error (Larrick & Soll, 2006; Soll & Larrick, 2009). By underweighting or ignoring advice, as the literature shows is common, people lose out on benefitting from the knowledge of others.

Studies of advice taking typically ask participants to form their own independent opinion on the decision problem before seeing the opinion of their advisor, after which they are given a chance to revise by using the advice however they wish (see review by Bonaccio & Dalal, 2006). We call this sequence of receiving advice the *independent-then-revise* advice sequence (Fig. 1). Most advice taking studies employ this sequence and use tasks in which participants answer numerical, fact-based questions, such as dates in history or the weights of people in photographs. This allows the researcher to calculate continuous measures of both the amount of advice taking and the accuracy of initial and revised judgments. The independent-then-revise sequence has the advantage of helping judges avoid any "mental contamination" (Wilson & Brekke, 1994) from an advisor when forming their opinion. Seeing the advisor's answer first could cause errors to be correlated, decrease the chances of bracketing, and thereby decrease the potential benefit of combining opinions with an advisor.

A number of core findings in the advice taking literature have emerged from this standard independent-then-revise paradigm.

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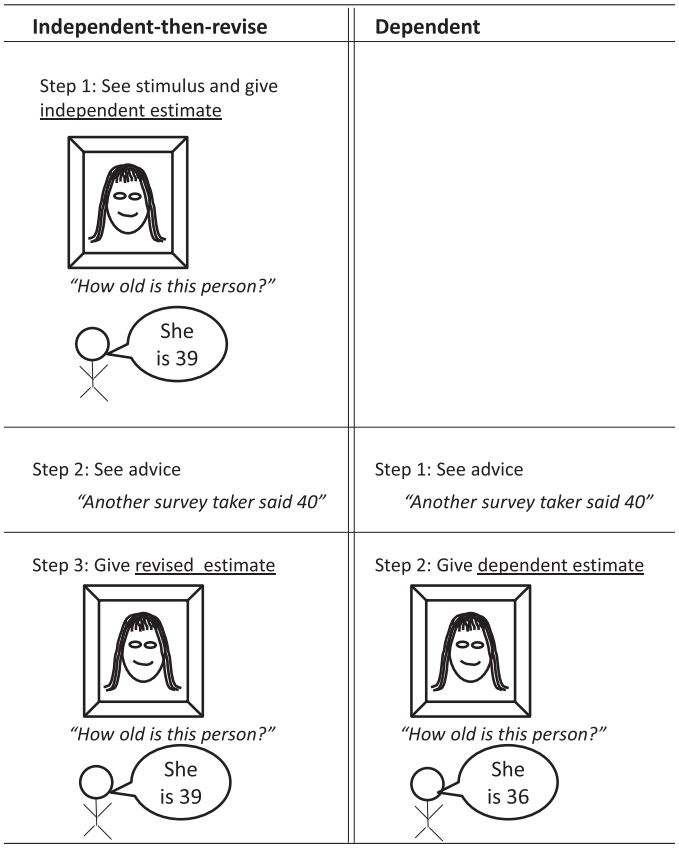

Fig. 1. Advice sequences. The stick figure represents the participant in the experiment. The face in the frame represents the stimulus – a photo of a person in the case of our experiments.

People tend to discount the opinions of others, with average weights of 70% on their own estimate and 30% on the advice (Harvey & Fischer, 1997; Yaniv & Kleinberger, 2000). Notably, this average weight arises from a multi-modal distribution of weights in which people often ignore advice entirely, occasionally average, and more rarely fully accept advice (Minson, Liberman, & Ross, 2011; Soll & Larrick, 2009; Soll & Mannes, 2011). A number of moderators of advice taking have also been identified. For example, people take more advice the more they trust the advisor (Gino & Schweitzer, 2008) or when they pay for the advice (Gino, 2008). People take less advice when they are primed with power (See, Morrison, Rothman, & Soll, 2011; Tost, Gino, & Larrick, 2012, 2013) or are induced to experience certain emotions such as anger (Gino & Schweitzer, 2008).

