Decisional autonomy undermines advisees' judgments of experts in medicine and in life

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Over the past several decades, the United States medical system has increasingly prioritized patient autonomy. Physicians routinely encourage patients to come to their own decisions about their medical care rather than providing patients with clearer yet more paternalistic advice. Although political theorists, bioethicists, and philosophers generally see this as a positive trend, the present research examines the important question of how patients and advisees in general react to full decisional autonomy when making difficult decisions under uncertainty. Across six experiments (N = 3,867), we find that advisers who give advisees decisional autonomy rather than offering paternalistic advice are judged to be less competent and less helpful. As a result, advisees are less likely to return to and recommend these advisers and pay them lower wages. Importantly, we also demonstrate that advisers do not anticipate these effects. We document these results both inside and outside the medical domain, suggesting that the preference for paternalism is not unique to medicine but rather is a feature of situations in which there are adviser–advisee asymmetries in expertise. We find that the preference for paternalism holds when advice is solicited or unsolicited, when both paternalism and autonomy are accompanied by expert guidance, and it persists both before and after the outcomes of paternalistic advice are realized. Lastly, we see that the preference for paternalism only occurs when decision makers perceive their decision to be difficult. These results challenge the benefits of recently adopted practices in medical decision making that prioritize full decisional autonomy.

autonomy | paternalism | ethics | medical decision making

Imagine that you were recently diagnosed with a serious illness, and you face a very difficult medical decision. You must choose between two medical treatments: Treatment A and Treatment B. You are very conflicted about which treatment is the best one to pursue as they each have unique costs and benefits. Each could potentially halt the progress of your illness, but they each are associated with an unpleasant side effect. Even though your doctor has provided you with all of the available information on each treatment, you still remain confused about which is the better choice. Thus, you ask your doctor what you should do.

Your doctor reviews the potential costs and benefits of both treatments and reminds you that there is no objectively right answer. Your doctor explains that, in the past, different people have made different choices in these circumstances. Consistent with the practice of patient-driven choice (1–5), your doctor may even tell you about the types of people who have chosen each option and the preferences that map on to each option. However, there is still sizeable uncertainty about how either treatment will affect you. Ultimately, your doctor advises you to consider your own preferences in light of the information that she shared and to come to your own decision. How would this make you feel? How would this make you feel about your doctor?

Interactions like these are common occurrences for patients who frequently have to make high-stakes medical decisions but typically lack the expertise and constitution to do so confidently (6, 7). This is particularly common in the United States, where the healthcare system increasingly prioritizes patient autonomy and encourages patients to have the final word on their medical

decisions (2, 8). The prioritization of autonomy in medical decision making stems from philosophical arguments about the importance of free choice (1). For example, moral philosophers argue that decisional autonomy is foundational for one's ability to govern oneself, which is necessary for the existence of individualism (9–12) and justice (13–16).

A key practice that embodies the prioritization of autonomy is patient-driven choice. Patient-driven choice is defined as the ethical obligation of practitioners to prioritize the preferences of the patient and to not influence those preferences with their own personal preferences (5, 17). This practice may manifest itself as a medical professional insisting that a patient's decision be based solely on his preferences regarding the information available as illustrated in the opening example (18). In situations that are characterized by uncertainty—in which there is no objectively right answer about what course of action is best for a patient—patients may yield to a doctor's recommendation rather than rely on their own preferences, which could make the presence of an explicit recommendation coercive (19). Therefore, a doctor who values patient-driven choice might refrain from explicitly recommending a course of action based on her own subjective preference because she fears that her recommendation would be paternalistic. A doctor's core obligation to her patient as an adviser according to the patient-driven choice model is to inform the patient so that he can autonomously develop his pure,

Significance

The debate over whether people ought to be guided paternalistically or given full decisional autonomy has been raging for centuries. However, in many Western societies, autonomy has become the gold standard. The US medical system, in particular, has increasingly prioritized patient autonomy. The present research examines the important question of how patients and advisees broadly react to full decisional autonomy. We find that advisees making difficult decisions prefer paternalism to autonomy, but doctors do not anticipate this preference. We document this preference within medicine and within a range of other contexts characterized by adviser–advisee asymmetries in expertise. Our results suggest that advisees facing difficult decisions do not perceive autonomy as the gold standard.

Table 1. Scenario wording in Study 1

Medical Decision-Making Scenario:
Imagine that you have a very difficult medical decision to make: You have an illness and have to decide how to treat it. You can choose between procedure A and procedure B.
When your doctor, Dr. Kinsel, informs you about your illness, he tells you about the two procedures. They each have different risks and potential side effects, and it is not clear which one will have better long-term consequences. You are very torn about which procedure to pursue, and feel very stressed about making the decision. You ask Dr. Kinsel what you should do.

Autonomy:	Paternalism:
Dr. Kinsel reminds you that both procedures have different risks, and either could lead to a favorable outcome. **He says he cannot give you a clear recommendation. He says the choice is yours to make.**	Dr. Kinsel reminds you that both procedures have different risks, and either could lead to a favorable outcome. **He gives you a clear recommendation. He says that you should choose procedure A (or B).**

The bolded text is added to emphasize the differences between the conditions. Participants in the paternalism condition were randomly assigned to receive advice that explicitly recommended procedure A or procedure B.

uncoerced preferences, which doctors generally believe benefits the patient (20, 21).

To directly test whether doctors believe that patients value decisional autonomy, we ran a pilot study with a sample of employed physicians ($N = 127$, average age = 39.8 y, 44.9% female)—many of whom were also medical researchers (55.9%). We presented these physicians with a scenario that was nearly identical to the opening example and asked them to indicate which of the following actions—1) providing the patient with their personal opinion of what the patient should choose (which we conceptualize as paternalistic, though this framing was not mentioned to doctors) or 2) withholding their personal opinion (which we conceptualize as honoring the patient's autonomy, though this framing was not mentioned to doctors)—would make them seem competent and helpful to a patient and what type of advice would increase the patient's intention to return to them and to recommend them to others. We found that 56%, 49%, 52%, and 48% of physicians in this pilot study believed that patients would find them to be more competent, would find them to be more helpful, would be more likely to return to them, and would be more likely to recommend them, respectively, for providing decisional autonomy instead of paternalistic advice. In other words, these physicians were torn about whether autonomy or paternalism would be seen more positively by patients (for all judgments, doctors' expectations regarding which communication tactic would be favored by patients did not significantly differ from the null of an equal 50% choosing autonomy/50% choosing paternalism distribution, all P values ≥ 0.214). However, as we will reveal across Studies 1 to 6 in this paper, patients are not torn. Patients and advisees in general show a strong preference for paternalism.

Why might this be the case? Think back to the opening example. When taking the patient's perspective, you likely wished that your doctor had given you a recommendation so that you would not have to make the difficult decision yourself. Indeed, people often desire to eschew decision-making power in difficult and emotionally fraught situations (22–27). You may have also wondered why your doctor failed to recommend a course of action given that people often search for explanations of unsettling events (28). In this situation, we propose that you are likely to attribute the doctor's failure to make a recommendation to incompetence, unhelpfulness, or perhaps both. Specifically, you may believe that the doctor was unable to come to a recommendation because she lacked confidence or access to full information (i.e., incompetence) (29, 30). Indeed, individuals

appreciate and are more likely to follow the advice of confident advisers (31). Additionally, you may believe that your adviser was simply unwilling to provide her recommendation (i.e., unhelpful). In many medical contexts—as well as in other complicated contexts—there is often no objectively right thing to do as the "right" thing depends on a number of individual factors and the decision maker's personal preferences (3, 32, 33), or there is not enough existing research to know what the right thing to do is (34, 35). Although experts might understand this, advisees may have a difficult time accepting this and therefore, might perceive their adviser to be hiding some information if a clear recommendation is not disclosed.* Previous research has shown that individuals who choose not to reveal information are often judged negatively by others and are perceived to be untrustworthy, regardless of the valence of the information being hidden (36).

