

An Organizational Model for Encouraging Social Cooperation

Two neighbors may agree to drain a meadow which they possess in common, because it is easy for them to know each other's mind; and each must perceive that the immediate consequence of his failing in his part is the abandoning the whole project. But it is very difficult, and indeed impossible, that a thousand persons should agree in any such action; it being difficult for them to concert so complicated a design, and still more difficult for them to execute it; while each seeks a pretext to free himself of the trouble and expense and would lay the whole burden on others.

David Hume

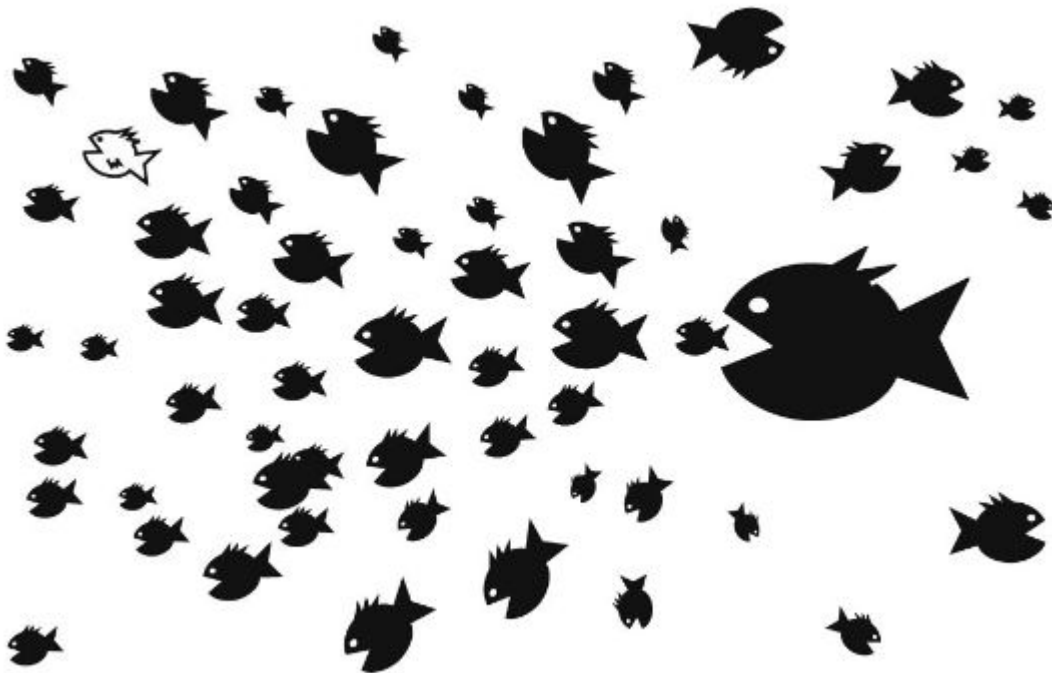
Hume, David. "A Treatise of Human Nature."

