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Advice as a form of social influence: Informational motives and the consequences for accuracy

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Abstract

In this article, we ask how well people fulfill informational motives by using the judgments of others. We build on advice-taking research from the judgment and decision making literature, which has developed a distinct paradigm to test how accurately people incorporate information from others. We use a literature review to show that people have mixed success in fulfilling informational motives—they increase their accuracy through the use of advice, but not as much as they could. We develop insights about how people perceive advisors and try to pursue advice—and where their perceptions may lead them astray. We conclude by proposing that future work further investigate the reasons people fail to use advice by building on the current advice taking paradigm used in judgment and decision making, but with a richer understanding of advice taking as a dynamic process that often entails complex decisions and normative motives.

1 | INTRODUCTION

Imagine that you are about to drive to a friend's house and are texting to let her know your arrival time. Your best guess is that it will take 30 min on your current route. Your passenger says that you can get there in 15 min on the current route. What do you tell your friend? 30 min? 15 min? Something in between? Did you become more accurate after hearing the other person's estimate? What should you have done differently to be as accurate as possible? These are the questions considered by the judgment and decision making (JDM) literature on advice taking.

In this article, we review the JDM literature on advice taking and its effects on accuracy. We briefly situate the JDM literature with respect to the earlier literature on social influence and then summarize the JDM findings on how people process advice and the consequences for decision accuracy. We next develop insights about how people perceive advisors and try to pursue advice—and where their perceptions may lead them astray. We conclude by proposing that future work continue to build on this paradigm but with a richer understanding of advice taking as a dynamic process that often entails complex decisions and a variety of motives.

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2 | SITUATING THE ADVICE TAKING LITERATURE WITHIN SOCIAL PSYCHOLOGY

A basic question underlying many decades of social psychological research is how individual responses are affected by learning the judgments and behavior of others (Asch, 1951; Sherif, 1935). The Asch paradigm became a canonical demonstration that individuals readily succumb to influence from others. In the presence of confederates giving clearly incorrect answers to a perception task, a real but naïve subject would give consistent public responses about 30% of the time. Early on, however, there was also a recognition that incorporating information from others into a publicly expressed judgment could reflect two possible motivations: to preserve social harmony or to make sense of a situation and provide an accurate answer (Deutsch & Gerard, 1955), giving rise to *normative* and *informational* social influence, respectively.

By the late 1960s, reviews of the conformity literature had concluded that a good deal was known about factors that increase or decrease normative influence, but little was known about how well people used information from others in the absence of normative pressures (Allen, 1965; Campbell, 1961; Tajfel, 1969). These critics frequently noted the limitations of the Asch paradigm for understanding the accuracy of information use—responses were public, information from others was unrepresentative and inaccurate, and there was no strong incentive to be accurate. They also argued that a group's judgment is usually more accurate than individual judgment, and, rationally, individuals would be wise to listen to a group. Other influence paradigms lacked a standard against which to judge the accuracy of individual responses (e.g., Sherif, 1935). In his *Handbook of Social Psychology* chapter in 1969, Tajfel lamented the lack of research directly examining informational influence and titled one of his sections "The Search for 'Pure' Informational Influence." In subsequent decades, normative influence remained a more central topic than informational influence in groups research. When informational influence was studied, it was used to explain specific processes in group judgment, such as group polarization (Burnstein & Vinokur, 1977) or minority influence (Nemeth, 1986), but without a focus on accuracy.

The first program of research that focused primarily on factors that affect informational influence was initiated by Sniezek and Buckley (1995). Working in the JDM tradition, they introduced an experimental paradigm they called the judge-advisor system (JAS) in which an advisee—called the "judge"—makes an initial quantitative judgment, receives the judgment of another person, and then reaches a final decision. For example, a judge might guess that the average slice of pizza has 300 calories, learn that someone else has guessed 520, and then provide a final answer of 380. This paradigm allows the researcher to quantify the amount of advice taken—in other words, the degree to which the judge has incorporated the opinion of the advisor.