Although most research results have been obtained with the independent-then-revise sequence, in many common advice-taking situations people receive advice before they have an opportunity to form their own opinion on a question—advice comes first, followed by an estimate. For example, subordinates may make recommendations to their managers about spending in categories that the manager had not previously considered, such as, "We should budget $1500 to send me to a conference in Hawaii." When working on the conference budget, the manager will be forming an estimate of the appropriate allocation *after* receiving the subordinate's advice. We call this the *dependent advice sequence*, because the judgment is likely to be influenced by, and therefore dependent upon, the advice.

We are interested in two main questions about the independent-then-revise and dependent advice sequences: When do people take more advice? When are they more accurate? The natural prediction from the perspective of decades of anchoring research (Chapman & Johnson, 1999; Mussweiler & Strack, 1999; Tversky & Kahneman, 1974) would be that people take more advice in dependent advice sequences, and in fact the handful of studies that have looked at this question found such a result (Koehler & Beauregard, 2006; Sniezek & Buckley, 1995; Yaniv & Choshen-Hillel, 2012, Study 3). Although the logic behind such a prediction is compelling and the published data supports it, we will suggest that there are situations in which the opposite can happen such that answers are *more distant* from advice in dependent vs. independent-then-revise sequences.

1.1. When dependence leads to less advice taking

To understand the effects of dependence on advice taking, we consider the perspective of anchoring research (Chapman & Johnson, 1999; Mussweiler & Strack, 1999; Tversky & Kahneman, 1974), given that the advice is likely to act as an anchor for dependent participants because they see advice before they form an opinion. A critical difference between research on anchoring and on advice taking is that anchoring studies typically provide participants with anchors that are near the extremes of what people might answer independently (e.g., Jacowitz & Kahneman, 1995 used anchors from the 15th and 85th percentiles of an independent distribution). In contrast, studies of advice taking often sample advice representatively from the distribution of unaided guesses (Bonaccio & Dalal, 2006). Providing extreme anchors is helpful for detecting anchoring effects because it maximizes the probable effect size. However, in everyday advice taking situations we expect that people will rarely encounter extreme advice (because by definition, extreme advice comes from the tails of the distribution of all possible advice and is therefore less likely to occur); more often they will see advice relatively close to the center of the distribution of independent answers (but see Gino, Brooks, & Schweitzer, 2012 for an advice taking experiment using extreme advice). Central advice, in particular, can frequently match (or nearly match) what people would have said independently if they were in the independent-then-revise sequence rather than the dependent sequence. For example, in an age estimation task, if many people independently think that a target person is 63 years old, then in many cases the advice given will be age 63 and the answer that would have been estimated independently is also age 63. Precisely how often such matches occur depends on the variance and shape of the distribution of independent estimates. For instance, matches will be particularly likely when the distribution has a tall peak at the median. The anchoring literature is mute on what happens in the case of central advice (i.e., median advice), which is critical because central advice is the norm in everyday opportunities to receive advice rather than the exception. From the perspective of how well people use advice, these are important circumstances to understand.

Although studies of anchoring have not looked at what happens when advice matches what people would have said on their own, the theory of anchoring does speak to this question, at least implicitly. The most prominent and widely-accepted anchoring theory that applies in this context is anchoring-as-accessibility, because the anchor in advice taking is provided by an external source (Epley, 2004). The theory posits that the anchor either primes anchor-consistent information in memory (Mussweiler & Strack, 1999), or more generally causes people to focus first on anchor-consistent features of the target (Chapman & Johnson, 1999). Although the anchor may be rejected as the answer, the anchor-consistent information remains active, and therefore pulls judgment in the direction of the anchor. Based solely on accessibility, one might hypothesize that a central anchor would boost evidentiary support for answers near the center of the distribution, leading to a strong anchoring effect in dependent sequences.