I. Example Problems of Collective Action and Their Solutions

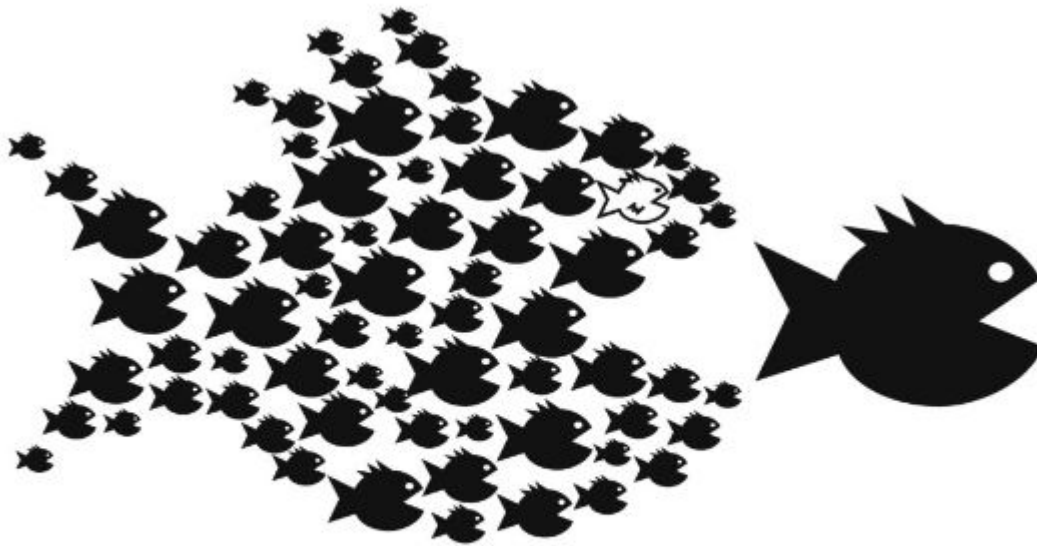
This essay is basically a bare-bones business plan for either a non-profit or for-profit entity. First, I'll present examples of problems I think this model will solve. The problem is the Tragedy of the Commons. I'm obsessed with this problem and I see it everywhere. I'll try to explain the idea only through examples, although there's an appendix for those who interested in details. Later, I'll explain the organizational model and be more specific about the real world problems it will solve.

Example 1

The little fish below have a problem.



In the next picture (which may be familiar to some of you) they have found a way to solve this problem by coordinating their behavior.



ORGANIZE!

Simple right? But one problem with producing this cooperative behavior is as follows. Let's assume that each little fish believes that organizing into the superfish benefits everyone overall, including themselves. However, if each little is unsure of the plans of the other little fish, they may not participate. The perceived cost to an individual of sticking their neck out becomes greater the more uncertain they are others will do the same. Encouraging cooperative behavior that carries a risk or cost means convincing each individual that their cooperation will not go unanswered by their fellows.

One way to get individuals to coordinate their behavior is through morality. Morality can be thought of as a solution to this problem. That is, our natural sympathy for other beings and/or our fear of shame and guilt can often produce enough participation for successful coordinated action. Many think that morality evolved to solve such problems. Populations of creatures that use concepts such as fairness, reciprocity, trust, guilt, shame etc. often do better than rival populations.

Example 2

The nation state can also be thought of as a solution to a similar problem of people living in a state of nature. Nation states do very well at eliciting cooperation and coordinating behavior, i.e. they are good at making the small fish stay in formation. Another way to put the idea is if the state of nature is "...nasty, brutish and short," because no one cooperates in the state of nature, then we should give up some rights and freedoms to the state in exchange for protection, education, sewers, etc. This is basically the idea of the social contract. It is a contract each citizen has with every other citizen and is enforced through the nation state.



As the this picture from Thomas Hobbes "Leviathan" illustrates, the individuals of the state make up the instruments through which the nation state exercises its power, the armed forces are the tip of the sword the bureaucracy and legislature are the brains, the police are the white blood cells and our taxes, the nourishment and oxygen (in case its unclear, the sovereign in the engraving is constituted by small figures of people). The nation state keeps all the little fish in line through education, acculturation, propaganda and physical force. For the most part, the nation state is good at providing incentives to act collectively. This metaphor, the nation state as a body, has many pitfalls. For example, there seems to be more discord and conflict in the nation state than in the human body. But for our purposes, it is enough to know that the nation state can be seen solution to a cooperation problem in addition whatever else it is (although sometimes the solution is worse than the problem!)

