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THE LURE OF AUTHORITY

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The Lure of Authority

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Abstract

Power and authority permeate political, social and economic life but still little is known empirically about the origins and consequences of authority. In this paper we tackle this question experimentally by implementing a simple version of Aghion-Tirole (1997) in the laboratory. We observe a strong tendency to retain authority even when it is in individuals' material interest to delegate it – indicating the existence of preferences for authority. Moreover, this tendency to hold on to authority is predicted by individuals' degree of loss aversion, suggesting that loss aversion is a key force behind the lure of authority. Finally, we also document that authority structures lead to a substantial over-provision of effort by those endowed with authority while a substantial minority of subjects are completely demotivated by a lack of authority and provide zero effort despite pecuniary incentives to the contrary. These motivational effects exacerbate the inefficiency inherent in authority relations.

Keywords

Authority, Power, Delegation, Organizational Behavior, Incentives, Experiments and Contracts.

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The lecture rests on the paper by Ernst Fehr, Holger Herz and Tom Wilkening on "The Lure of Authority: Motivation and Incentive Effects of Power".

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I hope that I can live up to the expectations that Ramon Marimon generated with his introduction. I am glad to be here and I wonder how you can work here in this beautiful environment where the opportunity cost of working is so high.

But I would like to move on to the topic I am going to present today. I will speak on "The Lure of Authority: Motivation and Incentive Effects of Power", which is joint work with a former student at MIT, Tom Wilkening, and a doctoral student from the University of Zurich, Holger Herz (Fehr, Herz and Wilkening 2010). I doubt we need much motivation for studying power and authority, because they are pervasive components of social life. Every hierarchical organization involves authority and power; examples are prevalent in the bureaucracy of public administration or firms and political offices. However, economists have long avoided the study of authority and power, and economic studies examining the origins and consequences of authority have only recently appeared. The other social sciences, however, have always been very interested in these concepts; they were at the center of sociology and political science, and even psychologists have shown more interest in these concepts than economists did. More recently, however, economists have also become very interested in these topics. In fact, one message today is that the combination of clean economic models and clean experiments can reveal additional insights into these concepts, in particular into motivation and incentive effects.

Instrumental versus intrinsic preferences for authority

Let me first sketch the economist's view of power and authority, which, I believe, many social scientists also share. Economists consider authority to be an institutional device that can be deliberately shaped in order to achieve a more efficient allocation of resources. For example, if someone sets up an organization, he or she needs to create jobs, offices, and lines of command that, under ideal circumstances, maximize the output of the organization.

When I use the term "authority" in the talk, I mean "the right to make a decision that affects other people's payoffs". Even if the other people resist this decision, they cannot change it. Authority is therefore a decision right, and for simplicity I equate authority with a decision right. I will speak a bit later about the extent to which decision rights involve power. In the economist's view, decision rights or authority are means to an end. For example, the assignment of decision rights can be used to achieve a second best efficient allocation. The economic models, however, never assume that authority has value *per se*. I define the value "*per se*" as something someone really covets just for the sake of having it and not for the sake of achieving some instrumental purpose with it. In political science and economics, that instrumental purpose is also often assumed to be rent seeking. Decision rights put the person who holds the rights in a powerful position that enables him or her to extract rents from others. But again, authority and decision rights are just means to an end in this view – in this case, the extraction of rents from those affected by the decisions.

Jon Elster recently sent me a nice quote from Adam Smith's "Lectures on Jurisprudence" in which Smith seems to advocate the view that authority may have value *per se*, intrinsic value if you like. Smith claims that slavery will never be abolished in a democracy of slaveholders because of the slaveholder's love of domination and authority. So let's go through that citation: Smith writes that "the love of domination and authority and the pleasure men take in having everything done by their express orders rather than to condescend to bargain and treat with those whom they look upon as their inferiors and are inclined to use in a haughty way; this love of domination and tyrannizing, I say, will make it impossible for the slaves in a free country ever to recover their liberty." Adam Smith thus comes close to asserting that authority and power have value *per se*, at least for the slaveholders.

