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INDIVIDUAL MOTIVATIONS AND MASS MOVEMENTS

José Miguel Sanchez Molinero

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UNIVERSIDADE NOVA DE LISBOA
Faculdade de Economia
Travessa Estevão Pinto
1000 LISBOA

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1. INTRODUCTION

In 1971 G. Tullock published his paper on "the paradox of revolution", which challenged the traditional view of the unselfish revolutionary. There he developed a "private interest theory of revolution" [1], where individuals are motivated mainly by their self interest. This theory draws heavily on Olson's concept of "selective incentives" (Olson, 1965). Selective incentives are private rewards that induce people to participate in a collective action, and private penalties that deter them from not participating in it. As applied to the theory of revolution, this means that revolutionaries are either induced to act by their expectations of wealth and power, or forced to join the revolution by some kind of social pressure [2]. Recently there have been some attempts to verify this theory (Silver, 1974; Cartwright, Delorme and Wood, 1985) with some apparent success.

Although there is an important element of truth in the "private interest theory of revolution", there seems to be an essential ingredient missing. This ingredient can be called group consciousness, group motivation or ideological motivation. It is an ingredient particularly important in the so-called mass movements. It is difficult to believe that there can be private rewards after a revolution for everyone who takes part in it. On the other hand, private penalties for not taking part in a revolution may be, in some occasions at least, much more general than private rewards. Remaining neutral in a mass movement may become too costly for almost everyone after a certain moment. But, before that happens, the movement must exist; and it is not easy to imagine its coming into being without some kind of ideological motivation.

This paper is an attempt to combine ideological and individualistic motivation in order to explain people's participation in mass movements. I believe the arguments developed here are not only relevant for revolutions. They are revelant for a broader class of collective actions, violent or nonviolent, involving large numbers of people, whose aim cam be called, in general terms, institutional change.[3]

2. A FORMAL MODEL

In order to formalize these ideas we shall assume that a typical individual member of a group faces the following pay off matrix

	E_1	E_2
A	U+G	U
	c_1	c_1
N	U+G	U
	c_2	c_2

There are two "estates of nature", E_1 and E_2, meaning "institutional change" and "status quo" respectively. A represents some collective action whose aim is to bring about institutional change. The individual has to decide whether to participate in this action, or to abstain from it, which is indicated by N. The individual's welfare level under the status quo situation is represented by U. G represents the utility gain that the individual derives from institutional change. In other words, it measures the individual's valuation of the public goods generated by institutional change. When E_1 occurs, the individual gains G, regardless of whether he participates in the collective action or remains neutral. The utility cost of joining the action is represented by c_1. This cost may be understood as the expected utility loss associated with possible injuries if the action is violent, time costs, income costs, etc. In addition to the cost of participation we must consider the cost of abstention, c_2. This cost represents the penalties imposed by the group on the person who remains neutral.[4]

It is assumed that the individual can assign probabilities to both estates of nature. The probability of E_1 is thought to be an increasing function of the observed level of participation in the collective action. Calling v the fraction of group members who participate, we difine

$$\text{Prob.}(E_1) \equiv \phi(v),\ \phi'(v) > 0,\ 0 \leq \phi(v) \leq 1,\ 0 \leq v \leq 1$$

The expected utilities of alternatives A and N are given by the expressions

$$EU(A) = \phi(v)\,(U+G-c_1) + [\,1-\phi(v)]\,(U-c_1)$$

$$EU(N) = \phi(v)\,(U+G-c_2) + [\,1-\phi(v)]\,(U-c_2)$$

If the individual does not regard participation in the collective action as something "just" or "unjust", it seems reasonable think that he will definitely join the action whenever $EU(A)>EU(N)$, and abstain whenever $EU(A)<EU(N)$. In cases both expected utilities are equal, there is no optimal alternative, and he will choose at random.

Here we want to know what the individual is going to do when he has some idealogical motivation. We say that a person is ideologically motivated when he or she values participation as something good, and is willing to sacrifice some utility in order to contribute to the common cause. In this case it seems reasobale to assume that, whenever $EU(A) \geq EU(N)$, the individual will choose to participate with a probability equal to one.

Now the problem arises when $EU(A)<EU(N)$. In this type of situation acting according to one's values implies a utility loss. This loss will be called "temptation" and measures the incentive to ignore the group's interest and to act selfishly. This temptation can be defined as

$$(1) \qquad T = \begin{cases} EU(N) - EU(A) = c_1 - c_2 & , \quad c_1 - c_2 > 0 \\ 0 & , \quad c_1 - c_2 \leq 0 \end{cases}$$

In this paper c_1 will be treated as a parameter. On the other hand, c_2 will be assumed to depend on two variables: the rate of participation, v, and the relative size of the group, s. Both variables are assumed to be positively related to c_2.