Many studies that have followed in this tradition elicit private judgments and provide accuracy incentives so that researchers can be reasonably confident that participants are reporting their true beliefs. Also, a number of studies used representative advice that statistically resembles what people might encounter in the natural ecology. Additional valid cues are often provided, such as the advisor's confidence or past performance, so that participants can evaluate the advice and make an informed decision about how much to adjust. These features—private opinions and representative advice—have enabled JDM advice-taking researchers to provide answers to the open, unanswered question of whether people conform the right amount in what they think, if not in what they publicly say. Thus, the JDM literature on advice taking provides the currently best available answer to the calls for studies of pure informational influence. The paradigm allows researchers to ask how well people use advice to improve accuracy in a situation dominated by accuracy-seeking, informational motives.²

The typical JAS study has several other noteworthy features that help make informational motives dominant. First, the judge and the advisor usually do not know each other and do not interact in the task or in the future (see Minson, Liberman, & Ross, 2011, as an exception). This helps reduce normative influence, but it also reduces access to potentially valid cues about advisor expertise. Second, the advisor is often unaware that his or her judgments will be given to someone else as advice, avoiding motives that might make the advisor give less accurate advice. Third, the judge usually does not have a choice about whether to receive advice—it is

unsolicited (see Gino, 2008, as an exception)—keeping the focus on the use of the information in the advice rather than a decision about whether to solicit advice. Fourth, the topic of advice is typically limited to mundane facts such as calories or historic dates, rather than value-laden topics such as estimating the numbers of guns in the United States or numbers of abortions. Finally, in this paradigm, advice is construed more broadly than the typical lay definition: Advice is simply information from another person (or people, or even an algorithm; Önkal, Goodwin, Thomson, Gönül, & Pollock, 2009) and does not require any particular advocacy by the advice giver. These features keep the experimental task and resultant findings focused on informational motives. Next, we detail the major empirical results of advice taking studies.

3 | EMPIRICAL RESULTS ON ADVICE TAKING

A variety of findings have emerged from the JDM literature using the JAS paradigm. We briefly review the most documented findings, which include "egocentric discounting," its detrimental effect on accuracy, and moderators of egocentric discounting.

3.1 | Egocentric discounting

A robust finding from studies using the judge–advisor paradigm with quantity estimates is egocentric discounting—the tendency to favor one's own opinions over those of others (Harvey & Fischer, 1997; Yaniv & Kleinberger, 2000). The weight on advice (WOA) is typically measured as the proportional shift toward another's opinion. In the case of guessing calories in a slice of pizza, a person who revises an initial guess of 300 calories toward the advice of 520 by answering 380 has moved 36% (80/220) toward the advice. Mean WOA is typically around 20% to 40%, which falls short of the 50% needed for ego-neutral equal weighting. When advice represents the average from a group, people shift more as the group grows larger, but still egocentrically discount by putting disproportionate weight on their initial judgment (Mannes, 2009).

3.2 | Accuracy and averaging

People pay a price for discounting others—simple averaging often leads to greater accuracy (Clemen, 1989; Suroweicki, 2004). Averaging is effective because estimates often "bracket" the truth, allowing errors to cancel out (Larrick & Soll, 2006). Moreover, participants tend to mix two aggregation strategies—choosing and averaging. They alternate between ignoring advice, occasionally averaging, and more rarely fully adopting it (Minson et al., 2011; Soll & Larrick, 2009). Although this pattern of mixing averaging and ignoring advice yields a mean WOA of around 30%, it is worse for accuracy than consistently shifting 30% of the way toward advice (Soll & Larrick, 2009).

3.3 | Moderators of advice taking

3.3.1 | Accuracy, confidence, and trust

In weighting opinions, people rely on cues to an advisor's accuracy. They take more advice from advisors who are more confident (Soll & Larrick, 2009), experienced (Harvey & Fischer, 1997), accomplished (Yaniv, 2004), and trusted (Sniezek & Van Swol, 2001) and less advice when they themselves are more confident (Gino & Moore, 2007). However, confidence and trust are subjective and susceptible to distortion. Confidence is enhanced by feeling powerful (See, Morrison, Rothman, & Soll, 2011; Tost, Gino, & Larrick, 2012) and diminished by anxiety (Gino, Brooks, & Schweitzer, 2012). Trust is enhanced by feelings of gratitude and diminished by anger (Gino & Schweitzer, 2008). In each case, advice taking increases or decreases in the expected direction, even when the feelings and emotions are unrelated to the judgment task.

3.3.2 | Distance effects

Advice can be near or far, and this affects how it is used and what is potentially gained from it. For example, someone who guessed that a pizza slice contains 300 calories might learn that an advisor guessed 310 calories (a near guess) or 520 calories (a far guess). Although people often ignore far advice (Ecken & Pibernik, 2016; Schultze, Rakotoarisoa, & Schulz-Hardt, 2015; Yaniv, 2004), they do so at their own peril (Yaniv & Milyavsky, 2007). In an estimation task, a large range of opinions is more likely to bracket the truth, and thus averaging will be more effective at reducing error. In a revealing study, Ecken and Pibernik (2016) examined the revision strategies of industry experts presented with the average opinion of other experts. Although a group average tends to be more accurate than individual estimates, the expert subjects often ignored far advice from a group of experts and discounted it more heavily than moderate advice. Apparently they believed that their highly discrepant answers were more accurate than a consensus of their peers. Another recent study provides a more optimistic view—given the opportunity, people sample more additional advisors after receiving far advice, which in turn leads them to shift more toward the average advice (Hütter & Ache, 2016).