Now, imagine that your doctor again provided you with the costs and benefits of both treatments and told you about the types of people and preferences associated with each choice, but your doctor also added that, "although there is no objectively correct choice, if I were you, I would choose Treatment A." How would this make you feel about your decision and about your doctor? In the current research, we find that advisees generally prefer this more paternalistic approach.

We explore the consequences of autonomy and paternalism in contexts with high decision conflict across six experiments, five of which were preregistered. In these studies, we operationalize autonomy consistent with research on patient-driven choice: an expert provides the advisee with objective information on the choice that he faces and advises him to make a decision based on his own preferences, but this is not accompanied by an explicit recommendation on which decision to make. In other words, the expert provides advice on the decision process but not the ultimate decision. We operationalize paternalism as expert-influenced choice: an expert provides the advisee with objective information on the choice that he faces and makes an explicit recommendation based on the adviser's own judgment and/or subjective opinion. We recognize that our operationalization may differ from other conceptualizations of paternalism (e.g., restrictive or coercive "hard" paternalism) (37). Our goal is not to suggest that advisees facing difficult decisions desire hard paternalism but rather, to explore

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*We collected exploratory measures in Pilot 1 and Study 4 to test whether doctors and patients have different beliefs about the frequency and plausibility of medical situations in which there is no objectively correct option to pursue. SI Appendix, SI Text and Tables S7 and S18 have details on these findings.
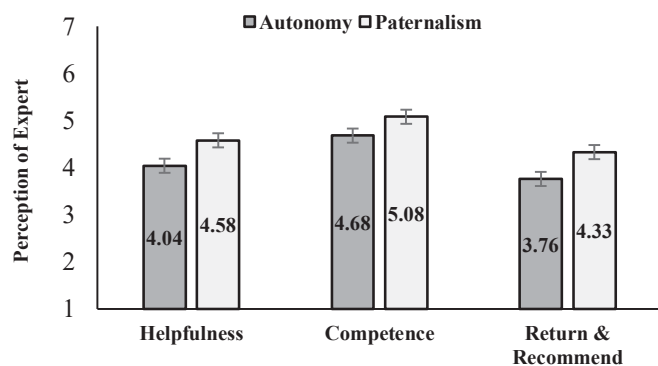
Fig. 1. Participants' perceptions of autonomy-oriented vs. paternalistic doctors in Study 1. These results come from one-way ANOVAs testing the effect of advice type (i.e., a doctor provides full decisional autonomy vs. offers paternalistic advice) on helpfulness, competence, and return and recommend intentions evaluated on a scale of one (not at all) to seven (extremely). Error bars reflect 95% CIs.

how advisees making these difficult decisions react to the forms of autonomy and paternalism that are typically used and discussed in medicine and other high-stakes, expert-guided contexts. Furthermore, although our goal is not to make normative claims about how medicine—or any other expert-guided context—should be practiced, we do believe that human psychology should inform normative ethics. Understanding how different advice styles impact the advisee's perception of and experience with the adviser could help both practitioners and ethicists develop a fuller picture of the ethical ramifications of autonomy and paternalism.

Study 1

Results and Discussion. In Study 1, participants ($N = 196$) read a scenario that was similar to the opening example. Participants were asked to imagine that they were a patient who had a very difficult medical decision to make. They had to decide between two procedures and imagined that they asked their doctor what to do. Participants were randomly assigned to one of two conditions: autonomy or paternalism. Participants in both conditions read that their doctor reminded them that both procedures had different risks and that either procedure could lead to a favorable outcome. Their doctor then either gave them a clear recommendation and said that they should choose procedure A (or B; paternalism) or did not give them a recommendation and told them that the choice was the patient's choice to make (autonomy). We present the scenario for Study 1 in Table 1. The scenarios for all other studies are provided in *SI Appendix*, Tables S1–S6.

Fig. 1 and Table 2 display the results. Participants who received paternalistic advice evaluated the doctor as more competent [$F(1,194) = 5.93, P = 0.016$] and more helpful [$F(1,194) = 6.11, P = 0.014$] than participants who received full decisional autonomy. Moreover, participants who received paternalistic advice indicated that they would be more likely to return to and recommend the doctor than those who received full decisional autonomy [$F(1,194) = 5.66, P = 0.018$]. That is, contrary to what doctors in our pilot study anticipated, participants who imagined themselves as patients showed a preference for paternalistic advice over full decisional autonomy.

Although patients may appreciate the clarity of an explicit recommendation, if they think like policy makers and doctors, they may also think that such clarity comes with a moral cost. This does not seem to be the case: participants judged a paternalistic doctor ($M = 5.15, SD = 1.48$) to be just as ethical as a doctor who gave them full decisional autonomy [$M = 5.08, SD = 1.36; F(1,193) = 0.11, P = 0.737$] (*Materials and Methods* has

further details). That is, participants did not think the paternalistic doctor was any less responsible, respectful, or ethical than the doctor who provided decisional autonomy. Taken together, these results provide evidence that patients taxed with a difficult and uncertain medical decision prefer doctors who provide paternalism.

In the next experiment, we examine whether this preference persists outside of the medical domain. This allows us to explore whether the preference for paternalism is unique to the medical context (in which choices are particularly difficult and emotional) (22) or whether this preference is characteristic of a broader class of situations in which there are adviser–advisee asymmetries in expertise and advisees experience some level of decision difficulty.

Study 2

Results and Discussion. In Study 2 ($N = 451$), we explore two additional domains: financial and managerial advice. In this study, participants were randomly assigned to see a medical, financial, or workplace scenario. The medical scenario was identical to the one used in Study 1 (i.e., choice between two procedures), the financial decision required participants to choose between two retirement plans, and the workplace scenario featured a decision about how to approach a high-stakes professional presentation. As in the previous study, the adviser in each context informed the participant of the different risks and benefits of each decision option and instructed the participant to think about personal preferences. Then, the adviser proceeded to give either full decisional autonomy or paternalistic advice.

Table 2 displays the results. Overall, participants evaluated the paternalistic adviser as more competent [$F(1,445) = 8.19, P = 0.004$] and more helpful [$F(1,445) = 64.85, P < 0.001$] than the adviser who provided full decisional autonomy, and they also reported higher return and recommend intentions [$F(1,443) = 52.08, P < 0.001$].[†]

Studies 1 and 2 reveal that, compared with advisers who offer full decisional autonomy, advisers who provide paternalistic advice are perceived to be more helpful and that advisees report higher intentions to return to and recommend them. The helpfulness and return and recommend intention results were consistent across scenarios (Table 2), suggesting that the preference for paternalism is not unique to medical decisions.