Example 3

Another example of a tough cooperation problem is the lack of voter turnout. Why is this? The essential reason, I think, is because individual votes don't matter. That is, holding separate what our duties might be as citizens, or whether we feel guilty if we don't vote, it is hard to make an argument that one person's vote matters, matters in the sense that it influences the outcomes of elections enough to counter the time and effort it takes to vote. Of course, the whole of all people voting matters, but while true, this doesn't tell the individual whether voting is a reasonable thing to do. It seems clear that an individual's vote does not matter enough when if, as it seems, many people don't enjoy voting and consider it a cost to be incurred. The upshot is that it is difficult to get everyone to vote, simply because the argument that your vote matters doesn't carry any weight. I believe we must rely on arguments already hinted at, to the effect that voting is one's duty

as a citizen, or that citizens will experience the inherent pleasure of participating in public life, to get people out there. The trouble is these are nebulous and slippery reasons.

As a side note, a lot of people don't like to hear that an individual's vote doesn't matter, perhaps because they see it as a dismal way to look at the world or a danger to our democracy. I realize that at first this is a hard idea to accept, but we should take this bitter pill, and admit that our vote doesn't matter, (which most of us know deep down anyway and if you really think any one individual's vote matters, do the math). Accepting it frees us to think about better ways to do democracy rather than just voting (hint: deliberative democracy). I vote because I know I would feel guilty if I didn't and I think its fun. I don't vote because I think my vote matters or that it "gives me a voice."

Example 4

In many apartments, or at least where I live, heat is included in the rent. This is a bad idea if it can be avoided. It encourages waste. If I keep my windows open all the time, my landlord pays that much more to heat the building and they raise their rents over the long run by that amount, or something close to it. So, the cost of my actions is spread out over the entire building. That is, everyone pays more for my actions, but I only pay a fraction of the total cost, with the rest being divided amongst other apartments. But if everyone pays for their own heat, then each person bears the cost they incur.

But what if it is impossible to divide up the bill according each's actions? Well, there are a few possible solutions. One solution is to have a short meeting once a year where the landlord presents how much she paid for heat last year, how that affects rental prices, and what everyone can do to keep heating costs down, etc. Everyone walks away with a flyer summing up the facts and energy saving tips. Information helps. Nobody will be under the impression that the costs just disappear or the landlord just eats them, which they don't. Also, face to face contact tends to make people more aware of how their actions affect everyone and hence makes people more likely to act in ways that benefit the group (i.e. form the superfish). This would be a simple device that takes advantage of human nature and human sympathy to change behavior.

A similar problem arises when encouraging people to voluntarily cut back on carbon emissions. Each individual incurs a very real cost to do so, for almost zero return, in that each individual's actions taken alone do not affect the outcome.

To sum up this section, in addition to setting-up examples of this sort of problem, I offered some possible solutions. There are a variety of ways to tackle these problems; and solutions will vary with the specifics of the problem. Some may be solved by a single simple change. Other problems may be solved by many small changes that work together to significantly alter outcomes. The organizational model I propose in the next section tackles many of the impediments to problems of collective action discussed above.

II. A Model for Encouraging Social Cooperation

What I propose is an organization that catalyzes collective actions and solves cooperation problems. It gives us the ability to transform ourselves into superfish for specific purposes. The idea is to provide a catalyst for collective action and give persons incentive to stay in formation.

Some Impediments to Donating

There are a few reasons why people are not willing to give money or time on such cooperative projects, some of which have been discussed in the examples above. Let's boil them down and add one more.

- People consciously or unconsciously weigh the cost of time, effort or money incurred in participating in collective actions, and the uncertainty that enough people will participate tips the scales towards pursuing narrower personal goals.
- People may want to contribute time or money, and agree to do it when it is off in the future, but when the time arrives, watching a movie or shopping sounds better *at that moment*.
- Potential donors lack knowledge about specific collective actions and so actions are under attended or fail to actualize.
- Some collective actions for which there would be demand are too costly to organize.

Target Market

The organization's target market is folks who already donate time and money and folks who are concerned with issues beyond their private lives, but do not often donate time or money. This model is not a magic wand for getting everyone out there and doing stuff; if someone really wants to sit at home, this isn't going to change that. But I think it will increase the level of participation in those who already participate and get more people off the couch.