But of course, this is just a claim. There is no reason to believe it just because Adam Smith said it. We can use his comments as a nice quote in the footnote of a paper. The real question is whether there is evidence for a non-instrumental preference for power and authority. I have looked fairly

deeply into social science literature, and I actually find many claims that authority and power have intrinsic – non-instrumental – value. However, I found no convincing piece of evidence for these claims. Maybe I am wrong, and reasonable evidence exists. I would in fact be happy if you could show me that I am wrong. But I could not find any persuasive evidence for the claim that people have a preference for authority and power *per se*. There are some questionnaire studies that claim to have this evidence, but none have actually provided the substantiation I think would be required to really prove it.

What do you have to prove, in order to be able to make the statement that people value authority and power just for the sake of having authority and power? This would require evidence that people are in fact willing to give up valuable resources for the sake of power *per se*, that is to say, they have to be willing to accept a net loss just to gain power. In other words, power must not be profitable, but costly, for them.

Everyone agrees that people may value authority and power if this enables them to extract rents from other people. For example, if you are the CEO of a big company with weak corporate governance rules, your decision rights may enable you to acquire a big salary at the shareholders' expense. But the claim here is a different one. If Adam Smith is right, and if a preference for power exists *per se*, a love for tyrannizing and dominating, then people should be willing to give up valuable resources in order to gain power.

So, what did we do? How did we approach this question? Everything started with a laboratory experiment on the optimal allocation of authority between two parties. In this experiment, pairs of real people had to make decisions involving the allocation of decision rights between the parties. These decisions had real monetary consequences for the participants in the experiment. During the course of the project, we unexpectedly found that many subjects seemed to have a preference for power and authority per se. In addition, authority also seems to have an endowment effect. What is an endowment effect? If I randomly allocate a good with a certain value to half of the people in this room, those who receive the good tend to value it on average significantly more than those who did not receive the good. Basically people assign a higher value to a good just because they possess it. We seem to observe something like that in our experiment; there seems to be an endowment effect in authority. Those who are randomly assigned authority (i.e. a decision right) tend to keep the right even if this lowers their monetary payoff and that of the subordinate. In addition, we found that authority has strong motivational effects. In particular, the possession of authority increases a subject's willingness to expend effort, and the lack of authority is strongly demotivating for a substantial majority of the subjects, i.e. they put forward effort levels that are so low that they hurt themselves. These are in a nutshell the results I am going to present today. Now let us proceed to the details of our theoretical and experimental set-up.

The theoretical and experimental framework

We use a version of the model by Aghion and Tirole (Aghion and Tirole 1997) as our theoretical framework. In this model, two parties are matched – a principal and an agent. The principal initially possesses the right to choose a project among the available projects, but the principal can voluntarily give this right to the agent. In the latter case, the agent has the right to choose the project. There is, however, a conflict of interest between the principal and the agent regarding the choice of the project. Among the projects which have a positive monetary payoff for both parties, one project is better for the principal and a different project is better for the agent.

To be more specific, there is a total of 36 projects in the experiment. Only 3 of the 36 projects have a positive payoff for both parties. All the other projects have a zero payoff for both parties. One of the 3 positive payoff projects – the outside option – pays both parties a payoff of 10 money units (MUs). The other two positive payoff projects provide more than 10 MUs for both the principal and the agent, implying that the parties have a common interest in choosing one of these two projects. In one of our treatments, for example, the principal's preferred project gives the principal 40 MUs and the agent 20 MUs. The agent's preferred project yields 40 MUs for the agent but only 20 MUs for the principal. Thus there is a common interest component in the experiment, but also a conflict of interest component. Both the principal and the agent prefer the (40 for the principal, 20 for the agent) project

and the (20, 40) project over the outside option which gives only 10 MUs to both parties. But the principal prefers the (40, 20) project and the agent prefers the (20, 40) project.

A key assumption in the model, and in our experiment, is that the project that yields (10, 10) is always known *ex ante*, while the two other positive payoff projects out of the 35 other projects are not known in advance. The two parties have to invest costly search effort to find out which of the 35 other projects has a positive payoff. If the principal searches successfully, she knows which among the 35 projects is the (40, 20) and the (20, 40) project. If the agent searches successfully he also knows this information. However, it is also possible that only the principal or only the agent, or that neither of the two has this information.