However, we obtained somewhat mixed support for increased perceptions of competence following paternalism; we find no evidence that decisional autonomy leads to decreased perceptions of competence in the workplace scenario (Table 2). Additional mediation analyses revealed that, in both Studies 1 and 2, participants' increased intentions to return to and recommend the paternalistic adviser were mediated by both perceptions of the adviser's helpfulness and competence. However, in both studies, the indirect effect of helpfulness was significantly larger than the indirect effect of competence. We provide full results on these mediation analyses in *SI Appendix*, Table S8.

Thus far, we have only manipulated the type of advice between subjects. It is possible that, when confronted with both an adviser who behaves paternalistically and one who provides autonomy, participants would realize that they prefer the latter. Direct comparisons trigger more cognitive processing (38) and reveal more explicit preferences. In Study 3, we randomly assigned participants to either see both types of advice side by side (joint evaluation) or just see one of the types of advice separately (separate evaluation) to test both direct and indirect preferences for autonomy or paternalism.

[†]The results from Study 2 come from conducting 2 (advice type: autonomy vs. paternalism) × 3 (scenario: medical vs. financial vs. workplace) ANOVAs for each of our dependent measures. We report the main effect of advice type in Table 2. There were no significant interaction effects between advice type and scenario for any of our dependent measures (all *P* values > 0.067).

Table 2. Results by scenario in Studies 1 to 3

|	N	Scenario	Autonomy M	Autonomy SD	Paternalism M	Paternalism SD	Main effect of paternalism (vs. autonomy)
Competence							
Study 1	196	Medical	**4.68**	1.25	**5.08**	1.05	$F(1,194) = 5.93$, $P = 0.016$
Study 2	451	All data	**5.24**	1.27	**5.55**	0.96	$F(1,445) = 8.19$, $P = 0.004$
		Medical	**5.18**	1.32	**5.52**	1.00	$F(1,445) = 3.47$, $P = 0.063$
		Financial	**4.82**	1.28	**5.38**	0.88	$F(1,445) = 10.73$, $P = 0.001$
		Workplace	**5.78**	0.97	**5.76**	0.97	$F(1,445) = 0.01$, $P = 0.926$
Study 3	802	Medical (separate)	**5.42**	1.15	**5.62**	1.01	$t(403) = 1.85$, $P = 0.065$
		Medical (joint)	**5.32**	1.14	**5.88**	0.89	$t(396) = 10.85$, $P < 0.001$
Helpfulness							
Study 1	196	Medical	**4.04**	1.55	**4.58**	1.49	$F(1,194) = 6.11$, $P = 0.014$
Study 2	451	All data	**4.25**	1.51	**5.26**	1.18	$F(1,445) = 64.85$, $P < 0.001$
		Medical	**4.36**	1.55	**5.43**	1.07	$F(1,445) = 23.51$, $P < 0.001$
		Financial	**3.87**	1.41	**5.04**	1.20	$F(1,445) = 30.48$, $P < 0.001$
		Workplace	**4.54**	1.52	**5.35**	1.22	$F(1,445) = 13.16$, $P < 0.001$
Study 3	802	Medical (separate)	**4.82**	1.53	**5.57**	1.16	$t(403) = 5.62$, $P < 0.001$
		Medical (joint)	**4.96**	1.34	**5.86**	0.94	$t(396) = 12.46$, $P < 0.001$
Return and recommend							
Study 1	196	Medical	**3.76**	1.78	**4.33**	1.53	$F(1,194) = 5.66$, $P = 0.018$
Study 2	451	All data	**3.84**	1.71	**4.92**	1.43	$F(1,443) = 52.08$, $P < 0.001$
		Medical	**3.67**	1.72	**5.03**	1.32	$F(1,443) = 28.50$, $P < 0.001$
		Financial	**3.50**	1.61	**4.57**	1.55	$F(1,443) = 18.95$, $P < 0.001$
		Workplace	**4.45**	1.67	**5.18**	1.35	$F(1,443) = 8.05$, $P = 0.005$

The results for Study 1 come from conducting one-way ANOVAs with advice type as the independent variable. The results for Study 2 come from conducting two-way ANOVAs with advice type and scenario as the independent variables and planned contrasts (autonomy vs. paternalism) within each scenario. Study 3's joint evaluation statistics come from paired-sample t tests, and separate evaluation statistics come from independent-samples t tests. These data include all participants who responded to at least one of our focal measures. All means are bolded for emphasis.

Study 3

Results and Discussion. Study 3 ($N = 802$) examines whether people are conscious of their preference for paternalism by using a mixed between- and within-subjects design. Participants were presented with a medical decision-making scenario similar to the one that we used in Study 1. In all conditions, participants were asked to imagine that they had a very difficult medical decision to make. Specifically, they had to decide between two medical procedures, neither of which was objectively better. They then learned that their friend had recently gone through something similar, and they read about their friend's experience with either one doctor (separate evaluation condition) or two doctors (joint evaluation condition). In the separate evaluation condition, participants learned that their friend had consulted with one doctor, and they then read the advice that the doctor had given to their friend. They were randomly assigned to read about a doctor who provided their friend with either full decisional autonomy or paternalistic advice. In the joint evaluation condition, participants imagined that their friend had consulted with two doctors, and they then learned about the advice that the two doctors (one who honored autonomy and one who behaved paternalistically) had given to their friend.

Fig. 2 and Table 2 display the results. In the separate evaluation condition in which participants only read about one of the two possible doctors, a χ^2 test of proportions revealed that participants were more likely to choose the doctor who behaved paternalistically (89.1%) than the doctor who honored autonomy [77.9%; χ^2 (1) = 9.06, $P = 0.003$]. In the joint evaluation condition in which participants read about both doctors, a χ^2 goodness of fit test revealed that participants were also more likely to choose the doctor who behaved paternalistically (67.5%)

than the doctor who honored autonomy [32.5%; χ^2 goodness of fit test against the null of equal 50% choosing autonomy/50% choosing paternalism distribution = χ^2 (1) = 48.67, $P < 0.001$]. Moreover and consistent with Studies 1 and 2, we found that paternalistic doctors were viewed as more helpful (both P values < 0.001) and competent ($P = 0.065$ and $P < 0.001$) in both separate and joint evaluations, respectively (Table 2).
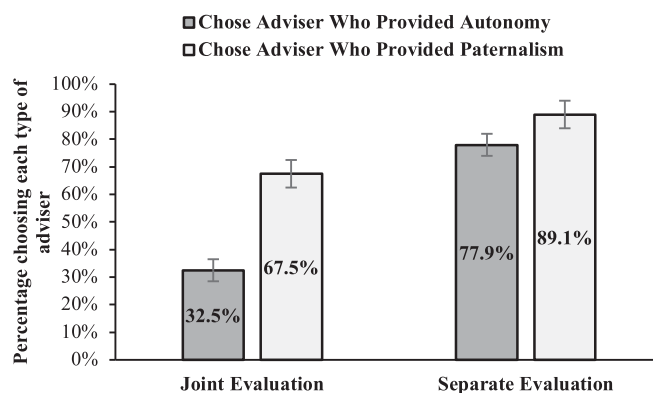
Fig. 2. Percentage of participants choosing each type of adviser in Study 3. Participants in the joint evaluation condition compared a doctor who provided full decisional autonomy with a doctor who provided paternalistic advice. Participants in the separate evaluation conditions evaluated either a doctor who provided full decisional autonomy or a doctor who provided paternalistic advice. Error bars reflect 95% CIs.