People also shift less toward advice in close agreement with their initial opinion (Ecken & Pibernik, 2016; Schultze et al., 2015) than toward moderate advice, perhaps because near advice makes little difference for improving accuracy. Near advice nevertheless has impact by engendering increased confidence (Schultze et al., 2015). Greater confidence is only justified, however, to the extent that the agreement is not caused by shared information or perspectives that lead to shared error. People are largely insensitive to this, drawing as much confidence from agreement among advisors who rely on correlated as opposed to independent information sources (Budescu & Yu, 2007).

An intriguing study by Yaniv, Choshen-Hillel, and Milyavsky (2009) illustrates both the allure and hazards of false agreement. Participants estimated calories of foods and were told that they would see estimates from three past participants who were either randomly chosen or selected for closeness to their own estimate. They were more confident when advice was selected for closeness, but more accurate when it was selected randomly. This shows that people intuitively draw confidence from validating opinions and neglect to consider the information environment in which they arise.

3.3.3 | Additional moderators

There are additional moderators of advice taking that do not flow through the accuracy motive. Feelings of power can lead people to dominate a conversation, making advice less available (Tost, Gino, & Larrick, 2013); people who feel powerful may also resist advice because it seems like a weakness to give in (See et al., 2011; Tost et al., 2012). When people have paid for advice, they are more likely to use it because they attend to sunk costs (Gino, 2008). Personality can also affect advice taking: People high in reactance—a motivational state that is aroused when individual freedom is threatened or eliminated (Brehm, 1966)—are less likely to take unsolicited advice that disagrees with their initial impressions (Fitzsimons & Lehmann, 2004).

3.4 | Explaining egocentric discounting

Although there are many moderators of advice taking, a general explanation for why people rarely shift more than halfway toward advice remains elusive. In part, people may discount advice because the reasons for their own answers are better understood or because they overestimate their own abilities (Harvey & Harries, 2004; Minson et al., 2011; Yaniv & Kleinberger, 2000). However, people continue to egocentrically discount even when their own reasons are not accessible and when they believe advisors to be as skillful as themselves (Soll & Mannes, 2011). Interestingly, 3- to 6-year-old children weight opinions from others very highly, often choosing the opinion of an ignorant individual over their own (Rakoczy, Ehrling, Harris, & Schultze, 2015). By early adulthood, however, something happens that suppresses the willingness to take advice. The nearly ineradicable persistence of egocentric discounting presents a puzzle to which we will later return.

In sum, research in the JAS paradigm has shown that people can improve accuracy by taking advice, but they rarely do so fully because of egocentric discounting. In the next section, we consider how people's *perceptions* of how to improve accuracy using advice may differ from reality.

4 | PERCEPTION AND REALITY IN USING ADVICE

From its start, work on social influence has considered how perceptions of influence compare to reality. Sherif's (1935) early experiments on social influence showed that when judging how far a point of light had moved, people thought they were not influenced by others when in fact they were (see also Nolan, Schultz, Cialdini, Goldstein, & Griskevicius, 2008). This interest in perception and reality continues to the present day with work showing that people underestimate their influence on others (Bohns & Flynn, 2013). Here, we consider how people's perceptions of *how* to improve accuracy by using advice compare with the reality of what actually increases accuracy. We detail three main determinants of accuracy—weight on advice, cognitive diversity, and relative expertise—summarized in Table 1 (for a mathematical analysis of these factors, see Soll & Larrick, 2009). In doing so, we draw on the JDM literature on advice taking as well as several complementary literatures: the social psychology literature on persuasion (Chaiken, 1980; Petty & Cacioppo, 1986), the communication literature on advice as social support (MacGeorge, Feng, & Guntzviller, 2016), the organizational behavior literature on employee voice (Morrison, 2011, 2014), and the social networks literature on knowledge sharing (Burt, 2009; Granovetter, 1973). Table 2 summarizes the key ideas in these literatures.

