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Dell'Era, Michele

EBS Paris

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Talking to Influence and the Consulting Paradox

Michele Dell'Era[⋆]

EBS Paris

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Abstract

This paper studies expert advice when an influence-hungry expert derives an intrinsic benefit from influencing a client's decision. A consulting paradox arises: the more the client needs advice, the less accurate is expert advice. The reason is that the expert's benefit from influence engenders an incentive to misreport information which is positively related to the client's need of advice. This paradox advances the debate on consulting beyond its focus on commissions and provides a new explanation to experts' misreporting of information. Finally, the consulting paradox sheds light on the challenges posed by influence-hungry experts to client protection authorities and the consulting industry.

Keywords: Expert Advice; Influence-Hungry Experts; Consulting Paradox.

JEL: D82; D83; D91; M21.

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1 Introduction

In consulting experts guide clients' decisions through advice. When agency conflicts or private benefits are absent, expert advice enables clients to make informed decisions. For this reason, expert advice is ubiquitous in policy-making, business management and finance.

Yet experimental evidence suggests that experts may be *influence-hungry*: they may derive an intrinsic benefit from influencing clients' decisions. Schaerer et al. (2018) find that advice giving enhances individuals' sense of power because of influence over others' decisions. This intrinsic benefit from influence is proportional to actual influence over others' decisions. Furthermore, individuals who exhibit a stronger desire to influence others' decisions are more inclined to give advice. Experts may hence derive an intrinsic benefit from influencing clients' decisions when they advise clients.

This paper studies expert advice when experts are influence-hungry. In my model an expert knows the state of the world and advises a client who then chooses an action. The expert is influence-hungry: he benefits from inducing a client's action which deviates from the action that the client would take without advice. Moreover, the expert cares that the client takes a suitable action, because of liability or reputation concerns.

The main result is the emergence of a consulting paradox. The more the client needs advice, the less accurate is expert advice. Since the expert benefits from influencing the client's decision, if the expert correctly reports the state, the action that he would expect the client to take is too moderate from his perspective.[1] The expert has hence an incentive to exaggerate the state in that when the state differs from the client's action without advice, the expert wants to convince the client that the state differs even more. The

[1] The action is too moderate in the sense that it is too similar to the client's action without advice.

expert's incentive to exaggerate induces less accurate advice. Furthermore, the expert's incentive to exaggerate and the client's need of advice strengthen with the difference between the state and the client's action without advice. Thus, the higher is the client's need of advice, the less accurate is expert advice.

This finding advances the debate on consulting beyond its focus on expert commissions. Commission gains bias expert advice (Jackson 2005, Inderst and Ottaviani 2009, 2012, and Inderst 2015). However, many experts such as policymakers' advisers and in-house analysts are not remunerated through commissions. Besides, experts may derive an intrinsic benefit from influence even in presence of commissions. The consulting paradox provides a behavioral explanation to experts' misreporting of information that abstracts from commissions: experts are influence-hungry.

The consulting paradox further demonstrates that influence-hungry experts pose a challenge to client protection authorities and the consulting industry in general. Indeed, influence-hungry experts are especially harmful to clients since the stronger is the clients' need of advice, the less accurate is expert advice. Moreover, the experts' intrinsic benefit from influence is not directly observable by regulators. The design of regulations that mitigate its impact on expert advice could hence be complicated, though possible in principle.

In line with the cheap talk literature initiated by Crawford and Sobel (1982), expert advice is the least accurate when the expert's taste to influence becomes extreme. Specifically, the expert only reports whether the state is to the "left" or to the "right" of the client's action without advice since for any state the expert wants to exert maximal influence over the client's decision. In this limit case the consulting paradox ceases to exist. Expert advice is the least accurate for any state and is hence independent from the client's need of advice.