Table 3. Results for Study 4

	Autonomy		Paternalism		Main effect of paternalism (vs. autonomy)	Main effect of solicited (vs. unsolicited) advice	Advice type × solicitation interaction
	M	SD	M	SD			
Competence							
All data	**5.14**	1.19	**5.45**	0.99	$F(1,803) = 18.15, P < 0.001$	$F(1,803) = 3.13, P = 0.077$	$F(1,803) = 2.83, P = 0.093$
Solicited advice	**4.98**	1.27	**5.44**	1.00	$F(1,803) = 17.59, P < 0.001$		
Unsolicited advice	**5.25**	1.13	**5.45**	0.98	$F(1,803) = 3.34, P = 0.068$		
Helpfulness							
All data	**4.20**	1.56	**4.92**	1.40	$F(1,802) = 48.25, P < 0.001$	$F(1,802) = 0.69, P = 0.406$	$F(1,802) = 1.45, P = 0.229$
Solicited advice	**4.07**	1.56	**4.93**	1.38	$F(1,802) = 33.02, P < 0.001$		
Unsolicited advice	**4.29**	1.55	**4.90**	1.42	$F(1,802) = 16.58, P < 0.001$		
Return and recommend							
All data	**4.03**	1.77	**4.72**	1.64	$F(1,802) = 35.14, P < 0.001$	$F(1,802) = 1.19, P = 0.276$	$F(1,802) = 2.16, P = 0.142$
Solicited advice	**3.84**	1.80	**4.74**	1.67	$F(1,802) = 27.18, P < 0.001$		
Unsolicited advice	**4.15**	1.73	**4.70**	1.59	$F(1,802) = 10.01, P = 0.002$		

The results for Study 4 come from conducting two-way ANOVAs with advice type and solicitation as the independent variables. All means are bolded for emphasis.

These results suggest that, even when evaluating autonomy-oriented vs. paternalistic advisers side by side, advisees prefer paternalism. Interestingly, when physicians were posed with this very same question—whether patients would prefer to have full decisional autonomy or receive paternalistic advice—they were torn about whether autonomy or paternalism would be seen more positively by patients (Pilot Study 1). These results suggest that there is a systematic asymmetry between physician expectations and patient experiences.

In our studies so far, advisees explicitly asked for a recommendation from their adviser. It is possible, therefore, that our effects reflect a preference for an adviser who does what the advisee asks of them (i.e., providing a recommendation) rather than paternalistic advice per se. To test this, in the next study, we manipulate whether advisees do or do not explicitly ask the adviser what they should do (i.e., whether or not the advisee directly solicits a recommendation).

Study 4

Results and Discussion. In Study 4 ($N = 807$), we examine whether advisees' preference for paternalism is actually driven by a preference for an adviser who does what is asked of them.

All participants read a medical scenario in which they were randomly assigned to imagine that they had asked the doctor what they should do (i.e., solicited advice condition) or that they had not asked the doctor what they should do (i.e., unsolicited advice condition). The scenarios in the solicited advice condition were similar to those in Studies 1 and 2 and identical to those in the doctor pilot study (except that they were now written from the advisee's perspective). In the scenario, the advisee asked the doctor what he should do ("You ask Dr. Kinsel what you should do"), and the doctor proceeded to provide either full decisional autonomy or paternalistic advice. The unsolicited conditions were identical to the solicited advice conditions except that the sentence about the advisee asking the doctor what he should do was removed. We provide the full wording of the scenarios in *SI Appendix*, Table S3.

Table 3 displays the results. Replicating our results from the previous studies, we found that paternalistic advisers were perceived as more competent and helpful than advisers who provided autonomy, and participants were again more likely to return to and recommend them (P values ≤ 0.001). Interestingly, participants who explicitly requested a recommendation (i.e., paternalistic advice was solicited) did not evaluate the advice differently than those who did not explicitly request a recommendation (i.e., main effect of advice solicitation; P values ≥ 0.077). Importantly, there were also no significant interactions between the type of advice and the advice solicitation condition on helpfulness, competence, or return and recommend intentions ($P \geq 0.093$).

The results from Study 4 suggest that, regardless of whether an explicit recommendation was solicited or unsolicited, paternalism improves judgments of the adviser's helpfulness and competence and increases intentions to return to and recommend one's adviser in the future. In our next study, we consider whether the benefits of paternalistic advice stem from the belief that paternalistic advisers devote more time and effort to guiding their advisees.

Study 5

Results and Discussion. In Study 5 ($N = 806$), we examine whether the preference for paternalism persists when autonomy is delivered in an ideal manner (according to models of both patient-driven choice and shared decision making). Doctors who advocate for patient autonomy certainly do not intend to abandon their patients and leave them feeling uneasy about their decision. We assume that these doctors actually go to great lengths to provide their patients with as much information as possible (including information about prior cases similar to the one that the patient is experiencing, which may help reveal the patient's preferences) and guide them to come to their own decision (2, 4, 5). Indeed, some medical ethicists have advocated that physicians and patients should try to make decisions together: for example, by having medical experts provide patients with more information on how to approach their medical decision and help patients uncover their own preferences (8, 32, 39–45). In this study, we manipulate whether autonomy or paternalism was accompanied by such additional effort.

Participants were randomly assigned to see a medical or financial scenario either with or without additional guidance. The scenarios without additional guidance were the same as those in Study 2. As in Study 2, the adviser first shared with the participant the different risks and benefits of each choice option and instructed the participant to think about his own preferences. Then, the adviser proceeded to give the advisee either full decisional autonomy or paternalistic advice. The additional guidance conditions were identical except that they also stated that the adviser walked the advisee through cases similar to the advisee's own case

Table 4. Results for Study 5 (collapsed across scenarios)

	Autonomy		Paternalism		Main effect of paternalism (vs. autonomy)	Main effect of added (vs. no added) guidance	Advice type × guidance interaction
	M	SD	M	SD			
Competence							
All data	**5.40**	1.05	**5.58**	0.89	$F(1,798) = 7.30, P = 0.007$	$F(1,798) = 23.89, P < 0.001$	$F(1,798) = 0.37, P = 0.542$
Added guidance	**5.59**	0.96	**5.72**	0.85	$F(1,798) = 2.18, P = 0.140$		
No added guidance	**5.21**	1.10	**5.44**	0.91	$F(1,798) = 5.50, P = 0.019$		
Helpfulness							
All data	**4.78**	1.52	**5.35**	1.16	$F(1,796) = 39.75, P < 0.001$	$F(1,796) = 67.94 P < 0.001$	$F(1,796) = 4.46, P = 0.035$
Added guidance	**5.25**	1.34	**5.63**	1.08	$F(1,796) = 8.75, P = 0.003$		
No added guidance	**4.31**	1.55	**5.07**	1.16	$F(1,796) = 35.60, P < 0.001$		
Return and recommend							
All data	**4.53**	1.69	**5.09**	1.41	$F(1,795) = 28.52, P < 0.001$	$F(1,795) = 62.30 P < 0.001$	$F(1,795) = 2.07, P = 0.150$
Added guidance	**5.02**	1.58	**5.43**	1.27	$F(1,795) = 7.56, P = 0.006$		
No added guidance	**4.04**	1.67	**4.75**	1.46	$F(1,795) = 23.13, P < 0.001$		