This can be easily justified. We may think that the more people participate in the action, the stronger will be the presure on those who remain neutral. Therefore life will become more uncomfortable for them within the group. But group hostility towards those who do not join the common cause and pressure on them will not be the same if the group is large or small relative to the entire population. If the group is small and scattered within a large society, there are probably many ways to escape social pressure for those who wish to remain neutral. However, this may not be as easy in a larger group whose members are not a scattered population, but live close together and observe each other all the time.

We may therefore rewrite T as follows

$$(2) \quad T = \begin{cases} F(v, s) & , \quad F(v, s) > 0 \\ 0 & , \quad F(v, s) \leq 0 \end{cases}$$

where $F(v,s) = c_1 - c_2\,(v,s)$, $0 \leq v \leq 1$, $0 \leq s \leq 1$, c_1 is a positive constant,

$$\frac{\partial c_2}{\partial v} > 0 \text{ and } \frac{\partial c_2}{\partial s} > 0 .$$

When the individual is ideologically motivated and T has a positive value, we shall assume that the choice between participating or abstaining is nor clearly determined, but has a probabilistic nature. Furthermore, we shall assume that the likelyhood of participation is inversely related to T, and reaches a.maximum equal to one for T = 0.

Let us also assume that everyone in the group faces the same pay off matrix and shares the same belief about the justice of the collective action. Then, we can identify the individual's probability of participation with the proportion of people in the group who actually participates in the action. That proportion will be inversely related to T.

Therefore, there will be a "participation function" that describes how the participation level - measured by v - varies in response in T. This function is written as

$$(3) \quad v = f(T)$$

We shall assume that the participation function satisfies the following requirements, the meaning of which is quite obvious:

(i) $f(0) = 1$

(ii) $f'(T) < 0$

(iii) $f''(T) > 0$

(iv) $f(T) \to 0$ as $T \to \infty$

Now we have a system formed by equations (2) and (3). Taking s as given, we can obtain the equilibrium values of v and T.

