A Nested Game Model of Protest & Repression Interactions in Authoritarian States

P.M. Picucci
Department of Political Science
University of Kansas
1541 Lilac Lane, Lawrence KS 66044

email:pmpicucci@ukans.edu
telephone: 785-864-3654

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"It is the nature of the multitude either humbly to serve or insolently to dominate." (Livy, VI, 20 and XXIV, 25)

It is in the nature of the political scientist to inquire as to what conditions will lead to each of these contingencies. Addressing this issue, in one of its variety of forms, is the object of this analysis. Authoritarian states repress. The response to anti-regime protest is often swift and harsh as the state makes use of its monopoly on the legitimate use of force to suppress dissent. Lacking the means to resist, protesters disperse rather than risk escalation of the violence. Occasionally however, the protest elements in a society meet this force with increased turnout. This behavior, generally dubbed "backlash," despite being well noted in the literature (Mason & Krane 1989, Khawaja 1993, Karklins & Peterson 1993, Francisco 1996, 2001) remains poorly understood. This analysis seeks to apply a game theoretic framework to protest and repression in an effort to clarify the dynamics that may lead to backlash behaviors.

Previous explanatory efforts have included the "focal nature" of particular repressive incidents (Karklins & Peterson 1993), Bayesian updating on the part of the protesters (Francisco 1996), and general improvements in the ease at which protestors can be mobilized after harsh repression (essentially a lowering of the costs of various mobilization tactics, Lohmann, 1994 and Lichbach 1995). Each of these approaches has merit and provides adequate justification for backlash events in particular, but not all, circumstances. Each also relies upon some form of basic rational choice or game theoretic approach to demonstrate backlash operation. Yet each has difficulty with two issues. The first is the inconsistency with which backlash manifests itself – why does it appear in some cases and not others? The second is overcoming the basic hurdle that protesters are making an apparently irrational choice – despite evidence that the personal cost of engaging in protest has increased, these same individuals who previously did not engage in these behaviors now commit to doing so. What is needed therefore is a framework by which we can analyze particular protest and repression dynamics that can, without eliminating altogether the premise of rationality, provide for this seemingly irrational behavior on the part of the protest population.

The apparently sub-optimal choice of the protestors and the complexity of payoff calculations, in any simple protest and response game, are indicative of the applicability of a nested game approach. Applying this technique necessitates first the specification of the principal game under consideration. Additional games are specified as needed to provide for payoff variations in the principal game. The interactions between these games are examined and the model, as a whole, is then utilized to examine the dynamics that might lead to backlash behavior.

While backlash does occur in non-authoritarian states, the character of protest in those states is of a fundamentally different character than that which occurs within authoritarian ones. Within authoritarian regimes protest against a policy cannot be distinguished from protest against the ruling elements of the regime. Adoption of a policy change is, therefore, necessarily a concession on the part of the regime. This limitation makes it possible, by confining the examination to authoritarian states, to simplify the options available to the state apparatus in the model. Therefore, while elements of this model may be applicable to democratic states, extraction of those elements is left to the reader.

The principal game is of standard two person sequential form. Player one, the state, has the option to repress or not repress. Player two, the protestors, having seen player one's choice, may choose to either escalate their protest behavior or not. The principal game is augmented by three "assurance" games that govern the levels of involvement of the various participants. The final piece of the model is supplied by the specification of a state versus dissident entrepreneur game which links the assurance games and whose equilibriums specify the conditions necessary for backlash.

The Principal or Basic Game

The starting point for this analysis is presented in both its extensive and matrix forms, see Figure 1. Several assumptions of this game should be indicated. First, some form of open protest is always presumed to occur. Regardless of the level of regime repression and/or popular satisfaction there will always be individuals willing to take

the risk to express their discontent.[1] Second, the decisions made by the players are sequential. The state demonstrates its choice of repression or not prior to the decision of the protesters to escalate or not. Third, the expected payoffs are not strictly defined but are constrained to a set of two probable hierarchies for each player. Fourth, as stated previously, these interactions are presumed to occur within an authoritarian society. Last, complete information is presumed.

