A THEORY OF TRUSTEES, AND OTHER THOUGHTS

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Abstract

Independent central bankers and judges can both be more usefully viewed as examples of *trustees* than as *agents*. A trust is a legal institution with rules set up by a *settlor*, administered by a *trustee* on behalf of *beneficiaries*. Public trustees often are motivated more by Pride, Policy, Place, and Power than by money, and economists should take this into account. This paper will be published in the conference volume for the October 10, 1997 Antalya conference organized by the Bank of Turkey.

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INTRODUCTION

I will make use of the freedom provided by this volume to write something different from the usual style of the journal article. Rather, I will give a brief summary of the paper I presented at the conference, comment on the other papers presented, and, at the end– rather than at the beginning as my title implies– I will outline a theory of trustees inspired by the conference.

1. A Theory of Negotiation, not Bargaining

At the conference I presented a model of negotiation, as opposed to bargaining. Most economists have modelled what I call bargaining: the decision about how to split a surplus between two parties. Much of what goes on between parties in the real world, though, is what I call negotiation– changing the terms of a contract in ways that might actually help both parties.

To model negotiation, I use an auditing model in which the Offeror chooses between a Sincere clause which helps both sides and a Misleading clause which helps him and hurts the other party, the Acceptor. The Acceptor, however, cannot tell which kind of clause it is except by costly reading, and might decide to accept or reject without reading. This goes on for two rounds of possible extra clauses.

This is thus a model of contractual incompleteness due to contract-*reading* costs, not contract- *writing* costs.

One of the many equilibria involves each player using mixed strategies. The Offeror randomizes between offering Sincere and Misleading clauses. The Acceptor randomizes between reading the contract and accepting without reading.

Another equilibrium involves no offers being made and none accepted. The reason is that out of equilibrium, the Acceptor would reject any offer made without going to the trouble of reading it, since he believes it is probably a Misleading offer anyway. The Offeror knows this, and so does not make any offer.

Thus, expectations are highly important. If the two parties are pessimistic, they will never negotiate a contract with Pareto-improving clauses.

This also has an application to labor economics. In a union setting, if management and worker do not trust each other, then even if both would benefit from abolishing Inefficient Rule X and splitting the dollar gains between them, management would not bother to propose such a change. If management did, the union would reject the offer, believing that the rule

change has a high probability of just benefiting management.

An implication is that forcing the two parties to sit down together and make and read offers could benefit both of them. If the union is committed to reading carefully, management will make Sincere offers and will not bother to make Misleading offers that would certainly get rejected.

For further details, I refer the reader to Rasmusen (1997a).

2. Inflation Objectives

We often talk of the goal of a central bank as being price stability, but what do we mean by that? Even distinguishing between price and inflation stability, as is commonly done, is not enough. Consider the following four possible goals a country might have whose price level was 100 on January 1 and is now 140, and which had 60 percent inflation over the past twelve months and 40 percent in the 12 months before that.

Target prices. Return the price level to 100 and keep it there.

Target inflation. Return the inflation rate to 40 percent and try to keep it there.

Stable prices. Keep the price level at 140. If you fail, do not try to return it to 140; just keep it from changing again.

Stable inflation. Keep the inflation rate at 60 percent. If you fail and it rises to 90 percent, keep it at 90 percent.

Which of these goals is best? Target prices are good for long-range planning, because under that policy, contracts can specify prices with the assurance that they will not change much. Target inflation would require somewhat more complexity, because the contract would have to specify that prices rise each year, but future prices would still be predictable, and this allows the government to earn seigneurage. The policy of target inflation is also desirable if prices are sticky and deflation causes unemployment. But we should wonder if prices will be sticky if the central bank really is following a Target Price policy and has convinced the public that it is doing so.

Stable prices are better for short-term planning. In making new contracts, this policy allows people to use current prices, without having to predict the price changes that target prices mandate. If, for example, prices rise from 100 to 120 and a stable price policy is followed, people can write contracts based on an expected price of 120, but under a target price policy

they would have to calculate that the price would fall to 100. Those people who were writing long-term contracts a year ago, however, did not have to think about price changes under the policy of target prices.

Is there anything to be said for stable inflation? Well, it does reduce memory costs, since one does not have to remember what the target rate of inflation is, but it increases the need for information acquisition, since one must learn what current inflation is. The best argument for stable inflation is not based on transaction costs, but on the difficulty of changing expectations. If, for whatever reason, public expectations are that the inflation rate follows a random walk, then the central bank might do best by following those expectations. This is not entirely satisfactory as a story, since, like my model of negotiation, it does not explain the origins of the expectations, but it does have a plausible ring to it.