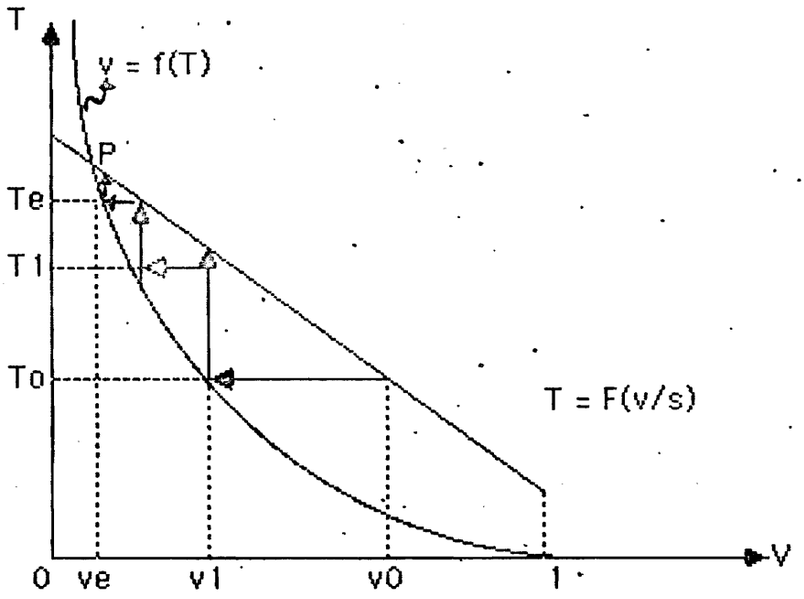

Figure 1

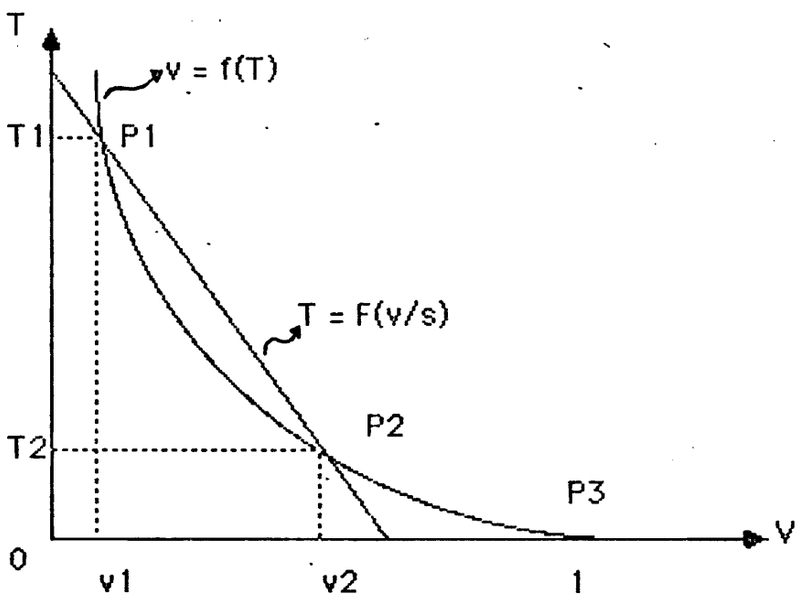

Figure 2

Figures 1 and 2 show two possible situations: The former shows a case of unique equilibrium and the latter a case of multiple equilibria. In both figures it has been assumed that $c_2(v, s)$ is a linear function of v. which implies that $F(v, s)$ is also linear with respect to that variable. In Figure 1 T is always above zero for any value of v in the relevant range. On the other hand, in Figure 2, T becomes equal to zero when v is high enough. This may occur, if, for instance, c_2 grows very fast as v rises. Then, after some point, $c_1 - c_2 (v, s) < 0$, which implies $T = 0$. When this happens, the "temptation function" - function (2) - becomes a horizontal line and coincides with the v axis.

Some casual stability analysis may show that point p in Figure 1 represents a stable equilibrium. In order to see this, let us assume an initial participation level equal to v_0. Given the temptation function, that implies a T value equal to T_0. But T_0 generates, at a later moment, a participation level equal to v_1. This participation will later generate a temptation equal to T_1, and the process will continue until equilibrium p is reached. A similar argument can be used to show that an initial participation level below v_e would set up a process again leading to p.

In Figure 2 we have three equilibrium points, p_1, p_2 and p_3. Using tha same kind of argument as before, it could be easily shown that p_1 and p_3 represent stable equilibria, whereas p_2 represents an unstable one.

An equilibrium such as p in Figure 1 represents a situation where the collective action is carried on by people whose basic motivations are ideological. The temptation in this case has a positive value. That means that people who take part in that action are sacrificing some welfare on behalf of their group. In this respect the situation is similar to those described by equilibria p_1 and p_2 in Figure 2.

Equilibrium p_3 in Figure 2 shows a somewhat different situation. Here the temptation is worth zero, which means (presumably) that $c_1 < c_2 (v, s)$. If that is the case, the expected utility of participating is actually higher than that of remaining neutral. The cost of abstention is too high and everyone is led to participate in the collective action. Ideological motivations here are irrelevant.

In the kind of situation depicted in Figure 1 it is obvious that an increase in the cost of participation, c_1, would reduce v (and increase T) and a decrease in c_1 would have the opposite effect. The same could be said about the effects of changes in c_1, if the initial situation is such as that described by equilibrium p_1 and p_2 in Figure 2. Nevertheless, an equilibrium such as p_3 in Figure 2 may not be sensitive to changes

in the cost of participation unless these changes are large enough. The reason for this is the following. As long as $c_1 < c_2(1, s)$, T is going to remain equal to zero. The value of c_1 may change without necessarily making T different from zero. Therefore, as long as T does not change, v will remain equal to one.

The changes in the relative size of the group, s, originate changes of the same sign in the cost of abstention, c_2. This means that the temptation function shifts up when s goes down, and down when s goes up. Therefore, an increase in s will originate a higher participation level (v increases and T goes down) and a decline in s reduces the participation level (v decreases and T goes up). If the initial situation is an equilibrium such as p_3 in Figure 2, those reactions may only be noticeable for relatively large changes in s. The reason is similar to that given above in relation to the effects of changes in c_1.

3. CHANGES IN GROUP SIZE

So far the changes in the group's relative size have been treated as exogenous. However, this variable may be at least partially endogenous to the model.- In order to see this let us consider the following situation.

A group is carrying on some collective action aimed at improving certain aspects of their society. A certain equilibrium level of participation has been reached on the basis of ideological motivations. Nevertheless, the participation rate is quite low, which means that the probability of reaching the desired institutional changes, $\phi(v)$, is rather small. If the collective action is not successful for a period of time, some people may revise their beliefs and their expectations. These people may simply cease to believe that the action has anything to do with the desired aim. Institutional change may then seem unattainable and the collective action totally useless. These people will no longer be ideologically motivated and cease to participate in the action.

What happens here can be interpreted as a reduction in the group's relative size. There are less people sharing the same basic set of expectations and beliefs. And, as we saw before, a reduction in group size leads to a reduction in participation. The effect of this is likely to be cumulative. Less and less people participate, which leads to a further deterioration of beliefs, new reductions in size and lower participation rates. In other words, failure breads failure in a cumulative process, until the collective action - and the group itself - eventually desappears.