Besides being important for understanding expert advice, this paper complements a number of other studies on preferences for power. McClelland (1975) argues that power is a basic human need motivating individuals' actions. Experimental research detects preferences for power in decision making and advice. Bartling, Fehr and Herz (2014) find that for many individuals, decision making carries an intrinsic value beyond its instrumental benefit for achieving certain outcomes. As a result, individuals prefer to make decisions rather than to delegate decision making even when delegation is more profitable (Fehr, Herz and Wilkening, 2013). Similarly, Owens, Grossman and Fackler (2014) show that individuals prefer to retain control over decisions. Schaerer et al. (2018) find that advice giving engenders an intrinsic benefit from influence over others' decisions. Building on these findings, current theoretical studies investigate the implications of preferences for power. Dessein and Holden (2019) analyze hierarchies in organizations where power-hungry managers derive an intrinsic benefit from making decisions. Instead, I aim at shedding light on expert advice when influence-hungry experts derive an intrinsic benefit from influencing clients' decisions.

The rest of the paper is organized as follows. Section 2 outlines the model. Section 3 characterizes equilibria. Section 4 illustrates the consulting paradox. Section 5 studies expert advice with extreme taste to influence. Section 6 concludes. All proofs are in the Appendix.

2 Model

To model expert advice, we consider a framework of strategic communication between an expert (E henceforth) and a client (C henceforth).

2.1 Information

The expert privately observes the realization of a state $x \in [-1/2, 1/2]$. It is common knowledge that x is uniformly distributed on $[-1/2, 1/2]$.

2.2 Preferences

The client chooses action $y \in [-1/2, 1/2]$ to maximize the expectation of her utility

$$U_C(y, x) = -(y - x)^2. \tag{1}$$

We see from (1) that the client wants her action to match the state. The $-(y - x)^2$ term captures the client's loss from not matching the state.[2] Without advice, the client chooses $\hat{y} = E(x) = 0$.

The expert advises the client on the state. Expert's utility is

$$U_E\left(y(m), x; \kappa\right) = -(y(m) - x)^2 + \kappa \left(y(m) - \hat{y}\right)^2. \tag{2}$$

The expert has two objectives. On the one hand, the expert wants the client to take a suitable action. An unsuitable action may cause a reputation loss or a punishment by a regulatory authority. On the other hand, the expert is influence-hungry. He intrinsically benefits from inducing a client's action which deviates from the client's action without advice. This benefit from influence increases the more the client's action differs from the

[2] The quadratic utility functions and the uniform distribution of x are assumptions commonly used in the literature for the sake of tractability.

client's action without advice.[3] The $-(y(m)-x)^2$ term captures the expert's concern for suitability, $\kappa \in (0,1)$ is the expert's taste to influence, and $\kappa(y(m)-\hat{y})^2$ represents the expert's benefit from influence. The expert chooses message $m \in [-1/2, 1/2]$ to maximize his utility.

2.3 Timing

Figure 1 summarizes the model. First, the expert privately observes the state. Second, the expert advises the client. Third, the client updates beliefs. Finally, the client chooses the action.

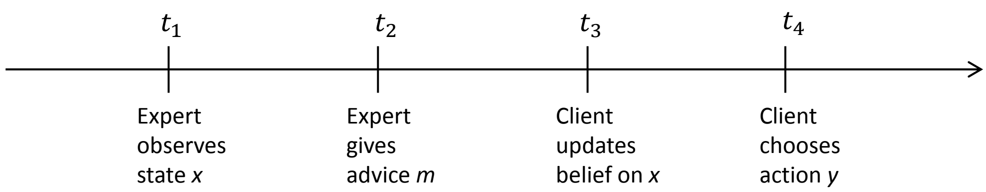

Figure 1: Timeline

All aspects of the model except the state are common knowledge. Since we aim at studying advice of an influence-hungry expert, our framework of strategic communication is intentionally standard. The key novelty is the modeling of the expert's intrinsic benefit from influencing the client's decision. To solve the model we look for perfect Bayesian equilibria.

[3]This feature captures the experimental finding of Schaerer et al. (2018) that individuals' intrinsic benefit from influence is proportional to actual influence over others' actions.