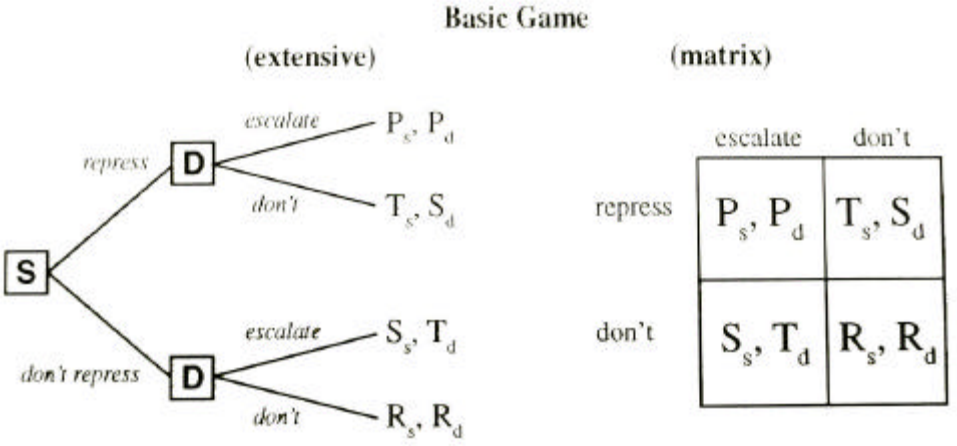

Figure 1.0

Each player is presumed to have one of two possible payoff orderings.[2]

State Payoff Orderings

$$H_{S1}: T > P > R > S$$

$$H_{S2}: T > R > P > S$$

dependent upon the relative values of the penalty (P) and reward (R) payoffs

Dissident Payoff Orderings

$$H_{D1}: T > R > S > P$$

$$H_{D2}: T > R > P > S$$

dependent upon the relative values of the sucker (S) and penalty (P) payoffs

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[1] This is generally empirical fact. Examination of the coded data from Francisco for Czechoslovakia, East Germany, or Bulgaria prior to 1989 shows consistent low levels of protest. (http://lark.cc.ukans.edu/~ronfran/data/index.html)

[2] The payoff notation is borrowed from Tsebelis (1990) and owes its payoff designations to the basic prisoners' dilemma game. P is the "penalty" payoff if both players defect. R is the "reward" payoff for cooperation by both players. T is the "temptation" payoff for the defecting player whose partner cooperates. S is the "sucker" payoff for the cooperating player whose partner defects.

For non-iterated play, (H_{D1} x H_{S1}) and (H_{D1} x H_{S2}) have unique, pure strategy Nash Equilibria of (Repress, Not Escalate) while (H_{D2} x H_{S1}) and (H_{D2} x H_{S2}) have unique, pure strategy Nash Equilibria of (Repress, Escalate).[3]

Tsebelis observed that, when correlated strategies are possible, any of a game's outcomes become possible. The relative likelihood of any outcome arising as an equilibrium no longer becomes dependent upon the payoff orderings of the players but upon the size of the payoffs associated with each outcome. This allows for certain payoff orderings to give rise to "cooperative" behaviors when games are iterated. The notable exception is the "deadlock" ordering under which such behaviors cannot arise. While Tsebelis is specifically looking at instances where this behavior occurs for both parties, the analysis should apply to single players whose payoffs may shift as well as for the genesis of "non-cooperative" behaviors. In this instance the H_{S1} hierarchy prevents cooperative behavior on the part of the state but the H_{S2} hierarchy allows for its possibility.[4] Since both behaviors empirically take place, this indicates that both hierarchies are present under differing conditions. This further indicates the potential applicability of a variable payoff structure. Such a structure must include the following three features:

1) A mechanism for shifting state preferences from H_{S1} to H_{S2} or which demonstrates the boundary between the R_s and P_s payoffs thus indicating the conditions under which these hierarchies are likely to arise.

2) A mechanism for increasing the probability of "cooperative" behavior on the part of the state. This entails provision of the circumstances under which the R and S payoffs would be expected to increase and/or the T and P payoffs to decrease.