3. Setting Up Institutional Objectives

An issue that came up at the conference was how to model social welfare as a function of output, inflation, and government spending. Kipici and Ozgan weighted the cost of divergences from the target levels of those variables equally, in contrast to the central bank's and government's possibly unequal weights and the central bank's zero weight on government spending. One alternative would be to set up a model with a representative agent and base welfare on his utility function. That would be unnecessarily complex for many models, however, and what we really want is a reduced form that captures the tradeoffs between these desirable variables in a simple way.

Weighting the arguments of the welfare function is arbitrary. I would suggest assuming that the social welfare function is the same as the government's except for a lower discount rate because of the limited term of office that elected officials have. The central bank, on the other hand, might well be set up to have a zero weight on government spending but the same discount rate as the public (or even a lower discount rate– an intriguing application of Ulysses at the mast).

Several questions could then be addressed. First, if a cooperative arrangement between government and central bank is feasible, how should each of their objectives be optimally weighted? Second, if the central bank is independent, is that an improvement over subservience to the government, given that that the envisaged central bank has different welfare weights than the public? Third, would it be desirable to have a central bank with a discount rate even lower than the one in the social weflare function?

4. A Theory of Trustees

We now come to trustees– almost. First, though, I must talk about agents.

Agency is an old concept in Anglo-Saxon law that has been widely used in economics since the 1970's. One party, the principal, hires another, the agent, to act for him. The principal can issue orders of varying specificity and can compensate the agent in various ways. He can fire the agent at any time unless they have a contract that forbids it, and even if the contract requires him to keep paying the agent, he can end the status as "agent" by removing all the authority delegated to the agent. In law, the main questions involving agents concern the effect on third parties of misbehavior such as negligent harm or making unauthorized contracts, something I have written about in Rasmusen (1997b). In economics, the main questions involve how the agent's compensation can be designed to make him follow orders properly rather than shirking. All of the problems economists usually study, though, would disappear if the principal had the same information as the agent, knowing the state of the world at every moment and knowing what actions the agent has taken.

Thus, this paradigm does not fit governments and independent central bankers. If the central bank is independent, it is acting on behalf of the government, but not under its orders. The government may very well know that the central bank is keeping interest rates high, but it cannot fire the central bank. Not agency, but a different legal paradigm is appropriate: the trust.

A trust is created when one party, the Settlor, grants some property to be controlled by a second party, the Trustee, on behalf of a third party, the Beneficiary. In the law, one person can fill more than one of these roles, and indeed could perhaps fill all three– I would have to do more research to discover that. A father can, for example, put ten thousand dollars in trust for his son's education, with himself as trustee. If he changes his mind later, he cannot take back the money (unless the trust is "revocable"), but as trustee he can control how it is invested.

The purpose of a trust is to make a commitment. Once the trust is set up, the Settlor no longer has any control over the assets. Nor does the Beneficiary have control; the Beneficiary may be unhappy about how the trust is managed, but the Trustee is not obliged to obey the Beneficiary's orders, and often a trust is set up precisely because the Beneficiary's desires are to be thwarted. The father in my example could have given the money directly to his son, but he chose to tie it up a trust for a specific purpose instead.

Trusts are better for commitment than either contracts or promises.

Promises, as opposed to contracts, generally cannot be enforced in Anglo-Saxon law, and when they can be enforced, it is often on the logic that the promise has implicitly set up a trust for the one to whom the promise was made. Contracts are enforcible, of course, but not if both parties decide to waive enforcement (see Section IIIe of Rasmusen & Stake (1997) for references). A Trustee is bound to carry out the terms of the trust, however, even if the Beneficiary objects.[1]

Let us now return to government institutions. These are often usefully viewed as trusts. Consider elected officials. Generally they are completely free of the control of the citizens between elections, though they can be sued for malfeasance in the courts. Thus, they are not agents, but trustees. As Rousseau said in *The Social Contract*, Book III, Chapter 15, "The English people believes itself to be free; it is gravely mistaken; it is free only during the election of Members of Parliament; as soon as the Members are elected, the people is enslaved." Only if elected officials can be recalled– as, I believe, they can in certain American jurisdictions– are they properly agents rather than trustees with limited terms. In fact, the American system was set up to have federal officials with diverse degrees of independence. "Representatives" were elected every two years by popular vote, but "Senators" were deliberately chosen only every six years, and then by the state assemblies rather than by the voters. (This was later replaced by direct election by the voters, but still only every six years.) The purpose of the six-year term is explicitly so that the senators will be unresponsive to the popular will.