Thus, information about the *ex ante* unknown two positive payoff projects comes in binary form. Either a party knows it or it does not know it. In the experiment, each party invests independently into the search by fixing a probability that the two positive payoff projects will become known. The cost of a probability of one was very high, meaning that it was never optimal for the parties' to bear these costs. In addition, the cost of a small probability of information was so low that it always was rational to choose a nonzero probability of information. Overall, effort costs were convex in the chosen information probability, i.e. a further increase in the probability was more costly at higher probabilities than at lower probabilities.

The sequence of moves in the experiment is as follows. First, the principal decides whether to delegate the decision right to the agent. Second, after this decision is taken, both the principal and the agent choose their effort levels which determine the probability with which the valuable projects will become known. Third, the valuable projects become known to the principal, or to the agent, or to both parties with the chosen probabilities. Fourth, the subordinate party (i.e. the party without decision rights) can communicate a recommendation with regard to the project choice to the controlling party (i.e. the party with the decision right). This recommendation represents soft information because the controlling party does not know whether the subordinate party was able to identify the valuable projects. Finally, the controlling party chooses one of the projects.

Of course, a rational controlling party will choose his or her preferred project if he or she knows the valuable projects. If the controlling party does not know the valuable projects, he or she must rely on the subordinate party's recommendation. Notice that the subordinate party always has an incentive to recommend his or her preferred project if he or she knows the valuable projects; otherwise he or she has an incentive to recommend the outside option.

Why should a rational principal ever delegate the right to choose the project to the agent in this setting? Whether the principal is better off when delegating depends on the extent to which the interests of the principal and the agent are aligned. In the example above – the (40, 20) project versus the (20, 40) project – the interests are not very well aligned because the principal's payoff is much lower in the agent's preferred project than in the principal's preferred project. However, we also implemented three other treatment conditions with varying amounts of interest alignment. The table below provides an overview of the 4 different treatments. In the table, the numbers indicate the monetary payoffs of the parties: project 1 is always the principal's preferred project, regardless of the treatment, and project 2 is always the agent's preferred project. If the outside option ("outside") is chosen, both parties earn 10 MUs and both parties earn zero for every other project ("other"). The treatment that we already described above – the (40, 20) versus the (20, 40) treatment – is labeled "Low" treatment because interest alignment is low. A similarly low interest alignment exists in the "Plow" treatment. In contrast, in "High" treatment the two positive payoff projects are given by (40, 35) and (35, 40). Here the principal loses little income if the agent chooses his preferred project; therefore interests are highly aligned. A similar interest alignment exists in the "PHigh" treatment.

By delegating authority, the principal generates additional incentives for the agent to search for the valuable projects. If the principal has the decision right, the agent's incentives for searching are smaller because it is possible that the principal will overrule the agent. If the agent is the controlling party (i.e. has the decision right), the agent can no longer be overruled which induces the agent to put forward higher effort. Thus, the principal faces the following trade-off. By delegating, she gives the agent incentives to search harder for the valuable projects, but she also forgoes some payoff because, if informed, the agent chooses his preferred project.

	Project 1		Project 2		Other Projects	
	Principal	Agent	Principal	Agent	Outside	Other
PLow	40	35	20	40	10	0
Low	40	20	20	40	10	0
High	40	35	35	40	10	0
PHigh	40	20	35	40	10	0

It can be shown that a rational and risk neutral principal who faces a rational and risk neutral agent should always delegate authority to the agent in the High and the PHigh treatments because the positive incentive effect outweighs the negative project choice effect (i.e. the fact that the agent will choose his preferred project if informed). In contrast, a rational principal will never delegate her decision right in the Plow and the low treatments because the payoff loss is large if the agent chooses his preferred project.