2.4 Client's Decision

To investigate incentives at work in expert advice and then characterize equilibria, it is useful to first consider the client's decision. The client chooses action y solving

$$\begin{aligned} \max_y E\left(U_C|m\right) &= E\left[-(y-x)^2|m\right] \\ &= -\left[y - E(x|m)\right]^2 - Var(x|m) \end{aligned} \tag{3}$$

where $E(x|m)$ and $Var(x|m)$ are the expectation and the variance of the state conditional on expert advice. The client's optimal action is

$$y^*(m) = E(x|m). \tag{4}$$

2.5 Incentives to Misreport Information

We can now study expert's incentives to report state x to the client. For this purpose, we compare expert's and client's desired actions.

The expert's desired action maximizing (2) is

$$y_E = \frac{x}{1-\kappa}. \tag{5}$$

If the client knew state x, (4) implies that her desired action would be

$$y_C = x. \tag{6}$$

We see from (5) and (6) that $y_E < y_C$ when $x < 0$, $y_E = y_C$ when $x = 0$, and $y_E > y_C$ when $x > 0$. Since the expert benefits from influencing the client's decision, if the expert correctly reports the state, the action that he would expect the client to take is too moderate from his perspective. The expert has hence an incentive to exaggerate the state: when the state differs from the client's action without advice, the expert wants to convince the client that the state differs even more. For this reason, the expert exaggerates the state by reporting $m < x$ if $x < 0$ and $m > x$ if $x > 0$. We can measure the expert's incentive to exaggerate as the absolute difference between the expert's and the client's desired action, that is,

$$|y_E - y_C| = \frac{\kappa}{1-\kappa} |x| . \tag{7}$$

We see from (7) that the expert's incentive to exaggerate is symmetric around the client's action without advice. Moreover, the expert's incentive to exaggerate strengthens the more the state deviates from the client's action without advice. Finally, the expert's incentive to exaggerate increases with the expert's taste to influence.

3 Equilibrium

The model has a multiplicity of perfect Bayesian equilibria. Each equilibrium partitions $[-1/2, 1/2]$ into intervals. The expert communicates in which interval state x is in. The expert's incentive to exaggerate determines the size of intervals, that is, how accurate is expert advice.

Formally, an equilibrium is defined by (i) the expert's advice strategy, (ii) the client's strategy after advice, (iii) the client's belief on the state after advice. The expert's advice strategy defines probability $p(m|x)$ of giving advice m if the expert observes x. The client's strategy after expert advice m is $y^*(m)$. Client's belief on the state after expert advice $\mu(x|m)$ is the probability of x given advice m.

Perfect Bayesian equilibria require that (a) the expert's advice strategy is optimal for the expert given client's strategy, (b) the client's strategy is optimal given the client's belief on the state after advice, (c) the client's belief on the state after advice is derived from the expert's advice strategy using Bayes's rule whenever possible.

Since perfect Baysian equilibria partition the state space into intervals, we denote $(a_0, a_1, .., a_{i-1}, a_i, a_{i+1}, .., a_N)$ the partition points of $[-1/2, 1/2]$ into N intervals with $a_0 = -1/2$, $a_N = 1/2$ and $a_i < a_{i+1}$ for $i \in \{0, 1, 2, .., N-1\}$.

Our first result characterizes equilibria.

Proposition 1 (Equilibria) *For every positive integer N, there exists at least one equilibrium $(p(m|x), y^*(m), \mu(x|m))$, where*

(i) $p(m|x)$ is uniform, supported on $[a_{i-1}, a_i]$ if $x \in (a_{i-1}, a_i)$;

(ii) $\mu(x|m)$ is uniform, supported on $[a_{i-1}, a_i]$ if $m \in (a_{i-1}, a_i)$;

(iii) $a_{i+1} - a_i = a_i - a_{i-1} + \frac{4\kappa}{1-\kappa} a_i$ for $i \in \{1, 2, .., N-1\}$ with $a_0 = -1/2$ and $a_N = 1/2$;

(iv) $y^*(m) = \frac{a_{i-1}+a_i}{2}$ for all $m \in (a_{i-1}, a_i)$.