Target Collective Actions

The following are some examples of situations this company or non-profit will serve:

- A community wants to build a library but lacks government funding.
- Organizers wish to stage a protest in Washington D.C.
- A group of friends wants to plan a trip to Europe two years from now.
- An expanding non-profit hopes to build a new building and needs funding.
- A neighborhood wishes to clean up a park.

For simplicity let's break these *collective actions* into two groups. *Collective projects* require mainly money. *Collective events* are those that require mainly time or effort on the part of the donor. Each of these will be handled in a separate manner.

The Conditional Contract

The model I am proposing alleviates these impediments to successful collective

action. The heart of the idea is the conditional contract. The conditional contract is a legal contract to which a donor agrees.

1) A potential donor identifies a collective action they wish to make real.

2) The potential donor sends a check, or gives credit card information, or otherwise put a set amount of money in escrow.

3) Specific conditions are laid out under which the collective action will take place. This will always include a specific number of people that must also agree to this contract.

4) If these conditions obtain (including the specified number of people signing their contracts) the contract kicks in. The event or project will take place and everyone is obligated to attend or donate. In the case of an event, if you don't want to go, that's fine, but we cash your check or charge your credit card. If you want to keep your money, participate in the event. In the case of a project where the donation is money, well, we'll just keep your money. You agreed to the conditions of the contract.

The donor then clicks a button or signs their name. Its an "if, then" contract. The reasoning goes like this: if x amount of others sign up (plus whatever else needs to happen) then the participants are legally obligated to attend the collective event, or donate to the collective project. But if the "if" does not obtain, the contract is void. The contract only kicks in if the specified number of people sign the same contract. You are then obligated to go if you want your deposit back. Again, if you chicken out, that's fine but we keep your money. And if the project requires mostly money, we already have your money. Of course if not enough people sign up or one of the other conditions does not obtain then nobody is obligated to do anything and everyone gets to keep their money. You can still attend the event or donate to the project but there is no *legal obligation* to do so.

Let's take the example of a community desiring a new library, but lacking the money to do so. The library posts a listing and states that if 100,000 people sign up at \$10 each this will fund the new library. So, if someone wants to see this library built, they click "yes" and their credit card is charged. And if not enough people sign up, after a time limit of say, a year, we'll refund the money, maybe with interest. And if 100,000 people click the button, the library rises up from the earth. All for \$10.

Possible Embodiments of the Conditional Contract

There are at least a couple of ways this idea could be embodied. One way would be a website like E-bay or Craigslist that would host these events and projects. Many groups or individuals dispersed across the country could organize collective actions. Donors could signup to receive listings by type or zip-code. The company would not manage the events and projects, but act only as host. If someone bids on the Brooklyn Bridge on E-Bay, E-Bay is not liable when the customer is angry because nothing came in the mail. Organizations that post these events and projects on the website could be

rated much like E-Bay sellers so that some could build good reputations. There are many things that can and should be done to minimize bad and poorly planned events, but at the end of the day, the organization would not be liable for whatever happened surrounding the project or event. The practical legal question is how much this liability can be limited.

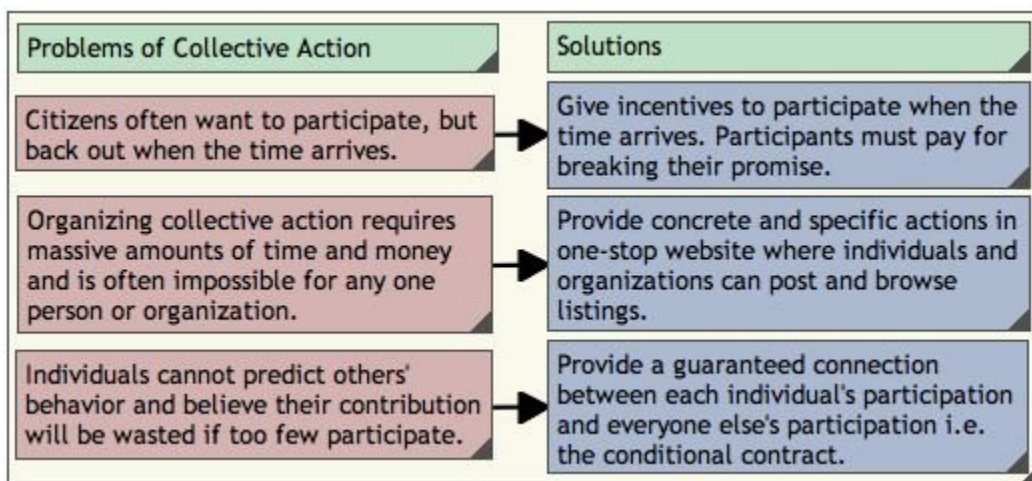
Another embodiment might be a non-profit that takes a more direct role in a smaller number of collective actions. This smaller organization might be more effective in local geographic areas.