To what extent does the possession of the decision right confer power to the controlling party? Some of you may have read Max Weber's "Wirtschaft und Gesellschaft". His definition of power is that an actor has power in a social relationship if he is in a position to carry out his own will despite resistance. This is a very neat definition of power, but it is not the only one; in fact, there is a huge discussion about the "correct" definition of power. There is a good book by Steven Lukes, a classic written in the nineteen seventies, called "Power – A Radical View", in which he criticizes Max Weber's view of power as being too narrow. I agree; Weber has a narrow definition of power that does not capture all of its important forms, but it is nevertheless a useful definition that captures some important types of power. For our purposes, Max Weber's definition suffices: an actor has power in a social relationship, if he is in a position to carry out his own will despite resistance. Now what is resistance in our setting? If I am the controlling party, and you are the subordinate party, what is the resistance? If the valuable projects are known, you, the subordinate party, want something other than I do, and you cannot make it happen as I can overrule you; in this sense I have power. You can give me a recommendation about your preferred project, but I will overrule your recommendation because I will choose my preferred project.

This is in fact what occurred in almost all cases. If the principal is the controlling party and knows the valuable projects, she chooses her preferred project in 95% of the cases. The same holds if the agent is the controlling party. Likewise, the subordinate party almost always recommends his or her preferred project, and the controlling party overrules that recommendation if he or she has the necessary information. If, however, the controlling party is not informed, the controlling party always follows the subordinate party's advice. Thus, we also observe empirically that there is a power relationship; the controlling party almost always overrules the subordinate party if both parties are informed.

The principal's reluctance to delegate

Now let's come to the results. We find that the principals rarely delegate in the low and the Plow treatment, as the model predicts. However, the principals only delegate in roughly 40% of the cases in the high and the Phigh treatments, even though the model predicts that they should delegate in 100% of the cases. There is thus a huge underdelegation in the high and the Phigh treatments.

At this point, making a more general statement about the non-economic social sciences is worthwhile. To a large extent, psychology, sociology and political science do not use quantitative theoretical models. To be fair, there are scholars in each of these sciences who develop quantitative theoretical models, but they are typically a minority. The situation is very different in economics because quantitative economic theory is an important basis for the whole field.

In the absence of a fully specified quantitative model, we could have only made statements like "theory predicts that there should be more delegation in the High and the PHigh treatment because interests are more strongly aligned in these treatments". However, we were unable to make a precise quantitative prediction like "theory predicts that the principals will never delegate in the Low and the Plow treatments, while the principals will always delegate authority in the High and the PHigh treatments". Yet, this is exactly the prediction we can make with the quantitative Aghion-Tirole model.

Why is making precise quantitative predictions so important? This is because sometimes we learn most from the quantitative failures of a theory. In the current case, for example, it is very interesting to discover that the theory fails to predict the correct outcome in roughly 60% of the cases in the High and the PHigh treatments. In the absence of a precise quantitative prediction, we would only be able to infer that there is more delegation in the High and the PHigh treatments compared to the Low and the Plow treatments – a prediction qualitatively in line with the theory. However, the strong failure of the theory in terms of quantities allows us to search with confidence for factors not captured by the theory but which contribute to the reluctance to delegate. Precise quantitative theories thus enable us to dig much deeper. In our context, this means asking the question why the principals are so reluctant to delegate their decision rights.

The effects of authority on effort provision

Before I answer this question, I present another precise prediction to you, namely, the prediction regarding the effort levels. The model not only provides precise predictions regarding delegation choices, but also makes precise predictions regarding the effort levels of the controlling and the subordinate party. We know, for example, that the effort has to be forty-five in some treatments and fifty-five in others, according to the theoretical prediction. We can thus calculate the difference between that quantitative prediction and actual numbers. By doing so, we discover the following: in all treatments, the controlling party (i.e. the principal in case of non-delegation and the agent in case of delegation) overprovides effort relative to the prediction (i.e. relative to the Nash equilibrium effort level). In contrast, the subordinate parties underprovide effort relative to the Nash equilibrium prediction in all treatments. In fact, overprovision of effort by the controlling parties and underprovision by the subordinate parties is substantial, raising the question of what drives this behavior.

Why are the principals so reluctant to delegate?

Why do principals retain their decision right in the High and the PHigh treatments, even though theory predicts that they will delegate it? One possibility is that the effort behavior after the delegation decision may have made it profitable for the principals to keep their decision right. This is not the case, however. On average, the principal's profit is substantially higher after delegation compared to those situations in which the principal kept the decision right. Thus, principals rarely delegate, even though delegation would have made them better off in terms of expected profits.