The same as failure breads failure, it is likely that success breads success. If a collective action is initially successful and achives some partial goals, this is likely to reenforce the motivations of those who participate. In addition to this, more people will become aware that they have interests similar to those who participate in the action, and that fighting for those interests is "legitimate" and "good".

All this can be interpreted as an increase in the group's relative size. As a result, the temptation function shifts down and the equilibrium level of participation tends to increase. If the process is cumulative and group size keeps increasing, this would eventually lead to an equilibrium such as p3 in Figure 2 where the participation rate is equal to one. The cost of abstention becomes too high and everyone in the group is led to participate. Ideological motivations here become uninportant.

4. LEADERSHIP

In the previous analysis we have completely ignored the question of leadership. We have assumed that there is some collective action going on and that each person has to decide whether to join it or to remain inactive. But for a collective action to be carried on, there must exist a group of people who share some degree of group consciousness. Nevertheless, people are not always aware that they have potentially important interests in common with others. And, even when they are aware, it may be difficult for them to recognize those who share their interests and beliefs.

This is why leaders are important. Leaders can be thought of as ideological entrepreneurs who are able to capture what the common interests of relatively large groups of people are. Their function is to preach, to convince other people, and to make them participate in collective actions. Without leadership, collective actions, especially those requiring large numbers of people, would probably never come into being.

In principle the motivations of a leader are not different from anyone else's. The same as other people, a leader may respond both to ideological (group oriented) and to estrictly selfish motivations. However, there is some reason to believe, at least in very general terms, that the actions of the leaders can be best understood in terms of selfish motivations.

As we have seen before, ideological motivations may lead rational people to participate in collective actions. Nevertheless, if we are to follow traditional thinking in economics, we would never expect participation to be relevant whenever the cost of acting ideologically is very high.

Leaders usually put more time and effort into collective actions, and take more risks, than followers. This means that the costs of acting ideologically are probably quite high for the former. Therefore, we would not expect leaders to act exclusively on the basis of ideological motives. They would be much more likely to respond to "positive selective inventives". These incentives are said to exist when the leaders of a group expect to obtain some private rewards for their organizing activity. In other words, we are saying that the leaders' basic motivations are likely to be their own expectations of wealth and power. 5

5. FINAL REMARKS

The previous analysis is quite general in its conclusions. Nevertheless, it allows us to draw a picture of what is likely to happen in a revolution, or any other "mass movement" (violent or non-violent) whose aim is institutional change.

The process is usually started by a leader (or a group of leaders) who respond basically to individualistic motivations (positive selective incentives). The general public's initial response is essentially ideological. That means that those who join the movement have to sacrifice some welfare on behalf of what they consider to be the group's interest. This initial ideological response can be rather extensive, particularly when the costs of acting ideologically are low. If the process is successful in the initial stages, it is likely to become more generalized and to involve every time more and more people. As the process goes on, the cost of abstention grows and ideological motivation loose ground. In other words, external pressure and fear of the others become the leading motive for the followers of a mass movement.

The model developed in this paper could be improved by relaxing some of its most restrictive assumptions. For instance, one could allow for different people to have different pay off matrices. Also, the costs of participation and of abstention could be considered partially contingent upon the estate of nature. There could be more than just two estates of nature and several mutually exclusive collective actions leading to those "estates" with different probabilities. All this would certainly complicate the analysis, but might open an interesting line of theoretical enquiry. In any case, the model, as it stands, seems to capture the essential ingredients of the so called mass movements. To what extent that picture is empirically correct remains, of course, an open question.

NOTES

(1) This term is taken from Silver (1974). Tullock called it the "by-product theory of revolution" (Tullock, 1971).

(2) The fact that people may be forced to take sides in a revolution, which means that remaining neutral may be costly, is not taken into account in Tullock's model.

(3) The terms "mass movement" and "institutional change" may help, I believe, to avaoid an ad hoc definition of "revolution" or a lengthy discussion about the meaning of this word.

(4) The same as there is an action aimed at institutional change, there could be another in defense of the status quo.

The potential defenders of the status quo would be those who believe instituutional change to be a source of public "bads". This means that the G term in the relevant pay off matrix is negative. In this case there would also be participation costs and abstention costs. The individual's decision making process would not be different at all from that of a person with a positive G.

(5) A leader's pay off matrix could be represented as folows:

	E_1	E_2
A	U+G+B	U+B
	c_1	c_1
N	U+G	U
	c_2	c_2

The private reward here is associated to the leader's participation in the collective action. It is represented by B. The value of B could in principle depend on the estate of nature. One would expect it to be higher under E_1 than under E_2. The leader's participation may also influence the probability of achieving the desired estate of nature in a positive way.
We have assumed that leaders face very high participation costs. If there were no private rewards, (that is, with B=0), the temptation to abstain would be very strong. Nevertheless, this is more than offset by high values of B.

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