As far as income goes, the organization could take a percentage of the money from the no-shows, charge a listing fee like e-bay, or take a percentage from the donations from successful collective projects.

Reasons Why the Conditional Contract Will Work

The conditional contract will encourage people to engage in collective action for the following reasons:

- It focuses people's attention on specific projects at specific times, places, etc. This focusing of attention will encourage collective actions.
- It reduces the cost of organizing such collective projects. The organization provides the skeleton for creating and enforcing collective actions, only the variables need to be plugged in.
- People gain the ability to bind themselves to a future action by making it too costly to back out when the time comes. The nature of the conditional contract binds people to follow through where they normally might not. For example, if a group of friends want to plan a trip two years from now, they will be less likely to sellout if there is a penalty. More people will sign up for the protest, because it is off in the distant future (pay nothing now!) and when the day arrives, they can't back out without a penalty, which will get most out the door and into the streets. It's like Odysseus tying himself to the mast when the ship encounters the Sirens.



The giver considers just one question before giving: "Am I willing to contribute to make this collective action real?" This is the only cost they could incur; there is no possibility that their donation will go unmatched by others. The donor does not have to consider the possibility they will donate and no one else will or that they will be the only ones to show up at the protest. They are only obligated to donate if the critical mass is reached.

The act of donation will entail the collective action's reality. There is a tight connection in the conditional contract between the individual participating in the collective action and that action taking place.

Once people get used to these ideas, I believe they will make the connection between their donation and the reality of the collective action. It's almost as if your donation is making the collective action real. Citizens will feel empowered since the collective actions to which they donate always, always, take place.

Miscellaneous Points

The collective actions should be concrete and specific. Building a new wing for the library is a better candidate project than funding various library projects for a year. Donating to hire a specific lobbyist for a year is a better project than raising money for the general purpose of lobbying congress. People like to see the results of their time and energy. The more nebulous and abstract the goal, the less likely people are willing to spend time and money trying to achieving it. Concrete, specific and tangible goals that involve peoples' hearts and minds are excite people to action.

The success of this model would depend on three main things. Firstly, are there enough people out there that would understand the benefits of the conditional contract and also be willing to participate in these actions? Would this organization be able to gain the critical mass necessary to be successful? (A non-profit would be less vulnerable to this problem). Lastly, would the legal issues raised by this sort of endeavor be manageable?

In September of 2007 a website was launched "<https://www.thepoint.com/>" which utilizes many of these ideas. One good idea they've instituted is that users' identities can be kept anonymous until the threshold is reached. So, if the collective action carries a risk of retaliation, say employees are demanding health insurance, no one's identities are released until the threshold is reached. This does not entirely eliminate the risk, but no individual is sticking their neck out. This website does not seem to have the binding mechanism of penalties, it's all on the honor system. Perhaps the penalty system is not appropriate for all collective endeavours.

Summing It All Up

If successful, the model I have presented would be a stepping stone in getting folks to design and implement institutions for effective and efficient collective action, including more overtly political institutions.