Federal judges are the extreme. They are appointed for life, and can be removed only by special impeachment proceedings of Congress. There is a literature that looks at the advantages and disadvantages of this independence.[2] The seminal article is Landes & Posner (1975), which notes that independent judges help solve a commitment problem. If judges were agents of Congress, then Congress could pass laws repudiating its previous agreements. Consequently, nobody would make agreements with the government. By delegating the power to enforce agreements to independent courts as trustees, Congress induces others to trust its agreements.

[1]Note, however, that if the Settlors and Beneficiaries unanimously agree, then the Trust can generally be dissolved, even against the will of the Trustee, and probably against the explicit terms of the Trust. See the Restatement, Second, of Trusts, Section 337, the Reporter's Notes to which say that in England the Beneficiaries can terminate the trust even if that defeats the Settlor's purpose, citing *Saunders v. Vautier*, 4 Beav. 115 (1841), though in America this is not allowed.

[2]See Cooter (1983) and Posner (1994) on judicial objectives, Ramseyer (1994) on the Japanese judiciary, Spiller & Gely (1995) on the interaction between Congress and the U.S. Supreme Court, Rasmusen (1994) on precedent as a control, and Ramseyer & Rasmusen (1997) on political influence on judges in Japan.

Many such cases exist, in which a Settlor government gives some of its powers to a Trustee institution because the government knows it would be tempted to abuse those powers otherwise. A more specific example is the way in which the U.S. Congress votes to give "fast track authority" to the President to make trade agreements. Under fast track authority, Congress agrees not to amend any agreements the President makes with foreign countries, but only to vote the agreement up or down. Congress delegates this power because it knows that otherwise it will be irresistably tempted to amend the agreement, and this will make foreign negotiations futile.

Independent central banks are also Trustees, with the elected government as Settlor and the citizenry as Beneficiaries. The property in trust is the power to inflate the currency, a power with which the elected government does not trust itself. Central banks that are not independent, on the other hand, are Agents, carrying out the orders of the Principal, the elected government, whether that be to inflate the currency or not. This is the well-known idea of Barro & Gordon (1983) and Rogoff (1985) rephrased.[3] The fundamental problem is the government's desire to inflate the currency. This has three advantages for the elected officials. First, it generates short-term macroeconomic gains by reducing interest rates and stimulating investment. Second, it earns seigneurage which can replace tax revenue. Third, it reduces the value of the national debt, reducing the government's liabilities. None of these mechanisms, however, have desirable long-term effects, and the inflation that results is costly in itself. Thus, it may be desirable to give this power to a Trustee.

Not all central banks are Trusts, of course, only independent ones. The central banks of the United States and Germany have a high degree of independence, and can viewed as Trusts. The central bank of Turkey and many other countries are better viewed as Agencies. The effects of each organizatonal form are what the vigorous discussion in academia is all about.[4]

The biggest problem that arises with Trustees, a problem for both judges and central banks, is that the Trustee may not act on behalf of the Beneficiary or according to the terms of the Trust. If the Trustee is independent, how will he decide how to use his power? Driffill (1997) and Miller (1997) survey the large literature that has developed to look at that question in macroeconomics and political science, a literature that includes much discussion of how to design optimal incentives for central bankers. Before we can reach the

[3]See also Miller (1997), which, like this paper, analogizes central bankers to judges, and follows the paradigm of Landes & Posner's 1975 article on judges to argue that the purpose of an independent central bank is to enforce contracts made by the government.

[4]Institutional details clearly matter tremendously in this discussion. See Goodhart (1995) for a book-length treatment of these.

question of optimal contracts, though, we must address the question of what bankers care about, what they would maximize in the absence of external constraints.

So what do Trustees care about? The usual arguments of a utility function in principal-agent models are effort and money. Those are important for many Trustees, too. When a bank acts as a Trustee for a spendthrift trust created to give an income to an heir, for example, the bank values the fees it collects and will minimize its effort subject to the constraint of its legal duties, its reputation in the market for becoming a trustee, and, one hopes sometimes in vain, a sense of moral duty. The problem of trustee misbehavior, whether in collecting overgenerous fees, exerting too little effort, or stealing from the trust are well worth studying.