Moreover,

(v) In each equilibrium intervals are symmetric around zero;

(vi) The number of intervals in an equilibrium can be infinite.

All other equilibria are economically equivalent.

Figure 2 illustrates equilibria. In each equilibrium, the expert communicates in which interval is the state. The second-order difference equation in (iii) defines the size of intervals. The size of an interval $(a_{i+1} - a_i)$ is the size of the preceding interval $(a_i - a_{i-1})$ plus $\frac{4\kappa}{1-\kappa} a_i$. The expert's incentive to exaggerate the state determines how information is distorted. Specifically, the expert's incentive to exaggerate induces less accurate advice (larger intervals). Since the expert's incentive to exaggerate increases the more the state differs from the client's action without advice and in the expert's taste to influence, so does the size of intervals. Thus, expert advice becomes less accurate, the larger is the difference between the state and the client's action without advice as well as the stronger is the expert's taste to influence.

Intervals are symmetric around zero because the expert's incentive to exaggerate is symmetric around the client's action without advice. The equilibrium number of intervals can be infinite since the expert has an incentive to exaggerate for any state except zero.

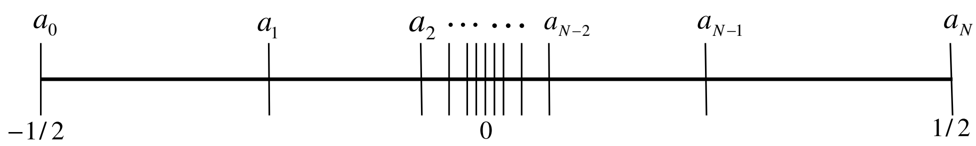

Figure 2: Equilibria

4 Consulting Paradox

In this section we investigate the relationship between the client's need of advice and accuracy of expert advice. We measure the client's need of advice as the difference in client's utility between her action when she is perfectly informed $y_C = x$ and her action without advice $\hat{y} = 0$. For any state x, the client's need of advice is

$$A(x) \equiv U_C(y_C, x) - U_C(\hat{y}, x) = x^2. \tag{8}$$

We see from (8) that the more the state deviates from the client's action without advice, the more the client needs advice. The next result uncovers the relationship between the client's need of advice and accuracy of expert advice.

Proposition 2 (Consulting Paradox) *The more the client needs advice, the less accurate is expert advice.*

Proposition 2 shows that a consulting paradox emerges when the expert is influence-hungry. The stronger is the client's need of advice, the less accurate is expert advice. The intuition is as follows. Both the client's need of advice and the expert's incentive to exaggerate increase with the difference between the state and the client's action without advice.[4] Furthermore, the expert's incentive to exaggerate induces less accurate expert advice. Thus, the more the state differs from the client's action without advice, the larger is the client's need of advice and the less accurate is expert advice.

This finding advances the debate on consulting beyond its focus on expert commissions (Jackson 2005, Inderst and Ottaviani 2009, 2012, and Inderst 2015). In particular, the consulting paradox provides a new explanation to the experts' misreporting of information: experts are influence-hungry.

The consulting paradox further demonstrates that influence-hungry experts pose a challenge to client protection authorities and the consulting industry. This is the case because the experts' intrinsic benefit from influence distorts experts' incentives to report information in an especially damaging manner for clients. Indeed, the stronger is the clients' need of advice, the less accurate is expert advice.

Moreover, the consulting paradox may prove difficult to address from a regulatory perspective. The paradox stems from the experts' intrinsic benefit from influence. Unlike commissions, the experts' intrinsic benefit from influence is not directly observable by regulatory authorities. Designing regulations that mitigate its impact on expert advice could hence be harder than for commissions, though theoretically possible.

[4]The expert's incentive to exaggerate and the client's need of advice are positively related. Indeed, using (7), (8) and the fact that $\sqrt{x^2} = |x|$, we can express the expert's incentive to exaggerate as $|y_E - y_C| = \frac{\kappa}{1-\kappa}\sqrt{A(x)}$. Alternatively, we can express the client's need of advice as $A(x) = \left(\frac{1-\kappa}{\kappa}\,|y_E - y_C|\right)^2$.