Another hypothesis that might explain the reluctance to delegate is that the principals may have believed that they would earn higher profits if they kept authority. Thus, perhaps the principals had very pessimistic beliefs about the agents' willingness to put forward high effort after delegation which may have led them to keep authority. Because we measured the principals' beliefs about the agents' effort levels for the (often counterfactual) case of delegation and for the case of retained authority, we can compute the principals' expected profit from delegation and compare it with that from retained authority. It turns out that the principals in fact expected higher profits in the case of delegation on the basis of the principals' own reported beliefs about the agents' effort levels. Thus, it is not only the case that the principals in fact earned higher profits on average if they delegated, but they also believed they would earn higher profits in case of delegation in a majority of the cases. Nevertheless, they preferred to keep their decision rights.

I think the evidence suggests that many principals did not want to give up decision rights just for the sake of keeping them. They seem to value authority *per se* and not just for making money. Our

hypothesis is therefore that individuals with decision rights may derive psychological value from the decision right. They value authority *per se*.

Can we strengthen the support for this hypothesis on the basis of the collected data? The answer to this question is YES because we also collected individual measures of loss aversion with regard to money. Loosely speaking, loss aversion means that losses loom larger than gains of the same absolute size. Loss aversion is thought to be one of the major determinants of the reluctance to give up positively valued goods. For example, if we endow one-half of the subjects in an experiment with a mug and ask them how much money they would need to be given to be willing to sell the mug (willingness to accept), they state a much higher monetary amount than the other half of the subjects not endowed with a mug when we asked how much they would be willing to pay to acquire the mug. Loss aversion is thought to be one major reason for this discrepancy between the willingness to accept payment to relinquish something and the willingness to pay to acquire the same thing.

In our setting, the principals' loss aversion could have added to their reluctance to delegate authority. One way to address this question is to measure subjects' loss aversion with regard to risky prospects. If loss aversion is not entirely domain specific – an assumption the evidence supports (Fehr and Goette 2007) – then loss aversion with regard to risky projects should be correlated with loss aversion with regard to authority. In other words, loss aversion with regard to risky prospects should predict subjects' reluctance to delegate authority. We find significant evidence for this hypothesis. Individuals who display an above median loss aversion (with respect to risky prospects) have a 20% lower delegation rate than those who display a below median loss aversion. Loss aversion thus seems to play a major role in explaining principals' reluctance to delegate. Keep in mind, however, that one can only be loss averse with regard to goods that have positive value to begin with. Logically, loss aversion can only play a role if authority has value *per se*; it tends to increase the subjectively perceived value of authority.

Explaining effort behavior

Why do subjects overperform when they are in the controlling position and underperform in the subordinate position? There could be two reasons for this. One has to do with beliefs because the controlling and the subordinate parties' effort levels are strategic substitutes. This strategic substitutability of effort levels is a crucial feature in the Aghion-Tirole model and it implies that if the controlling party believes that the subordinate party underperforms, the controlling party has a pecuniary incentive to overperform. Thus, the fact that controlling parties overperform could be a mere belief effect.

However, this explanation cannot be valid for the principals because they in fact have very optimistic beliefs about the agents' effort behavior. Therefore, principals in the controlling position (i.e. when they retain authority) even have an incentive to underprovide effort but they in fact overprovide effort. Thus the principals' beliefs cannot be the origin of their overperformance. If the agents are in the controlling position (because authority has been delegated), they believe that principals who delegate underperform. Thus, given this belief, strategic substitutability then implies that these agents have a pecuniary incentive to overperform, which can explain part of their overperformance when they are the controlling party.