4.1 | Weight on advice

One of the main determinants of whether accuracy goals will be achieved from advice taking is the weight that advisees place on the advice. As discussed previously, equal-weight averaging is often the most effective strategy for reducing error (Clemen, 1989; Mannes, 2009; Soll & Larrick, 2009); instead people often ignore the advice or (more rarely) choose the advisor's estimate. Consistent with this, many people hold a misperception that averaging equals average performance, endorsing aphorisms such as "compromise leads to mediocrity" (Larrick & Soll, 2006; Mannes, Soll, & Larrick, 2014). Thus, when it comes to weight on advice, people's lay theories of how to increase their accuracy often do not optimize these benefits in reality. An open question remains as to how much of people's failure to weight advice stems from misperceptions about its benefits versus other factors, such as not having access to the advisor's reasons for their advice. We return to this topic later in the paper.

TABLE 1 Accuracy in advice taking: Reality and perception

Determinant of accuracy	Reality	Perception
Weight on advice	Averaging is an effective strategy under many conditions	Averaging is erroneously viewed as mediocrity
Cognitive diversity	It matters who provides advice—cognitive diversity is important—not just accuracy	Advisees try to seek out the "right" answer rather than specifically seeking cognitive diversity
	The order in which judgments are shared matters: Independent judgments preserve the benefits of cognitive diversity	The order of sharing judgments is erroneously viewed as unimportant, rather than crucial to maintaining independence
	Agreement among advisors can be a cue to shared error	Agreement among advisors is viewed as indication of accuracy rather than possible shared error
	Networks of possible advisors are complex	People oversimplify networks in their minds, which can lead them to miss sources of cognitive diversity
Relative expertise	Cues to advisor expertise, such as self-proclaimed ability, are imperfect	Advisees often rely on faulty cues to expertise, such as self-proclaimed ability

TABLE 2 Summary of advice literatures

Persuasion	Advice taking	Persuasive messages that contain information relevant to an attitude.	Experimental studies in which subjects are presented with a persuasive message. Studies systematically vary characteristics of the presenter, recipient, and the message.
Networks	Advice seeking and taking	Task-related information for getting work done. "Organizations are transactive knowledge systems in which the bulk of information is in individual's heads To utilize this knowledge in the solution of problems and the creation of knowledge, organizational members must know who knows what, and interact with each other in order to utilize and combine knowledge" (Cross, Borgatti, & Parker, 2001).	Workplace surveys of employees that measure the patterns of relationships between people. Psychological research examines how people cognitively represent their social network, including the accuracy, structure, and membership of the network.
Voice	Advice giving	No definition of advice. Definition of voice: the "informal and discretionary communication by an employee of ideas, suggestions, concerns, information about problems, or opinions about work-related issues to persons who might be able to take appropriate actions, with the intent to bring about improvement or change" (Morrison, 2014).	Workplace surveys of employees and their supervisors.
Communication	Advice taking, primarily also advice giving	"Messages that make recommendations about what to do, think, or feel in response to a problematic situation" (MacGeorge, Feng, & Thompson, 2008).	The "message paradigm" studies how advice messages affect recipients, typically in personal relationships, with personal problems evoking a relatively high degree of stress. Messages may be researcher-designed messages embedded in scenarios or naturalistic self-reports about advice interactions.
MQL	Advice taking	No definition of advice. Typically operationalized as a numerical estimate from another participant.	Judge-advisor system (Sniezek & Buckley, 1995): Experimental studies where an advisee —called the "judge"—has an initial opinion, receives advice, and then reaches a final decision. The advice most typically takes the form of a quantity estimate using general knowledge tasks.
	Focal actions	"advice"	Dominant paradigm

(Continues)

TABLE 2 (Continued)

	MQſ	Communication	Voice	Networks	Persuasion
Typical variables	DVs: Weight on advice, accuracy of final decision IVs: Advisor expertise, advisor confidence, advisee confidence.	DVs: Advisee's perceptions of the advice (its quality, helpfulness in coping, and intentions to implement the advice) IVs: Politeness of advice message, content of advice message.	DV: Frequency of voice, supervisor ratings of employee performance IV: Individual factors (e.g., employee personality and job attitudes); contextual factors (e.g., organizational culture and supervisor openness) Mediators: Psychological safety.	DVs: Behaviors: knowledge seeking; Outcomes: Team project ratings, individual job promotions IVs: Existence of relationship; type of relationship (e.g., friendship, advice).	DVs: Attitude change IVs: Characteristics of the presenter (such as credibility); characteristics of the recipient (such as personal relevance); characteristics of the message (such as whether it presents a one-sided or two-sided argument or a strong or weak argument).
Key theoretical constructs and findings	Egocentric discounting: People tend to favor their opinion over those of others. Averaging opinions often leads to greater accuracy than other strategies, because errors cancel out.	Advice, in addition to being a form of influence, is a form of social support—it can reduce recipients' distress and help them cope with their problems better. Giving advice entails threats to the recipient's face—their claim to positive evaluation and autonomy. Effective advice attempts to reduce face threats.	The decision to speak up is based on an assessment of whether it will be effective and safe. Automatic processes and emotions may also play a role in the decision to speak up or not.	Proximity and similarity lead to the formation of pockets in which people frequently interact and come to share the same ("redundant") knowledge. Individuals who bridge different clusters gain access to a broad pool of diverse knowledge. Trust facilitates the sharing of information, especially complex information.	The degree to which attitudes change are a function of both argument quality and other cues that may not be related to argument quality. Recipients are influenced more by argument quality when they are motivated and knowledgeable because they process it carefully; recipients are influenced by other factors when they are unmotivated or unknowledgeable.
For a review, see	Bonaccio and Dalal, 2006	MacGeorge et al., 2016	Morrison, 2011, 2014	Burt, 2009	Wood, 2000