5 Extreme Taste to Influence

We conclude our analysis by studying expert advice when the expert's taste to influence is extreme ($\kappa \to 1$). The next result shows that expert's extreme taste to influence induces binary advice.

Proposition 3 (Extreme Taste to Influence) *When the expert's taste to influence becomes extreme, expert advice is binary.*

When the expert's taste to influence becomes extreme, the expert reports any state in the least accurate manner to exert maximal influence over the client's decision. Thus, the expert only reports whether the state is in $[-1/2, 0)$ or in $[0, 1/2]$. Expert advice is hence binary.

This result is in line with the cheap talk literature initiated by Crawford and Sobel (1982). In particular, the emergence of binary advice when the expert's taste to influence becomes extreme is reminiscent of Kawamura (2015). In Kawamura's model binary communication is the only way to transmit private information for a sender who suffers from severe overconfidence or underconfidence about his ability to correctly observe the state.

The consulting paradox ceases to exist when the expert's taste to influence is extreme. In this limit case expert advice is the least accurate for any state and is hence independent from the client's need of advice.

6 Conclusion

This paper analyzes expert advice when an expert is influence-hungry. The main finding is the emergence of a consulting paradox. The more the client needs advice, the less accurate is expert advice. This result advances the debate on consulting beyond its focus on commissions. In particular, the consulting paradox provides a new explanation to experts' misreporting of information: experts derive an intrinsic benefit from influencing clients' decisions.

The consulting paradox further shows that influence-hungry experts pose a challenge to client protection authorities and the consulting industry. Indeed, influence-hungry experts are especially harmful to clients because the stronger is the clients' need of advice, the less accurate is expert advice. Moreover, the experts' intrinsic benefit from influence is not directly observable by regulators. The design of regulations that mitigate its impact on expert advice could hence be complicated, though possible in principle.

Besides being highly relevant for the consulting industry and regulators, the findings of this paper more generally inform the debate on the role of preferences for power in decision making and advice. To my knowledge, my analysis is the first to study the impact of experts' intrinsic benefit from influence on expert advice. This novel perspective on expert advice opens new avenues for research on consulting and preferences for power.

Appendix

Proof of Proposition 1: To prove existence of perfect Bayesian equilibria, let x_A be the state such that the expert's and the client's desired actions coincide, that is, $y_E(x_A) = y_C(x_A)$. From (5) and (6) we have $x_A = 0$. (5) and (6) also imply that the expert's desired action for any state $x \neq 0$ is larger than that of the client, that is, $y_E(x) > y_C(x)$ for $x > 0$ and $y_E(x) < y_C(x)$ for $x < 0$. Furthermore, (5) and (6) imply that the expert's preference is continuous in y and the client's desired decision is continuous in x. We can therefore use Theorem 4 of Gordon (2010) to determine that there exists an equilibrium with an infinite number of intervals (hence (vi) is true). Existence then follows from Theorem 2 of Gordon (2010) which shows that if there is an infinite equilibrium, then there is an equilibrium with N intervals for every positive integer N.

To characterize perfect Bayesian equilibria, let $\underline{a}$ and $\bar{a}$ be two points in $[-1/2, 1/2]$ with $\underline{a} < \bar{a}$. Suppose the expert communicates $x \in (\underline{a}, \bar{a})$. Since x is uniformly distributed, the client's beliefs become

$$E\left[x|x \in (\underline{a}, \bar{a})\right] = \frac{\underline{a} + \bar{a}}{2}. \tag{A.1}$$

Then, from (4) the client's action after advice is

$$y^*\left(\underline{a}, \bar{a}\right) = \frac{\underline{a} + \bar{a}}{2}. \tag{A.2}$$