3) A mechanism for increasing the probability of "non-cooperative" behavior on the part of the dissidents. This entails provision of the circumstances under which the R and S payoffs would be expected to decrease and/or the T and P payoffs to increase.

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[3] Note that in the instance of H_{S2} x H_{D2} the game is a classic prisoners' dilemma.

[4] H_{S2} conforms to the payoff hierarchy of the prisoners' dilemma while H_{S1} is that of a deadlock game. See Tsebelis Appendix 3A for proof that cooperative behavior is possible under H_{S2} and Appendix 3B for proof that cooperative behavior is impossible under H_{S1}.

Payoff variation can come from either rules changes resulting from the payoffs of player strategies[5] or from a failure to recognize that payoffs may be dependent upon the outcome of other games – "multiple arenas".[6] Since institutional changes are the end goal of the dissidents, we presume that the strategies taken by either party prior to such changes are not dependent upon them taking place. This focuses the attention on player interactions which, although not altering the institutional status of the players and how they interact, do modify the payoffs presented for each party in the basic game.

Player Assurance Games

Karklins and Peterson (1993) provide an initial look at assurance games. They demonstrate the usefulness of seeing the decision-calculus of the state and protestors as being influenced by n-person assurance / de-assurance games (Sen, 1967) played within their own differentiated populations. Figure 2 is a Schelling diagram (Schelling, 1985) illustrating such a game for protestors and shows different tipping points for the various protestor subpopulations.

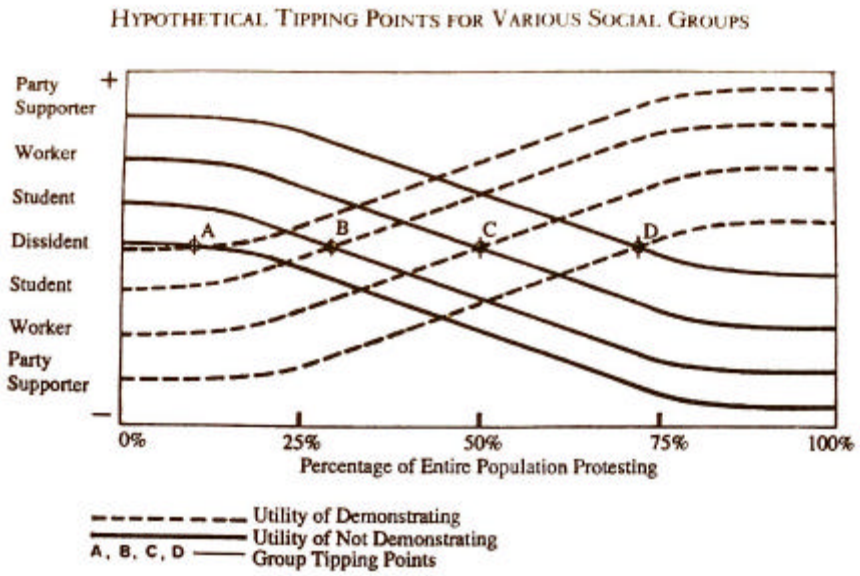

Figure 2.0

[5] This would be what Tsebelis refers to as games of "institutional design" where the actual institutions that determine the game payoffs change as a result of player strategies.

[6] These are the "multiple arena" games of Tsebelis where payoffs to the principal game may be altered by how the payoffs of other games change.

Since these points are determined by the intersection of two utility plots, any factor which influences the utility of participation or non-participation has a potential impact upon whether an individual's threshold has been crossed. The Karklins and Peterson model of protest behavior holds that an individual's decision to participate is a function of three tipping points: "the overall societal tipping point of their group, the internal tipping point within their own group, and the tipping point in a reference group."(Karklins & Peterson, 1993, 596) Each of these tipping points may, in turn, be acted upon by outside events or the actions of those outside their social grouping. They extend this conceptualization to a differentiated n-person "de-assurance" game for state supporters.