Note. For a similar table, see MacGeorge et al. (2016).

DV = dependent variable; IV = independent variable.

4.2 | Cognitive diversity of advisors and advisees

Network sociologists refer to people who interact frequently or share the same background—and come to think alike—as being redundant with each other, almost like clones. Ideally, advice comes from individuals who bring new perspectives as a result of differences in knowledge, training, experience, or thinking styles. When people are cognitively diverse in this way, their judgments tend to err non-systematically. In its absence, people are likely to generate similar solutions to a problem, get the same questions wrong on a trivia quiz, and err in the same direction when estimating a quantity. Cognitive diversity is the key ingredient for aggregation schemes such as majority rule and averaging to outperform most individuals (Clemen, 1989, p. 2008)—a phenomenon popularly called "the wisdom of crowds" (Suroweicki, 2004).

4.2.1 | Sources of diversity: People and process

Not all diversity translates into cognitive diversity. Demographic differences such as gender and ethnicity matter for a host of reasons, such as fairness and inclusiveness. But demographic diversity may not necessarily yield new ideas and information (Woolley, Aggarwal, & Malone, 2015). An interesting, open question, however, is whether people rely on demographic diversity as a cue to cognitive diversity. Although people with different demographic backgrounds may have different insights on some tasks (e.g., different consumer market segments), for many decision problems, their demographic differences may not be task relevant. In a social network, individuals who are proximal share many information sources, and this structural redundancy can overwhelm any benefit from differences in perspective connected to demographic background.

Cognitive diversity depends not just on the people but also on the process. A key element of the process is whether or not people form judgments independently. Suppose, for example, that an advisor learns the opinions of other advisors before providing a recommendation. Several things may happen. First, their thinking may be guided by what they have learned; cognitive processes such as anchoring and confirmatory search may cause them unknowingly to produce a more similar answer than they would have otherwise (Koehler & Beauregard, 2006; Rader, Soll, & Larrick, 2015). Second, they may feel a desire to conform to what they believe to be the majority viewpoint (Wood, 2000). Third, other social motives may arise, such as providing support to others as opposed to being informative (Goldsmith & Fitch, 1997). When people form opinions independently, their thought processes and motives are less affected by informational and normative influence, which allows them to convey an opinion based mainly on their own knowledge and expertise. Statistically, this yields more divergent answers that bracket the truth and increase the benefits of averaging (Rader et al., 2015).

4.2.2 | Agreement

People do often appreciate opinions on the basis of disparate knowledge and information, at least in principle, before they actually know what those opinions are. As discussed earlier, however, they also tend to discount or ignore distant advice. There is a tension here because cognitive diversity and larger disagreement often go together: Diverse sources are more likely to generate distant advice. Thus, when people discount distant advice, they are often underusing the opinions that offer the most value. There is some evidence, however, that people are more tolerant of disagreement, and more likely to incorporate discrepant opinions, when they understand that it is in fact based on a different perspective (Goethals & Nelson, 1973; Gonzalez, 1994; Van Swol & Ludutsky, 2007).

As we described earlier, agreement between judges' estimates often makes decision makers more confident. Although agreement is a cue to accuracy, it is also a cue to shared blindspots that may arise from shared experiences or prior interaction, and people seem to neglect the possibility of shared blindspots (Budescu & Yu, 2007; Dechêne, Stahl, Hansen, & Wänke, 2010; Kahneman & Tversky, 1973). Another consequence of agreement is that it makes the advice seeker believe he is smarter, who in turn thinks the advice giver is more expert for giving such good advice (Wittenbaum, Hubbell, & Zuckerman, 1999). This process can create a loop in which the absence of cognitive diversity becomes a belief in shared expertise.