The results for Study 5 come from conducting three-way ANOVAs with advice type, additional guidance, and scenario as the independent variables. All means are bolded for emphasis.

and described the choices that past advisees had made. The adviser then either ultimately helped the advisee come to his own decision (in the autonomy condition) or helped him understand his recommendation (in the paternalism condition).[‡]

Table 4 displays the results. Replicating our results from the previous studies, we found that paternalistic advisers were perceived as more competent and helpful than advisers who provided autonomy, and participants were again more likely to return to and recommend the paternalistic advisers (P values $\leq$ 0.007). Moreover, participants who received additional guidance (regardless of whether they were assigned to receive autonomy or paternalistic advice) found their adviser to be more helpful and competent, and they were more likely to return to and recommend them (P values $\leq$ 0.001). Interestingly, there was no significant interaction between the type of advice and the additional guidance conditions for competence ($P = 0.542$) or return and recommend intentions ($P = 0.150$). This suggests that, regardless of whether the doctor offered additional guidance, paternalism improved judgments of the adviser's competence and increased intentions to return to and recommend their adviser in the future.

For the helpfulness measure, we did find evidence that providing additional guidance moderated the effect of advice type on perceived helpfulness ($P = 0.035$): the effect of paternalism on helpfulness was smaller when the adviser provided additional guidance ($P = 0.003$) than when the adviser did not provide additional guidance ($P < 0.001$).[§] In other words, providing additional guidance decreased but did not eliminate the perceived helpfulness gap between autonomy and paternalism.

These results demonstrate that, even when we manipulate how much effort the adviser puts into helping the advisee (i.e., additional guidance), advisees still find paternalistic advisers to be more competent and more helpful, and they are more likely to

return to and recommend them. To be clear, we did find that participants evaluated advisers more positively when they provided more guidance. That is, there was a main effect of additional guidance on all measures. However, both with and without the presence of additional guidance, advisees preferred the paternalistic adviser. These results suggest that paternalistic advisers do not come across as more helpful simply because their explicit advice communicates added effort or added guidance. Rather, providing an explicit recommendation for a difficult decision is seen as uniquely helpful.

Study 6

Results and Discussion. In Study 6 ($N = 805$), we extend our investigation in four important ways. First, we examine real rather than hypothetical advisee experiences by studying advice and choices in the context of risky gambles. Second, we examine whether preferences for paternalism influence the wages that advisees pay to advisers. Third, we examine whether preferences for paternalism change after the (negative or positive) outcome resulting from the paternalistic advice is realized. Fourth, we explore whether decision difficulty moderates our effects.

Existing research suggests that decision makers have the desire to eschew decision-making power when they face highly difficult situations (22–25, 27). In line with this literature, in Studies 1 to 5, we featured decisions that would likely be experienced as very difficult, and we specified that the participant felt uncertain about what to do. In the real world, however, decision difficulty varies across individuals: individuals can have an easier or more difficult time forming preferences and may feel more or less conflict over which choice to make. Thus, in Study 6, we chose a paradigm in which we expected decision difficulty to vary, and we measured participants' decision difficulty after they learned about their choice options but before they received advice. We predicted that experienced decision difficulty would moderate our effects such that participants would only prefer paternalism over autonomy when they experienced high levels of decision difficulty.

We modeled our stimuli in Study 6 off of other paradigms that have been used to model medical decision making in an experimental context (46). Specifically, we had participants make a risky choice about which of two possible raffles to enter. Participants learned that both raffles entailed different risks and benefits: either raffle could cause them to lose money, but either could also cause them to earn money or prizes. We also told

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[‡]We provide the wording of the scenarios for Study 5 in *SI Appendix*; *SI Appendix*, Table S4 shows the medical decision-making scenario, and *SI Appendix*, Table S5 shows the financial decision-making scenario.

[§]The results from Study 5 come from conducting 2 (advice type: autonomy vs. paternalism) × 2 (additional guidance: yes vs. no) × 2 (scenario: medical vs. financial) ANOVAs for each of our dependent measures. We report the main effect of advice type, additional guidance, and their interaction in Table 4. There were no significant interaction effects between advice type and scenario, between additional guidance and scenario, or between advice type, additional guidance, and scenario for any of our dependent measures (all P values > 0.197).

Table 5. The effect of advice type, time, and decision difficulty in Study 6

Independent variables	Competence	Helpfulness	Use again	Wage assigned (0–10 cents)
(1) Advice type	$b = -0.008$, $SE = 0.044$, $P = 0.854$	$b = 0.040$, $SE = 0.050$, $P = 0.417$	$b = 0.026$, $SE = 0.050$, $P = 0.598$	$b = -0.063$, $SE = 0.106$, $P = 0.553$
(2) Time	$b = 0.043$, $SE = 0.022$, $P = 0.052$	$b = 0.022$, $SE = 0.023$, $P = 0.337$	$b = 0.043$, $SE = 0.022$, $P = 0.051$	$b = -0.057$, $SE = 0.043$, $P = 0.183$
(3) Decision difficulty	$b = -0.095$, $SE = 0.033$, $P = 0.004$	$b = -0.096$, $SE = 0.038$, $P = 0.011$	$b = -0.101$, $SE = 0.038$, $P = 0.008$	$b = -0.123$, $SE = 0.075$, $P = 0.099$
(4) Interaction between (1) and (2)	$b = 0.015$, $SE = 0.022$, $P = 0.500$	$b = 0.008$, $SE = 0.023$, $P = 0.708$	$b = 0.005$, $SE = 0.022$, $P = 0.825$	$b = 0.017$, $SE = 0.043$, $P = 0.696$
(5) Interaction between (1) and (3)	$b = 0.075$, $SE = 0.033$, $P = 0.023$	$b = 0.063$, $SE = 0.038$, $P = 0.097$	$b = 0.075$, $SE = 0.038$, $P = 0.049$	$b = 0.152$, $SE = 0.075$, $P = 0.043$
(6) Interaction between (2) and (3)	$b = -0.013$, $SE = 0.016$, $P = 0.430$	$b < 0.001$, $SE = 0.016$, $P = 0.955$	$b = 0.005$, $SE = 0.015$, $P = 0.717$	$b = 0.016$, $SE = 0.031$, $P = 0.602$
(7) Interaction between (1), (2), and (3)	$b = -0.010$, $SE = 0.016$, $P = 0.535$	$b = 0.003$, $SE = 0.016$, $P = 0.843$	$b = 0.002$, $SE = 0.015$, $P = 0.881$	$b = -0.011$, $SE = 0.031$, $P = 0.721$

The results come from regressing each of the dependent measures on (1) the advice type condition (contrast coded as 1 = paternalism, −1 = autonomy), (2) time (within-subjects variable, coded as 1 = Time 2/after outcome of advice is known; −1 = Time 1/before outcome of advice is known), (3) the decision difficulty measure (mean centered at 3.45), and (4) their interactions. Standard errors are clustered at the participant level in all analyses.

participants that the two raffles appealed to different kinds of people and that some people loved the prizes that they won but others had been extremely unhappy about their choice.