While they do note the presence of "backlash" behavior,[7] their approach accounts for it by considering certain protest/repression events as "focal events." This is hardly satisfying as they do not provide criteria by which we can classify events as being "focal," hence, the need for an additional game structure. Particularly missing from the Karklins and Peterson analysis is the incorporation of the behavior of dissident entrepreneurs, hereafter referred to as DEs. Noting that there is a significant body of work that indicates the crucial role of such individuals this seems like a logical addition.[8]

The assurance game for DEs follows the same format as the protestor and state-supporter games. Any given potential dissident entrepreneur evaluates the decision to participate based upon the tipping point of the DEs as a whole, their own particular sub-population of DEs and the tipping point of the sub-population ahead of them in the tipping point rankings. This gives us three separate assurance/de-assurance games that input into the basic game. What remains to be developed is the mechanism by which these games interact. I follow the standard approach of extensive form analysis.

[7] Karklins and Peterson (1993) do not refer to it as such but rather speak of instances in which "the numbers of protesters increased dramatically *after* the use of brutal repression" (italics in original).

[8] See Lichbach (1990 & 1995) and Moore (1995 & 1998).

The State / Dissident Entrepreneur Game

In the model, this mechanism takes the form of a game between the state and the dissident entrepreneurs. The extensive form of the game is presented in figure 3.0. The game initiates with the conventional technique for modeling incomplete information, nature makes an initial move which determines whether a state is one of two types: weak (with probability p) or strong (with probability 1-p). The state, knowing its type, can choose either to repress the ongoing protest movement or offer some form of concession.[9] In the event of repression the DEs are then faced with the decision whether or not to support the protest movement.

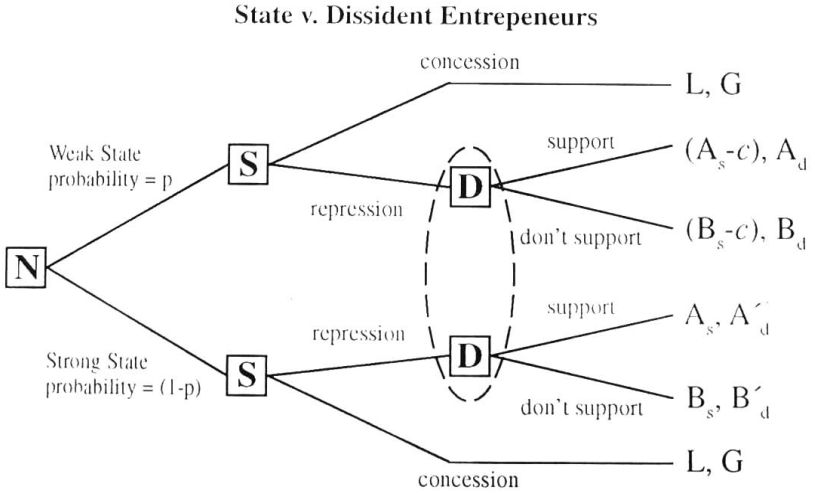

Figure 3.0

As figure 3.0 indicates, the DEs must make their decisions without knowing whether they face a strong or weak state. Support entails the risk of being associated with the movement, as well as the cost of the resource outlay to the protestors but carries an increased probability of the achievement of public and / or private goods if the state is weak.

Discussion of strong v. weak state

This categorization of a state as either weak or strong is obviously a simplification. Another model might assume a continuum of types however, assuming binary types makes the model more tractable. Integration of this game with the state supporter de-assurance game is a way of reintroducing a less arbitrary state distinction. As noted in

the payoffs the only difference between the weak and strong state is that there is a cost associated with repression for the weak state. In fact this functions as the definition for a strong state in this model: a state that can engage in repression of dissent without incurring a cost to its own stability. This too is a simplification. Obviously any act of state force entails some cost. A more appropriate distinction may be that the cost associated with repression (*c*) is negligible compared to its benefits for strong states.

Payoffs

As presented, the payoffs L and G represent a zero-sum loss for the state (L) and gain for the dissident entrepreneurs (G) irrespective of state type. The state is assumed to be better off without support of the protestors so $B_s > A_s$. It can also be reasonably claimed that $B'_d > A'_d$. Since neither option has a reasonable prospect of achieving a desired good, the potential cost of being identified as a dissent supporter is the determining factor in the value of the payoffs. The claim that one is less likely to be the target of repression if one is not supporting the dissent is *a priori* valid. No other claims regarding the relative values of the payoffs are necessary. The strategic form for the game is given in figure 4.0.