4.2.3 | Motivation to seek diverse advisors

Recent research on social networks has argued that "network activation" (Smith, Menon, & Thompson, 2012) is a critical intervening step in the pursuit of knowledge from others. Activation entails thinking of specific others from memory (Joe in accounting, my neighbor Ashish, etc.), and these processes are susceptible both to cognitive biases and to motivational influence. For example, the motivation to gain task knowledge activates a cognitive representation of a social network that has more diverse members than the one evoked when one is motivated to affiliate with others (Shea & Fitzsimons, 2016). Thus, whatever network becomes cognitively active in a decision maker's mind may not accurately reflect the actual network pattern of interactions and friendships. This matters because an accurate picture of these network features may be an important intervening variable when people try to seek new, diverse information from others.

Research on the cognitive representation of social networks suggests that people's representations of the network are overly simple in systematic ways. People are often unaware of missing links in friendship networks (Janicik & Larrick, 2005), overestimate the "groupiness" of separate units in organizations by overstating within-group connections and underestimating between-group connections (Kilduff, Crossland, Tsai, & Krackhardt, 2008), and exaggerate the degree to which a few central individuals provide advice to everyone else in the group (Kilduff et al., 2008). All of these effects suggest that people may fail to identify and exploit opportunities for tapping into truly diverse sources of information.

In sum, cognitive diversity contributes to increased accuracy, yet people often miss these benefits: They fail to appreciate the importance of seeking diverse advisors and implementing processes that maintain independence. They often favor advisors that agree with them and may not locate advisors with new perspectives due to inaccurate views of their social network.

4.3 | Levels of expertise

A third determinant of accuracy in advice taking is the level of knowledge possessed by advice givers and takers. Expertise differences can be conceived of as a socially constructed dimension, where advice givers and takers use cues such as credentials or expressed confidence to identify experts, or as an objective dimension, where an empirical record of performance is used to identify experts (Larrick & Feiler, 2015). Research on overconfidence has shown that there is often a weak relationship between cues to ability and actual ability; thus, seeking advice by relying on an advisor's self-proclaimed ability is an imperfect and potentially disappointing process (Klayman, Soll, González-Vallejo, & Barlas, 1999; Larrick, Burson, & Soll, 2007; Sah, Moore, & MacCoun, 2013).

Research on knowledge sharing in social networks shows that effective advice taking depends not just on the expertise of the advice giver but also the advice taker: Advice takers understand, modify, and retain advice better when they have sufficient knowledge in a domain—what organizational researchers call "absorptive capacity" (Cohen & Levinthal, 1990; Szulanski, Cappetta, & Jensen, 2004). In addition, more expert advice seekers can use the content of the advice itself to judge its accuracy and the ability of the advice giver.

Thus, true relative expertise can frequently diverge from perceptions of expertise because it cannot be determined easily on the basis of cues or self-proclaimed expertise. One open question is how people perceive the benefits of relative expertise as compared to those of cognitive diversity. We suspect that people will overestimate the benefits of expertise compared to those for cognitive diversity and will seek out the expert advisor over the cognitively diverse one. In sum, perceptions and reality differ with respect to the appropriate weight on advice, the value of cognitive diversity, and the determination of expertise, all of which contribute to missed opportunities to improve accuracy through advice taking.

5 | ADVICE TO ADVICE RESEARCHERS

Existing research on advice has successfully documented the degree to which people fulfill accuracy goals and how their perceptions of how to achieve accuracy may come up short. The majority of these findings, however, come from a particular paradigm, which, as described earlier, uses a relatively impoverished task in order to keep the focus on the

use of information. It is time to expand this paradigm to generate findings that are increasingly representative and generalizable. We propose three directions for future research: including complex decisions and rich advice, capturing the dynamic nature of advice, and bringing in other motives. Many of these expansions require awareness of constructs core to other literatures. Importantly, expanding the paradigm in these ways will also help address the questions raised earlier about why people's perceptions (and behaviors) about achieving accuracy often differ from reality, which we highlight throughout this section and summarize at the end for the specific case of explaining egocentric discounting.

5.1 | Include complex decisions and rich advice

To date, advice-taking research has largely focused on simple judgments and omitted the sharing of explanations in that process (for exceptions, see Minson et al., 2011; Van Swol, 2011). In contrast, studies of social influence allowed participants to interact extensively (e.g., Milgram, 1963), studies of persuasion systematically varied details of the message (Petty & Wegener, 1997; Wood, 2000), and studies of voice, communications, and social networks have all allowed richer, more natural communication.