To help them make their decision, we randomly paired each participant with a (fictitious) raffle expert who had previously observed a number of raffle drawings from each raffle box. Additionally, we told participants that these experts knew the raffles that a set of previous participants chose to enter, the outcomes that these participants drew, and how these participants felt about their choices. The participants were then shown the information that their expert chose to send to them. The expert first provided participants with information about the content of each of the raffles (we provide the contents of the raffles in *Materials and Methods*). From this information, participants learned some but not all details about the possible prizes in each raffle.

Then, after participants learned some of the contents of the raffles but before they received the advice from their raffle expert, we asked them to evaluate how conflicted they felt about the two raffles, how difficult the decision was for them, and how strong or weak their preferences over the two raffles were. We combined these items to create a composite measure of subjective decision difficulty ($\alpha = 0.83$).

Then, participants received advice from the raffle expert. All participants first were told by the expert the following: "If you choose Raffle A, you'll probably get a prize today. If you choose Raffle B, you have to wait longer to get the largest reward. However, I don't know exactly how many of each prizes are in each raffle box, so it is impossible to say which raffle is objectively better." We then randomly assigned participants to one of two between-subjects experimental conditions: autonomy vs. paternalism. In the autonomy condition, the expert told participants, "You should really choose whichever raffle you're more comfortable with." In the paternalism condition, the expert told participants, "Although you should definitely consider whichever raffle you're more comfortable with, I think you should choose Raffle A (B)." We randomized whether the paternalistic expert recommended Raffle A or B.

After reporting their decision difficulty and receiving either full decisional autonomy or paternalistic advice, participants evaluated the adviser's competence and helpfulness, indicated whether they would recommend using the raffle expert again, and assigned the wages that they would like the expert to be paid.

Participants were allowed to pay any amount between 0 and 10 cents as a wage to the expert. Following their initial judgments and decisions, participants learned the outcome of their raffle choice. Then, they were able to make judgments about the expert again and to revise the wage that they wished to pay the expert.

To test whether the effects of receiving full decisional autonomy vs. paternalistic advice is moderated by decision difficulty, we conducted a series of ordinary least squares regressions, regressing each dependent measure on 1) the advice type (autonomy vs. paternalism), 2) the time of judgments (before or after the outcome is realized; within-subjects variable),¶ 3) our decision difficulty measure (mean centered), and 4) their interactions. In these analyses, we clustered SEs at the participant level to account for the within-subjects nature of the time variable.

Table 5 displays the results. There was no main effect of advice type for any of our dependent measures (all P values ≥ 0.417). Importantly, however, there were significant interactions between advice type and decision difficulty for three of the four measures (competence, use again, and wages assigned; all P values ≤ 0.049) and a marginally significant interaction for helpfulness ($P = 0.097$).

Taking a closer look at the interaction between advice type and decision difficulty (Fig. 3), the visualized results reveal that paternalistic advisers are seen more favorably than advisers who offer full decisional autonomy when decision difficulty is high, but this preference attenuates (and sometimes reverses) when decision difficulty is low. Furthermore, advisees appreciate autonomy less and less as a decision feels increasingly difficult; however, advisees evaluate paternalistic advisers similarly across all levels of decision difficulty. Fig. 3 depicts the nature of these results for wages (Fig. 3*A*) and for the "use again" measure that indicates whether the adviser should be used again in the future (Fig. 3*B*); our measures of competence and helpfulness follow similar patterns (*SI Appendix*, Fig. S1).

Interestingly, however, we found no significant interactions between advice type and time for any of our dependent measures

¶As described in *Materials and Methods*, each participant evaluated the adviser at two points in time: once before the raffle outcome was realized (Time 1) and once after the raffle outcome was realized (Time 2).
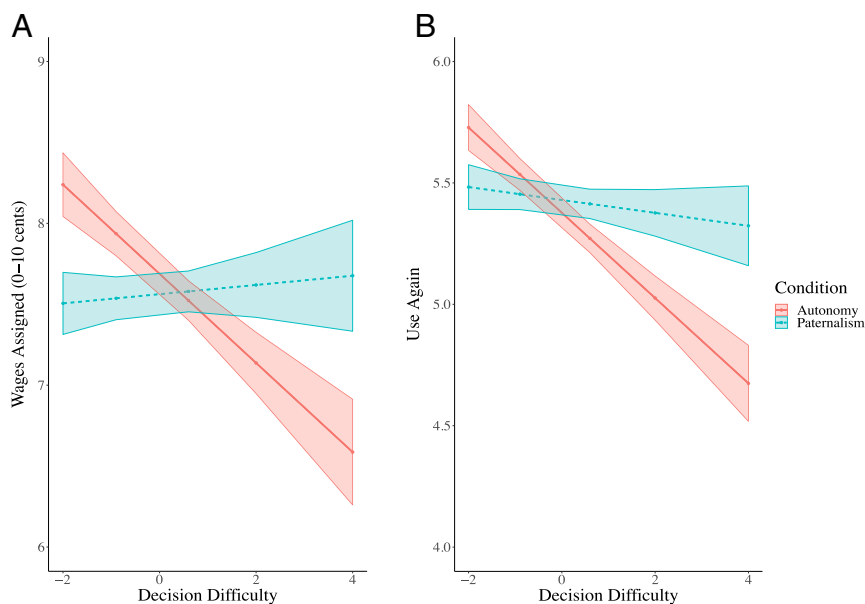
Fig. 3. (*A*) Wages assigned to the adviser and (*B*) recommendations for future use of the adviser as a function of advice type and decision difficulty in Study 6. The decision difficulty variable was reported on a scale of 1 (not at all) to 7 (extremely), but the figure shows the decision difficulty results mean centered at 3.45. The dependent variables are collapsed across Time 1 and Time 2 evaluations (before and after raffle outcome was revealed). Outside lines reflect 95% CIs, and middle lines reflect the predicted regression lines. Dashed (solid) middle lines represent the paternalism (autonomy) condition.

(all *P* values ≥ 0.500) nor did we find any three-way interactions between advice type, time, and decision difficulty (all *P* values ≥ 0.535). That is, we find no evidence that participants updated their judgments of paternalism vs. autonomy at Time 2 after learning that the advice (or lack thereof) led to a positive or negative outcome.

Taken together, the results from Study 6 demonstrate that advisees evaluate paternalistic advisers more favorably than advisers who provide decisional autonomy but only when decision makers experience decision difficulty. Advisees do sometimes prefer decisional autonomy, specifically when advisees have strong, preexisting preferences and experience little decision difficulty. However, when preferences are weak and decisions seem daunting, advisees find explicit, subjective recommendations on which decision to make (i.e., paternalism) to be more helpful and are more likely to reward advisers who offer paternalism.

Moreover, the perception of one's adviser does not change after the (positive or negative) outcome of the advice is realized. Analyses on Time 2 judgments provide further evidence that judgments of the adviser are not moderated by the specific outcomes associated with the advice (*SI Appendix*, Table S12).

The pattern of these results also reveals that preferences for paternalism are relatively stable; participants had reasonably positive (and constant) reactions to paternalistic advice regardless of their level of decision difficulty. Perceptions of autonomy, however, were variant and highly dependent on perceived difficulty of the decision, suggesting that autonomy may actually be the riskier approach when a patient's preference strength is unknown. These results deepen our understanding of how advisees experience and react to autonomy and paternalism and challenge the benefits of recently adopted practices in medical decision making that prioritize autonomy without taking patients' strength of preferences or the difficulty of decision (i.e., patient-driven choice) into consideration.