For equilibria to be truthful, the expert observing a state in (a_{i-1}, a_i) must prefer to communicate such interval rather than the interval (a_i, a_{i+1}). This is the case when an expert observing $x = a_i$ is indifferent between reporting the two intervals, that is, $U_E(y^*(a_{i-1}, a_i), a_i, \kappa) = U_E(y^*(a_i, a_{i+1}), a_i, \kappa)$, or, using (2) and (A.2)

$$-\left(\frac{a_{i-1} + a_i}{2} - a_i\right)^2 + \kappa\left(\frac{a_{i-1} + a_i}{2}\right)^2 = -\left(\frac{a_i + a_{i+1}}{2} - a_i\right)^2 + \kappa\left(\frac{a_i + a_{i+1}}{2}\right)^2$$

$$\Leftrightarrow a_{i+1} - \frac{2(1+\kappa)}{1-\kappa}a_i + a_{i-1} = 0. \tag{A.3}$$

This second-order difference equation defines the unique equilibrium partition for given κ and N where

$$a_0 = -1/2; \quad a_N = 1/2 \tag{A.4}$$

and $a_i < a_{i+1}$ for all $i \in \{0, 1, 2, .., N-1\}$. Subtracting a_i from both sides of (A.3) we can characterize equilibria as in (iii). These results also prove (i), (ii), and (iv).

Using (A.3) and boundary conditions (A.4), the solution of the second-order difference equation is

$$a_i = \frac{1}{2\left(z_1^N - z_2^N\right)}\left[\left(1+z_2^N\right)z_1^i - \left(1+z_1^N\right)z_2^i\right] \quad \text{for all } i \in \{0,1,2,..,N\} \tag{A.5}$$

where the distinct roots of the second-order difference equation are

$$z_1 = \frac{1+\kappa+2\sqrt{\kappa}}{1-\kappa} \tag{A.6}$$

$$z_2 = \frac{1+\kappa-2\sqrt{\kappa}}{1-\kappa} \tag{A.7}$$

and satisfy $z_1 z_2 = 1$ with $z_1 > 1$.

(v) It is readily seen from (A.5) that for any integer $0 \leq K \leq N$, $a_K = -a_{N-K}$, that is, intervals are symmetrically distributed around zero. □

Proof of Proposition 2: Since $A(x) = x^2$ and $x \in [-1/2, 1/2]$, the client's need of advice is zero when $x = 0$ and is strictly increasing as x moves away from zero. The result then follows from Proposition 1 (iii) which shows that accuracy of expert advice is monotonically decreasing (and locally strictly decreasing at partition points $i \in \{1,2,..,N-1\}$) as x moves away from zero. □

Proof of Proposition 3: We want to show that the most informative equilibrium with $N \to \infty$ converges to the binary partition when $\kappa \to 1$. From (A.5) we have

$$a_i = \frac{1+z_2^N}{2\left(z_1^N - z_2^N\right)}z_1^i - \frac{1+z_1^N}{2\left(z_1^N - z_2^N\right)}z_2^i \quad \text{for all } i \in \{0,1,2,..,N\} \tag{A.8}$$

and equivalently with $a'_0 = 1/2$ and $a'_N = -1/2$

$$a'_i = -\frac{1+z_2^N}{2\left(z_1^N - z_2^N\right)}z_1^i + \frac{1+z_1^N}{2\left(z_1^N - z_2^N\right)}z_2^i \quad \text{for all } i \in \{0,1,2,..,N\} \tag{A.9}$$

where z_1 and z_2 are given by (A.6) and (A.7), respectively. Solving (A.8) and (A.9) for $N \to \infty$ we obtain two sequences

$$\begin{cases} a_i = -z_2^i/2 & \text{for } a_i \in [-1/2, 0) \\ a'_i = z_2^i/2 & \text{for } a'_i \in (0, 1/2] \text{ such that } a'_0 = 1/2 \end{cases}$$

Since $z_2 \to 0$ when $\kappa \to 1$, both sequences converge to 0. The most informative equilibrium therefore converges to the binary equilibrium. Thus, the binary equilibrium is the only informative equilibrium. □

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