In many everyday situations, decisions might be informed by advice on a single quantitative estimate, such as the expected completion time for a task. In other cases, it might be possible to boil a large amount of information down to a single quantity, such as when a research funding request is rated on multiple attributes that are combined into an overall value. Other decision problems are not easily summarized in a single number or recommendation: Where should I vacation this summer and how should I find a place to stay? How can a local water shortage be handled best? These decisions often involve multiple objectives and attributes, multiple alternatives, different possible future states of the world, varying benefits and costs, an understanding of the causal forces that shape outcomes, and different possible processes for deciding (Larrick, 2009). For complex decisions, an advice taker may seek out and incorporate advisor-provided information about these components separately and then decide alone on the basis of how she personally prioritizes the objectives.

We further speculate that more complex decisions may prompt people to seek advice from *less* diverse social sources. Existing social network research has shown that complex information is difficult to transmit because it takes time and mutual understanding to share (Levin & Cross, 2004; Szulanski et al., 2004). Knowledge sharing is easier in close relationships where people tend to invest more effort in understanding one another (Borgatti & Cross, 2003; Szulanski, 1996). But the benefit of a close relationship is accompanied by a liability: People tend to affiliate with similar others who hold similar perspectives. Therefore, a challenge for future research is to determine whether decision complexity prompts a greater search for cognitive diversity and whether that search actually results in successful use of diverse perspectives.

5.2 | Capture the dynamic nature of advice

The existing JDM work on advice has largely focused on the advisee and his or her decisions at a single point in time. Advice processes, however, often unfold over time, and advice-taking behaviors at one time can affect subsequent advice giving and advice seeking—both of which are topics that have received less attention in the literature thus far but have potential for important insights (e.g., Brooks, Gino, & Schweitzer, 2015). For example, Rader (2015) found that advisors' impressions of how much their advice was used in the *current* interaction determined their willingness to give advice again for a *future* interaction. Thus, advice processes are dynamic—the parties' perceptions, knowledge, and skill are all likely to evolve as a function of feedback on usage and accuracy.

5.2.1 | Perceptions

Advice takers often ponder "Is this advisor knowledgeable? Trustworthy?" In one of the first (and only) dynamic studies of advice taking, Yaniv and Kleinberger (2000) investigated how advisors' reputations change over time. They

found an asymmetry—a good reputation was more easily lost than gained—and suggested this occurs because people require more evidence to confirm that someone is trustworthy than to confirm they are untrustworthy. Expanding the paradigm to consider the dynamic nature of advice could help address the elusive mechanism for egocentric discounting mentioned earlier. Egocentric discounting may not be as strong after people have been in longer everyday relationships—which could be due to trust or to an increased pressure to comply with the advice to preserve the relationship (Schwartz, Luce, & Ariely, 2011).

With more complexity, there may also be more ambiguity in how advice givers and takers evaluate each other over time. Feedback on relative accuracy may be difficult to obtain if decision outcomes are delayed or ambiguous, and perceptions may evolve less on the basis of what is shared and more on feelings about the interaction itself (Bies & Moag, 1986; Colquitt, 2001). A lack of accuracy feedback, therefore, enables erroneous better-than-average beliefs (Alicke, 1985; Brown, 1986; Krueger, 1998) to persist, which are a contributing (but not necessary; see Soll & Mannes, 2011) factor toward egocentric discounting.

5.2.2 | Knowledge and skill

Over time, advisors and advisees will evolve in their knowledge and skill—and not necessarily for the better. Interaction leads to the spread of knowledge, which can improve individual accuracy on both current and future judgments (Mellers et al., 2014). However, interaction also propagates shared perspective and cue usage (Maciejovsky, Sutter, Budescu, & Bernau, 2013; Schultze, Mojzisch, & Schulz-Hardt, 2012). Through interaction, *individuals* become more knowledgeable, but they also come to share the same errors—a collective liability (Larrick, Mannes, & Soll, 2012). This process helps the advisee but makes the advisor less useful going forward. Second, interacting over time could yield an expertise about interaction itself. Bunderson and Sutcliffe (2002) have shown that the presence of people with more diverse work experiences on a team helps teams function better—presumably because they have more experience at understanding and communicating complex information across functional and disciplinary boundaries. Building on this, perhaps experience with interactions helps people develop advice-giving skills, such as improved perspective-taking.

5.3 | Bring in other motives

A strength of the JDM literature on advice taking has been its focus on informational motives. It is also a limitation. Motives for seeking and using advice clearly extend beyond the solely informational. The time is ripe to reconnect with the social influence literature and reintroduce normative motives into this paradigm. These motives are likely to be especially critical in the more complex, dynamic situations we have advocated studying.