General Discussion

The prioritization of autonomy—particularly in medicine but also, in many other aspects of life in the Western world—assumes that advisees are capable of and willing to make independent decisions free of social influence. For example, when facing a difficult medical decision, patients—with enough time and information from their doctors—should be able to come to their own decisions about their medical care. Regardless of whether this should be the case from a normative standpoint, in the present research we ask how patients and advisees in general react to such autonomy. We find that advisees generally perceive autonomy to be unhelpful and penalize advisers who thrust it on them.

Across six studies, we find that advisees perceive paternalistic advisers to be significantly more helpful than autonomy-oriented advisers, which in turn leads to higher return and recommend intentions. In most of our studies, we also find evidence that advisees view more paternalistic advisers as more competent. Although most medical ethicists and philosophers claim that advisers who provide autonomy are more ethical, our results suggest that advisees disagree. Interestingly, we find that advisees rate paternalistic advisers as no more or less ethical than advisers who provide autonomy.

We test the robustness and boundaries of our effects in a number of ways. We find that the preference for paternalistic advice rather than full decisional autonomy exists across a number of domains and in both separate and joint evaluations, suggesting that advisees facing difficult decisions are aware of their preference for more paternalistic advisers. We find that this preference for paternalistic advice influences the choice of whether to work with an adviser (Study 3) and the wages paid to one's adviser (Study 6). We also find that this preference holds regardless of whether advice is solicited or unsolicited (Study 4) and regardless of how much effort the adviser puts into guiding the advisee (Study 5). Importantly, we also find that these results are moderated by experienced decision difficulty: only conflicted advisees prefer paternalistic advisers (Study 6).

Of course, more research is needed to understand the full range of consequences of both full decisional autonomy and more paternalistic approaches. For example, what are the consequences of these approaches over time? It is possible that paternalism undermines advisees' ability to make decisions for

themselves over time, which could be costly in the long run. This is an important question that ought to be studied before enacting any novel policies inspired by the present research. There might also be some operationalizations of autonomy that are perceived as better or equal to that of paternalism as conceptualized in this research. We operationalize autonomy as withholding subjective opinions consistent with current discussions of patient-driven choice; however, we encourage future research to test different operationalizations of autonomy.

It could also be fruitful for future research to test ways to mitigate one's sense of decision difficulty and attenuate the preference for paternalism. For example, if advisees feel that their adviser did not provide them with sufficient information to make an informed decision themselves, decision difficulty could increase, leading to a stronger preference for paternalism. However, it is possible that, with some amount of information or perhaps, the proper framing of that information, advisees will feel less uncertain and more able to formulate their own preferences.

Future research should also more closely examine why some experts are reluctant to provide their subjective recommendations when there is not an objectively right answer. Are advisers systematically undervaluing the helpfulness of their expert, subjective opinions? Or do they understand the value of their opinion but fear that paternalism would infringe on the advisee's ability to formulate an unswayed preference? Importantly, is discomfort with paternalism unique to medical advisers? We ran another small pilot study (Pilot Study 2) with a group of financial advisers ($N = 38$, average age = 44.3, 18.4% female) to shed light on these questions. In contrast to practicing physicians, we found that the majority of financial advisers in our sample did believe that advisees would find them to be more competent (82%) and helpful (89%) and would be more likely to return to (97%) or recommend (97%) them if they provided paternalistic advice rather than full decisional autonomy. These preliminary results begin to suggest that the medical community may be uniquely miscalibrated in their beliefs about advisee preferences for decisional autonomy.

To explore why this is the case, we collected exploratory mechanism measures in our pilot study with physicians (Pilot Study 1) and our subsequent pilot with financial advisers (Pilot Study 2). Specifically, we measured beliefs about the degree to which paternalistic advice that resulted in a negative outcome might lead to a lawsuit or cause the advisee to blame the adviser and the degree to which advisers thought that providing paternalistic advice would prevent advisees from forming their own preferences. Overall, the exploratory data from these two pilots suggest a potential asymmetry in what drives doctors' and financial advisers' choices. Financial advisers' choices to use paternalism or autonomy seem to be driven, at least in part, by their expectations about what would lead to higher perceptions of their competence and helpfulness, whereas doctors do not seem to be influenced by these same considerations of how competent or helpful they would seem to their patients. Instead, it seems that, in the medical domain, fears of litigation and moral rhetoric around preference infringement drive practitioner beliefs and behavior. We report the full results from these pilot studies and a summary of their results in *SI Appendix*, Tables S17–S20.[#] Future research should examine why this is the case and how doctors could be refocused on thinking about patients' preferences for paternalism.

Normative ethicists, who make clear that autonomy is the normative gold standard, have influenced prevailing rhetoric and

practice regarding autonomy and paternalism. However, normative ethics should be informed by the psychology of the advisees; it is important that we understand the reactions, emotions, and preferences of those that normative theories are designed to protect. In the present research, we find that advisees do not strictly endorse autonomy. We find that advisees view paternalistic advisers and those who provide decisional autonomy to be equally ethical while still showing strong preferences to return to and recommend paternalistic advisers who they evaluate as more helpful and often, more competent. We hope that this research will cause policy makers, ethicists, practitioners, and future researchers to take a deeper look into the advisees' perspective. Specifically, we hope that future research examines the circumstances in which autonomy does and does not benefit advisees in medicine and in life.

Materials and Methods

We report all of our measures, manipulations, exclusions, and how we determined our sample sizes. We preregistered Studies 1 and 3 to 6, and we provide the links to the preregistrations in *SI Appendix, SI Text*. We also provide all methods and results of Pilot Studies 1 and 2 in *SI Appendix, SI Text*. All of our data and materials are available through the Open Science Framework (OSF) repository at https://osf.io/2587f/. The institutional review board of the University of Chicago approved all studies. Across all studies, participants began the study by providing informed consent (via Qualtrics survey).

Studies 1 to 5.
Participants. We conducted Study 1 in the Chicago Park District and Studies 2 to 5 on Amazon's Mechanical Turk. Participants in Study 1 received a small prize (e.g., a University of Chicago pen, keychain, or bookmark) in exchange for participating in the study, and participants in Studies 2 to 5 received a small monetary compensation. For Studies 1 to 5, we recruited 196, 451, 802, 807, and 806 participants, respectively. The samples averaged 36 to 38 y in age and were 46 to 56% female.
Procedure. Studies 1 to 5 followed a similar procedure. In all five studies, participants were presented with a scenario in which they were asked to imagine that they had a very difficult decision to make and that they sought advice from an adviser. Participants then evaluated the adviser. Since the studies were so similar, we first describe the procedure of Study 1 in detail, and then, we explain how the other studies differed from Study 1.

Study 1. The scenario that participants viewed in Study 1 is described in the text and displayed in Table 1. After reading the scenario and seeing the advice, participants were asked to evaluate Dr. Kinsel's competence by indicating how confident/intelligent/competent/knowledgeable/capable they thought Dr. Kinsel was (1 = not at all, 7 = extremely; averaged into a measure of competence; α = 0.94). Participants also evaluated Dr. Kinsel's helpfulness by indicating how helpful/valuable/useful they thought Dr. Kinsel was and how worthwhile they found their visit to Dr. Kinsel (1 = not at all, 7 = extremely; averaged into a measure of helpfulness; α = 0.95). Lastly, participants were asked how likely they would be to return to Dr. Kinsel, how likely they would be to return to a doctor in Dr. Kinsel's practice, how likely they would be to recommend Dr. Kinsel to others, and how likely they would be to recommend Dr. Kinsel's practice to others (1 = not at all, 7 = extremely; averaged into a measure of return and recommend intentions; α = 0.97).