Here, however, we will concentrate on more metaphorical trustees– the judges, politicians, and central bankers. The proper way to model their utility function is different. Effort and money are minor concerns. It is rare for abuse of power for these trustees to take the form of low effort. Nor can varying their compensation be expected to make much difference.[5] I have suggested elsewhere that politicians should be paid generously because their salaries are trivial compared with the amount of wealth that their decisions affect, and we would like to reduce their marginal utility of income to reduce the temptation to steal (Rasmusen [1992]). But all three of these occupations select for people who care less for money than for other things. Most politicians could increase their income by quitting politics for the private sector, and this is true of the vast majority of judges (above the local level) and central bankers in most countries. This is no less true because of the fact that their high alternative income often arises from their having held those positions– once they hold the positions, if they value money much, they will resign quickly.

The Chairman of the Board of Governors of the Federal Reserve, for example, earned a salary of $133,600 in 1995, while the lowest-paid president of the twelve Federal Reserve District Banks earned $177,550, and even the salaries of the head of the Research and Statistics department at the Board of Governors earned more than Chairman Greenspan.[6] Compare this with $2,989,832, the 1995 annual salary plus bonus of the CEO of the Bank of

[5]Hence, the literature represented by Walsh (1995) and Goodhart & Huang (1995), in which central bankers' compensation is linked to inflation and unemployment rates, is misguided. I have not yet seen a copy of Bruno Frey's new book, *Not Just for the Money: An Economic Theory of Personal Motivation*, but it would seem useful for this kind of task.

[6]See Thomas (1997) at 299 and Cassidy (1996) at 41. Also, it seems that in 1996 the head of custodial services was earning $163,800 per year (Ralph Vartabedian, "Tightfisted Fed Generous to Own Staff, Panel Reports," *Los Angeles Times* , September 12, 1996, p. D1).

Boston Corp. , or the $494,615 for the fifth-highest-paid officer of that bank.[7] When Board members leave office, their salaries rise. This was true even of Board member Alan Blinder, a professor of economics, who increased his salary when he returned to academia in 1994, and who must have increased his earnings far more with the consulting activities Princeton allows him (Cassidy (1996), at 46).

The position of federal judges in the United States is similar: virtually all of them could earn more if they lost their jobs. Elsewhere in the world this is also true; this is why in our forthcoming paper on the Japanese judiciary, Mark Ramseyer and I felt comfortable in proceeding without salary data to look at judicial rewards in terms of location and court hierarchy.

So what do trustees want? I suggest a "Four P's" approach, hijacking a slogan from marketing. The "Four P's of Marketing" are Price, Product, Promotion, and Place. My Four P's of Trustees are Policy, Pride, Place, and Power.

POLICY refers to the trustees desire to see particular policies in place, usually because of his political or moral principles. A central banker has a personal preference for the inflation rate. A judge has a personal preference for whether abortion is legal or not. A politician has a personal preference for the rate of income tax. A good way to model this is to label the trustee's policy choice x, his personal preference x_i, and the settlor's preference x^*, where all these variables lie in the interval $[0,1]$. The Trustee wants the policy to be as close to his desired policy as possible, so let us have $\frac{1}{(x-x_i)^2}$ enter his utility function.

PRIDE refers to the trustee's reputation for competence. A central banker wants to be known as someone who understand the economy and the effects of the instruments at his disposal. A judge wants to be known to the legal profession as someone who can argue cogently for his positions and who knows the law. A politician wants to be known as someone who can get things done. Let us denote Pride by the variable y_i for Trustee i's perceived ability, a variable lying on the $[0,\infty]$ continuum.

PLACE is the Trustee's job. He likes being a trustee, and does not like being fired, quite apart from the losses in the other variables. Central bankers, judges, and elected officials all are granted deference and perks based solely on their positions, and instantly lose most of this when they leave their positions. Let us denote Place by Z_i, which take the value 0 if the Trustee loses his job and 1 if he keeps it.

[7]Salaries from p. 19 of www.sec.gov/Archives/edgar/data/36672/0000950135-97-001232.txt, on November 7, 1997.

POWER is a different dimension than Place. A trustee can keep his position but have no discretion to do anything. Or, the trust could separate out position and power; the Emperor is worshipped as a god, but the shogun makes all the decisions. Power is here considered as a good in itself, not as a means to influence Policy. A simple way to model Power is as the number of decisions the Trustee is free to make. Here, let us denote it by D, an integer from 0 to M. In the modelling of Policy above, the Trustee was limited to one decision variable, x. We can easily make this a vector with $N \geq M$ elements, where N could be larger than M because it may be useful to model the Trustee as having preferences over some policy variables that he cannot possibly affect by his actions. Also, note that we can keep the model simple by continuing to model Policy as unidimensional; this implies that the Trustee likes having more decisions to make because of Power, but he only cares about the outcome of one of them for Policy.