However, the really interesting question is whether the controlling parties overperform, and whether the subordinate parties underperform, relative to their profit maximizing choices. If that were the case, the controlling parties would reveal a willingness to pay to overprovide effort because the overprovision reduces their expected profits. Likewise, underperformance of subordinates relative to the profit maximizing choice would mean that the subordinates display a willingness to pay to underprovide because the underprovision reduces their earnings. In other words, over and underperformance relative to the profit maximizing choice implies that the possession of authority generates a nonpecuniary motive to provide effort, while the lack of authority causes a nonpecuniary motive to withhold effort. Perhaps being in the position of the controlling party elicits a sense of responsibility for the overall output which tends to increase effort, while being a subordinate brings forth a lack of responsibility for the overall output which tends to decrease effort.

We indeed observe that the principals and the agents, when in the position of the controlling party, overprovide effort relative to their profit maximizing choices. Thus, the possession of authority seems to have a strong motivational effect on effort provision. For the subordinate parties, the situation is more nuanced, depending on whether the subject is a principal or an agent. Principals in the subordinate position (i.e. after delegation) strongly underprovide effort relative to their profit maximizing choice. Among the agents, however, we find a substantial amount of heterogeneity. A substantial share of the agents seems to be completely demotivated when in the subordinate position: they choose zero effort although that can never be an optimal choice in terms of profit maximization. The other half of the agents even overperforms relative to the profit maximizing choice. Thus, on average, agents in the subordinate position neither over nor underperform, but this "average view" is misleading because it hides heterogeneous responses.

Summing Up

Our experiments thus support the following conclusions. There is a strong underdelegation of authority even though this is costly for the principals. Loss aversion seems to be an important determinant behind the delegation choices, but substantial underdelegation occurs even when loss aversion is small. Many subjects seem to have a preference for authority per se. Those who are randomly endowed with authority value it per se, keep it, and subsequently like it even more. This is a piece of evidence that I have not yet shown you. We asked the people at the end of the experiment whether they preferred being in the position of the controlling party or whether they preferred being in the position of the subordinate party. The interesting fact is that the principals say that they would rather be in the position of the controlling party in seventy-five percent of the cases, while the agents only say this in forty percent of the cases. Recall that the principals kept authority in the High and the Phigh treatment and lost money all the time while doing so. Hence, the only thing they could have learned in this experiment is that keeping authority is costly because they did delegate from time to time. They therefore should have learned that delegating is better than not doing so. However, seventy-five percent ultimately say they would rather be in the position of the controlling party. Hence they like authority in itself.

With regard to effort choices, we observe that authority seems to provide extra motivation while the lack of authority seems to demotivate a substantial number of subjects completely. Finally, it is also worthwhile to point out that the deviations of delegation and effort choices from the theoretical predictions led to an overall decrease in average earnings for both principals and agents.

Together with my coauthors, I believe that these results may have important implications: "If people value decision rights *per se*, it may be diffcult to (re)allocate authority in organizational hierarchies to the benefit of the organization because even if organization members with authority would benefit economically from delegation, they may oppose it. ... The distortion in the allocation of control rights can lead to organizational structures that reduce the value of the organization as a whole. ... A reluctance to delegate power may also play a role in both corporate finance and the political sphere. Models of empire-building investment which have been used extensively in the literature to understand the trade-offs between financial instruments may, in part, be founded on a desire for power. Similarly, the taste for power may provide a rationale for term limits because otherwise politicians may try to keep their political power positions beyond what is good for the polity. In addition, the desire for power may also provide a rationale for models ... which assume that bureaucrats seek to maximize their discretionary budget."

"The motivational consequences of authority for effort provision may be equally important. The motivation enhancing effect for the controlling parties and the detrimental effect on the motivation of a large minority of the subordinates suggest that the incentive effects of authority are much larger than the standard model predicts; a reallocation of authority causes much larger effort increases for the new controlling parties and may cause a much larger effort reduction for the previously controlling party. The noteworthy gap between the controlling and the subordinate parties' efforts also implies that the effciency costs of authority are likely to be higher than predicted by the standard model, as, in the presence of strictly convex (and identical) effort cost functions, the first best effort allocation requires effort to be identical across parties. Additionally, the result that a lack of authority only seems to

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demotivate a minority of people strongly suggests that putting the right people into positions that lack authority is important. The development of tools for detecting this type of employee may thus be important in minimizing the cost associated with the (re)allocation of authority." (Fehr, Herz and Wilkening, 2010, p. 3).

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