Brett Anderson
djbraski@yahoo.com

Appendix - Prisoners' Dilemma and The Tragedy of the Commons

The Prisoners' Dilemma

Two thieves, Anne and Suzy are caught by the police, put in separate rooms and given the following set of choices. Each is asked to Defect and testify against the other in exchange for a reduced sentence. However the catch is that the outcome for each is partially determined by the other's choice. If both *Cooperate* and do not testify against the other, then the police charge both with minor infractions, carrying a year long sentence. If they both *Defect*, then both get 2 years. If Anne *Defects* while Suzy *Cooperates*, then Anne walks while Suzy goes to jail for three years.

		Anne	
		D	C
Suzy	D	-2 / -2	-3 / 0
	C	0 / -3	-1 / -2

Notice the fewest total years in prison occurs if both *Cooperate*. However, *Defecting* strictly dominates, that is, no matter what Anne does, Suzy does better by defecting. If Anne keeps mum, Suzy is better off *Defecting*, she walks. If Anne *Defects*, then Suzy is also better off *Defecting* too, getting two years versus three. Let's also assume they don't like each other, and they have no mutual friends or mafia bosses to affect their outcomes. There won't be any consequences for

their decisions, and they feel no love for one another. But wait, if for each one, the best choice is to defect, then why do they end up with more jail time, a higher total prison time, then if they both cooperated? Wouldn't it be best for both if they both cooperated? That's the puzzle. From the perspective of each individual, it would be best if they *Defected* and the other *Cooperated*. Now, we're considering what it is rational to do, given thier beliefs and desires. If it is really rational for Anne to *Defect*, hoping that Suzy will *Cooperate*, then it must be rational for Suzy to do the same, and they both end up ratting. Notice too, that both players may realize that it would better for them to both *Cooperate*, but they may not trust the other to keep up their end of the bargain, and so still end up *Defecting*.

When presented with this dilemma, peoples' intuitions differ, and each side invariably thinks the other side is clueless. Also, intuitions shift when the costs differ, while keeping the ordering of the outcomes the same. This is strange since it is the orderings of the outcomes that matter, not what or how much is at stake.

Similarly the general problem for rationality that the PD creates does not go away if we try to get each player to be "unselfish" or "do what's right." For let's say that each player only values the welfare of the other and care nothing for themselves. The problem still has the same bite. The problem is a general one with how the players order the outcomes, not what they specifically value. The upshot is that the prisoners' dilemma is one of rationality generally and does not go away if we change what specifically is valued.

The Tragedy of the Commons

The story of the tragedy of the commons goes like this: say you own a herd of cattle, and many other ranchers around you also own their own herds. Everyone grazes a common plot of land. The land can only hold so many cattle before it degrades and eventually collapses. The tragedy occurs if 1) the cost each rancher incurs to add one more to the herd is less than the payout for selling the cow later on and 2) each rancher does not bear the full cost each

additional cow creates on the commons. For the cost of each additional cow is split equally amongst everyone. The rancher that adds the cow only bears a fraction of the real cost of that cow. So, each keeps adding cows until the commons collapses. The point is that every rancher is able to *externalize* the cost of each cow onto the rest of the group, while keeping the entire income. And note that it could be true that each rancher understands they are contributing to the collapse of the commons, and that the collapse will happen and it still may be rational for them to continue to add cows. For if the number of ranchers is great enough, your actions can't stop the collapse, so it is reasonable to extract what you can, if you expect everyone else to do the same. Moreover, it may be practically impossible to set-up and enforce an agreement with all the other ranchers to limit the pressure on the commons. The Tragedy of the Commons is an iterated Prisoners' Dilemma with many players. That is, the abstract mathematical structure of the TOC is a PD run over and over again with each agent taking turns playing the group.

Googling either the Prisoners' Dilemma or the Tragedy of the Commons will get many hits. There are many rich issues which lead in the directions of rationality, politics, morality, evolution, etc. Also, for another mind bender check out Newcomb's Dilemma, or Newcomb's Problem, this related dilemma ties in with the games above and leads into causality, free will, religion etc.