Following these key measures, participants were asked to evaluate Dr. Kinsel's ethicality by indicating how responsible/respectful/ethical they thought Dr. Kinsel was (1 = not at all, 7 = extremely; averaged into a measure of ethicality, α = 0.93). Finally, at the end of this study and all of our other studies, we included exploratory measures that assessed participants' own experience with and knowledge about similar scenarios in real life (*SI Appendix, SI Text* has details).

Study 2. Participants were randomly assigned to see a medical, financial, or workplace scenario. The scenarios are described in the text. Within each scenario, participants were again randomly assigned to receive full decisional autonomy or paternalistic advice. Participants evaluated their adviser's (doctor's/financial adviser's/senior colleague's) competence and helpfulness and indicated how likely they would be to return to and recommend him using the same items that we used in Study 1 (all α values ≥ 0.94).

Participants were also asked to evaluate their decision comfort by indicating how confident/comfortable they felt about making their decision (1 = not at all, 7 = extremely; averaged into a measure of decision comfort,

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[#]We also report additional analyses comparing adviser and advisee beliefs about autonomy vs. paternalism in the medical domain. Specifically, we explore whether advisers' and advisees' perceptions of the consequences of autonomy (and paternalism) differ and whether these perceptions are driven by different factors. We report these analyses and our findings in *SI Appendix, SI Text*.

α = 0.92). This measure was intended to inform whether autonomy and paternalism differentially affected how confident and comfortable participants felt when making their decision after receiving advice. Participants reported feeling significantly more confident and comfortable making their decision (collapsing across scenarios) when receiving advice from a paternalistic adviser than when receiving autonomy-oriented advice (*P* < 0.001) (*SI Appendix*, Table S7).

Study 3. Participants in this study viewed a medical decision-making scenario similar to the one that we used in Study 1. They were randomly assigned to a separate or joint evaluation condition (38). The scenario and conditions are described in the text. Participants in the separate evaluation condition were asked whether or not they would choose the doctor in the scenario as their primary doctor during their illness (yes, no). Participants in the joint evaluation condition were asked to choose which of the two doctors they would like to have as their primary doctor during their illness (Dr. K or Dr. L; one doctor honored autonomy, and the other gave paternalistic advice). Before participants made their choice, we asked them to evaluate how competent and helpful they found the doctor(s) using the same items that we used in Studies 1 and 2 (all α values ≥ 0.91).

Study 4. Participants read a scenario about a difficult medical decision identical to the scenario that we used in the doctor pilot study (except that it was written from the advisee's perspective). We randomly assigned participants to receive either autonomy or paternalistic advice, with advice being either solicited or unsolicited. The difference between the conditions is described in the text. Participants were asked to evaluate how competent and helpful they found their adviser and how likely they would be to return to and recommend them using the same items that we used in Studies 1 and 2 (all α values ≥ 0.92).

Study 5. Participants saw either a medical or financial scenario similar to those used in Study 2. Within each scenario, we randomly assigned participants to either receive autonomy or paternalistic advice with or without additional guidance. The difference between the conditions is described in the text. Participants were asked to evaluate how competent and helpful they found their adviser and how likely they would be to return to and recommend him using the same items that we used in Studies 1, 2, and 4 (all α values ≥ 0.93). Lastly, we asked all participants to indicate which procedure/investment they would choose. Across both the additional guidance and the no additional guidance conditions, we find that the majority of participants in the paternalistic advice condition followed the paternalistic recommendation (additional guidance = 92.5%, no additional guidance = 91.6%).

Study 6.

Participants. We conducted Study 6 on Amazon's Mechanical Turk. Participants received a small monetary compensation. We recruited 805 participants (average age = 37.3 y; 55.8% female).

Procedure. Participants in this study had the opportunity to enter one of two raffles and win a prize. We told participants, "In this study, you will have an opportunity to enter one of two raffles and win a prize. You will start with a base payment of $0.50, and can earn as much as $10.50 or as little as $0.38." They were then presented with two raffles and were told that they would be paired with a raffle expert to help them make their decision. The raffle expert provided participants with information about the raffles and gave them advice.

All participants learned from their raffle expert that if they chose to draw from Raffle A, they could 1) win an immediate $2 bonus, 2) lose $0.10 from

their payment for this survey, 3) win an Amazon.com gift card, or 4) win a $0.20 bonus. However, if they chose to draw from Raffle B, they could 1) win a $6 bonus in 2 wk, 2) lose $0.12 from their payment for this survey, 3) win a Target gift card, or 4) win a $0.25 bonus. All participants were also informed that the expected value of each raffle was about $3 (the full scenario is in *SI Appendix*, Tables S6).

After receiving this information about the raffles from the raffle expert and answering questions about how difficult they found this decision, participants were then randomly assigned to one of two experimental conditions: paternalism vs. autonomy. The advice that participants received from the raffle expert is described in the text. After receiving either full decisional autonomy or paternalistic advice, participants made a choice between the two raffles that resulted in real prizes or losses.

Our primary dependent measures were 1) participants' evaluation of the adviser's competence ("How competent is Expert X?"; 1 = not at all and 7 = extremely), 2) participants' evaluation of the adviser's helpfulness ("How helpful is Expert X?"; 1 = not at all and 7 = extremely), 3) the extent to which participants thought the expert should be used in future studies (1 = should not be used again and 7 = should definitely be used again), and 4) the wage (from 0 to 10 cents) that participants assigned to the adviser. We assessed all of these measures both before and after participants learned the outcome of the raffle. That is, participants received the opportunity to alter their judgments after they learned the outcome of the raffle that they decided to enter. We randomized which outcome participants received.

Since the main purpose of this study was to assess whether participants' judgments of an adviser are moderated by how torn they feel about the choice that they are about to made, we measured participants' perceived difficulty of choosing between the raffles, the conflict that they experienced when deciding between the two raffles, their uncertainty, and their preference strength after they learned about the contents of the raffles but before they received the advice. Participants were asked the following questions: 1) "How difficult is it for you to choose between Raffle A and Raffle B?" (1 = not at all difficult, 7 = extremely difficult), 2) "How conflicted do you feel about whether to choose Raffle A or Raffle B?" (1 = not at all conflicted, 7 = extremely conflicted), 3) "How uncertain do you feel about whether to choose Raffle A or Raffle B?" (1 = not at all uncertain, 7 = extremely uncertain), and 4) "How strong is your preference for one of the raffles?" (1 = not at all strong, 7 = extremely strong). Although we collected feelings of uncertainty around which raffle to choose, this variable did not show sufficient agreement with our other measures to merit combining them per our preregistration (the α of the decision difficulty scale dropped to 0.63 when we include this item). We present the results for all of our main dependent measures and the moderation by decision difficulty in the text. In addition, for participants who received paternalistic advice, we also assessed how likely they were to follow the advice (*SI Appendix*, Table S10 has details). We report additional exploratory results from Study 6 in *SI Appendix, SI Text*.

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