5.3.1 | Building and maintaining the relationship

People may seek, take, or give advice to build or maintain relationships and the rewards or punishments that they can provide (Deutsch & Gerard, 1955; Wood, 2000). Building a relationship may be an end in itself, or it may be instrumental for the benefits derived from the relationship. People may take advice to avoid damage to the relationship from not doing so (Goldsmith & Fitch, 1997) or to garner buy-in such that others will help implement the decision (Vroom & Yetton, 1973). Giving advice can also serve relationship motives. It can be a way to show support for others (Burris, 2012; Goldsmith & Fitch, 1997), to extract value from others when there are conflicts of interest (Cain, Loewenstein, & Moore, 2005, 2011; Sah, Loewenstein, & Cain, 2013), or to gain power or control (Tost et al., 2013). The relationship-maintenance motive may also change the advice content—when advising someone who faces a possible loss, people advise a more risk-averse action than they would pursue themselves (Dana & Cain, 2015).

5.3.2 | Maintaining the self-concept

Advice givers and takers are also motivated to maintain a favorable evaluation of the self. Deutsch and Gerard's (1955) original description of normative influence included the desire to conform to the expectations not just of others but

also to oneself. Taking advice can threaten the self-concept by undermining perceived autonomy and evoking concerns about self-presentation (Brooks et al., 2015; Brown & Levinson, 1987; Tost et al., 2012). This need to maintain the self-concept may be one of the main reasons people dislike unsolicited advice (Goldsmith, 2004) and egocentrically discount advice. Advice giving can also accomplish ego-maintenance goals: It can allow advisors to show their expertise (Brooks et al., 2015) or to act consistently with their identity (e.g., an environmentally conscious person giving advice on how to recycle; Ashford & Barton, 2007; Morrison, 2011).

An ego-preservation motive may play out differently in complex and dynamic situations. For instance, when there are multiple tasks, people may construct an identity around some task and cede to the expertise of others on the remaining tasks. The relationship might then evolve into the mutual exchange of advice on specialized topics that fosters a feeling of optimal distinctiveness (Brewer, 1991).

5.4 | Egocentric discounting revisited

We believe that expanding the paradigm can help researchers answer the key enigmatic question raised in the advice taking literature: Why do people rarely shift more than halfway toward advice and so often stand firm with their initial belief? The preceding sections proposed many possibilities to explore, such as a motivation to maintain the self-concept, lack of trust among strangers, and missing feedback about relative expertise. Having explored this issue in a number of ways, we have come to believe that there is no single answer. The pattern of egocentric discounting is overdetermined—many different things can cause people to reject advice, and having just one of those causes present is sufficient for rejection to occur.

In recent work with Thomas Schultze, we have preliminary evidence that two broad categories of explanation may be particularly important: a concern for accuracy and a desire for autonomy. We asked participants who had given low weight to advice to rate a variety of possible reasons why they did so. The majority of participants rated items related to their own autonomy as high or higher than those related to accuracy. Furthermore, although some reasons for wanting autonomy served to defend one's self-concept—such as "I wanted to give my own answer without assistance"—other reasons addressed commonly held norms that people should do their own work, as in "I should take responsibility for my own answer." Multiple motives appear to underlie the high desire for autonomy, and just one of those motives alone may be enough to make the advisee ignore advice.

6 | CONCLUSION

We began by asking whether getting advice helps people fulfill their informational motivation to understand the world more accurately. The answer is yes—but not as much as it could. In part, this is due to a mismatch between people's perceptions about how to achieve this informational goal and the reality of how combining opinions can improve judgment. Also, other motives can intervene and lead people to prioritize other objectives, such as maintaining relationships or a positive self-concept. As advice researchers address more complex problems and more dynamic interactions, inclusion of these motives is particularly important. It is our hope that by expanding the paradigm in this way, we can gain a better understanding of why people fail to effectively seek and use advice from others and that these findings can be leveraged to help people get the most from advice.

ENDNOTES

- ¹ A study by Jenness (1932) used a design meeting most of the criteria for studying pure informational influence; this study, which predates the advice taking literature by 50 years, was not cited by Tajfel (1969).
- We note that our focus on accuracy for objective tasks (such as estimating calories) is not meant to imply that these are the only kinds of tasks that matter. Research on advice for matters of taste (Müller-Trede, Choshen-Hillel, Barneron, & Yaniv, 2017; Van Swol, 2011; Yaniv, Choshen-Hillel, & Milyavsky, 2011)—which falls outside the scope of this review—is a productive area that has found, for example, that the more expert a judge is in a particular domain, the more they rely on similar others rather than majority opinion (Yaniv et al., 2011).

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