We can thus write the Trustee's utility function as

$$U_i = U(\frac{1}{(x - x_i)^2}, y_i, Z_i, D), \tag{1}$$

with U increasing in all its arguments.

Let me now return to Pride. How does a Trustee improve his reputation for competence? That depends on the setting. Let us consider a central banker. One possibility is that he is rated on his ability to achieve his Policy, Place, and Power objectives. If that is so, then Pride will have little independent effect, perhaps even having no effect on his decisions. A second possibility is that Pride depends only on how well he achieves one of the other objectives– on his Power, for example, but not on his Policy. In that case, the effect of PRide is just to magnify the effect of Power relative to Policy and Place, increasing the importance of Power as an incentive tool.

A third possibility is the most interesting. Suppose the central banker's competence is rated on how close he comes to achieving the beneficiary's desired Policy. This can be modelled as

$$y_i = \frac{1}{(x - x^*)^2}$$

Perhaps I should set this up as a formal signalling model with incomplete information. It could be done, at any rate.

In the example of a central banker, the story would be that if the banker's personal preference is for 0 percent inflation, but the electorate's ex ante, informed preference is for 10 percent, then the banker will not choose 0 percent, but rather something in between. If he chooses 0 percent inflation,

people perceive his ability to be low– they think that he tried for higher inflation, but couldn't manage to get what he wanted. The belief is self-confirming.

Pride is interesting because there are multiple equilibria in it. It all depends on what people think is the signal of ability. If the settlor of the trust can set up expectations a certain way, he can use this tool to move the Trustee to the Settlor's preferred Policy and away from the Trustee's.

The Four P's Theory also allows us to explain certain other aspects of central banking. One question is why a central bank should have authority over banking regulation as well as over interest rates. It is certainly desirable to have an independent Trustee supervising banking regulation, given the experience of the United States (and no doubt other countries) with elected officials pressuring regulators to go easy on troubled and criminal banks. But why not set up a separate Trustee? The answer may be in the central bank's love of Power. In the United States, the Federal Reserve has resisted attempts to take away the control it has over certain bank regulations and rationalize regulation within a single agency. An obvious explanation is the utility of Power.

We can also explain the low salaries of Federal Reserve governors. The salaries of Board members are set by Congress, and it may be advantageous to set them low. This reduces the value of Place, and Board members commonly leave before their 14-year terms are up. They clearly have independence from Congressional bribery, and they do not care about reappointment simply because the law forbids them to be reappointed– an interesting aid to independence. Moreover, there is a beneficial selection effect. Paying public servants a low salary to attract only those with particular utility functions– who wish to serve the public rather than earn money– is an old idea, though usually applied to elected officials. We have deliberately selected for Trustees who are unusually unresponsive to monetary incentives.

The theory has implications for the dimensionality of central bank objectives. A Trustee whose Trust has many objectives has much greater discretion, since he can choose which objectives to favor. This allows great scope for satisfying his personal Policy preferences (as we see with independent American federal judges, whose objectives have very high dimensionality, besides being quite vague). If, on the other hand, the central bank is given one objective– low inflation, for example– it is much easier to monitor how it is doing, and much easier to use Pride by showing that the bank has failed to meet its formal objective.

It is equally important to give the Trustee only objectives which are under his control. Ordering a central bank to deliver "a healthy economy"

is futile. Moreover, if some objectives are out of the bank's control, the banker already loses some utility from Pride, or gains some from successes not really due to his own effort, making it harder to use that instrument to control his behavior in more relevant areas. Combining the ideas of these last two paragraphs: if the central banker has 10 targets, of which only inflation is truly under his control, then inflation will be so small a part of his reputation that he will use it to satisfiy his personal Policy preferences instead of to gratify his Pride by improving his reputation for effectiveness.

I hope that these thoughts may be useful in organizing our thinking about government institutions. The Four P's Theory hardly deserves the name of theory, since it has been largely taxonomic. I have, in fact, committed a sin of which I frequently accuse graduate students: constructing a model without coming to any propositions, as a general rule, any paper that states its achievement to be, "I have constructed a model of ..." is worthless. I hope this taxonomy, though, will be useful to shift from thinking of agents to thinking of trustees. The shift of emphasis has quite different implications for how to structure their incentives.

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