	DEs Support		*DEs Don't Support*	
W S	state	DEs	state	DEs
R, R	(A-*c*)p + (A)(1-p)	Ap + (A´)(1-p)	(B-*c*)p + (B)(1-p)	Bp + (B´)(1-p)
C, R	Lp + (A)(1-p)	Gp + (A´)(1-p)	Lp + (B)(1-p)	Gp + (B´)(1-p)
R, C	(A-*c*)p + (L)(1-p)	Ap + (G)(1-p)	(B-*c*)p + (L)(1-p)	(B)p + (G)(1-p)
C, C	L	G	L	G

R=repression C=concession

Figure 4.0

[9] While some may characterize this treatment as artificially limiting I contend that for an authoritarian state not to take action against protest is, in itself, a form of concession given that all protest is inherently anti-regime.

Note that since $B_s > A_s > L$, (R, R) is strongly dominant to (R, C). It follows that (C, R) is weakly dominant to (C, C). Comparing the (R, R) and (C, R) strategies, a state's preference between them is dependent only upon the value of c. If $c < A_s - L$ then (R, R) **P** (C, R) and if $c > A_s - L$ then (C, R) **P** (R, R). The don't support option, hereafter referred to as (D), is a best reply to a state's (C, R) strategy. Thus when $c > A_s - L$ there exists the following Nash Equilibrium: { (C, R) (D) }. If $c < A_s - L$ then the DE choice between Support (S) and Don't Support (D), given (R, R) is dependent upon the value of p. If $Ap + (A')(1-p) > Bp + (B')(1-p)$ then (S) **P** (D). Setting both sides of inequality equal to one another and solving for p gives the following:

$$p = (B' - A') / (A + B' - A' - B)$$

all payoffs are for the DEs

For values of p above this level the optimal strategy for each player is a mixed strategy. Figure 5.0 illustrates the relationship of the pure strategy and mixed strategy equilibriums.

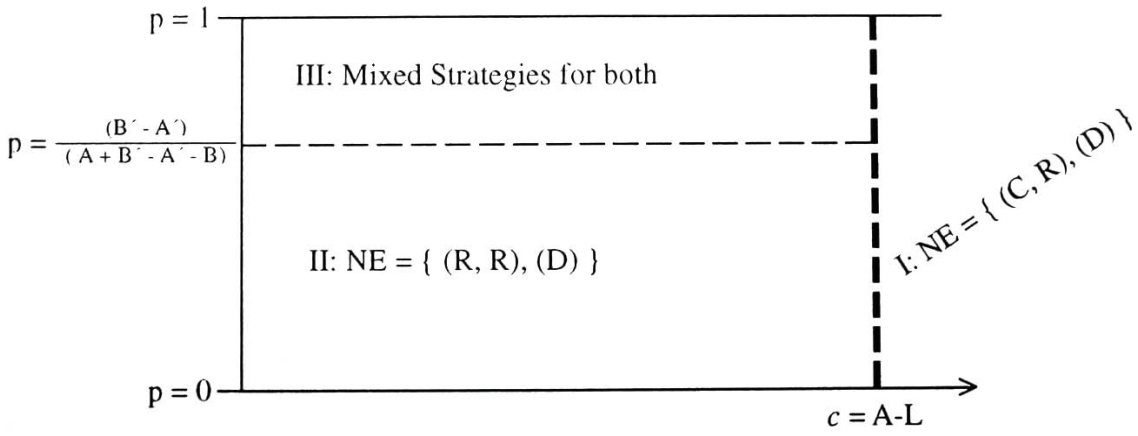

Figure 5.0

Section I represents the separating equilibrium. The cost of repression is high enough such that correct determination of state type can be made on the basis of their response to protests. For costs above this level strong states will always repress and weak states will always allow concessions. Section II denotes the area of a pooling equilibrium. The state type cannot be determined by their action since regardless of type, the state will always seek to repress. Section III is a semi-separating equilibrium. Both players use mixed strategies to optimize their payoffs. Although not explicitly derived, the

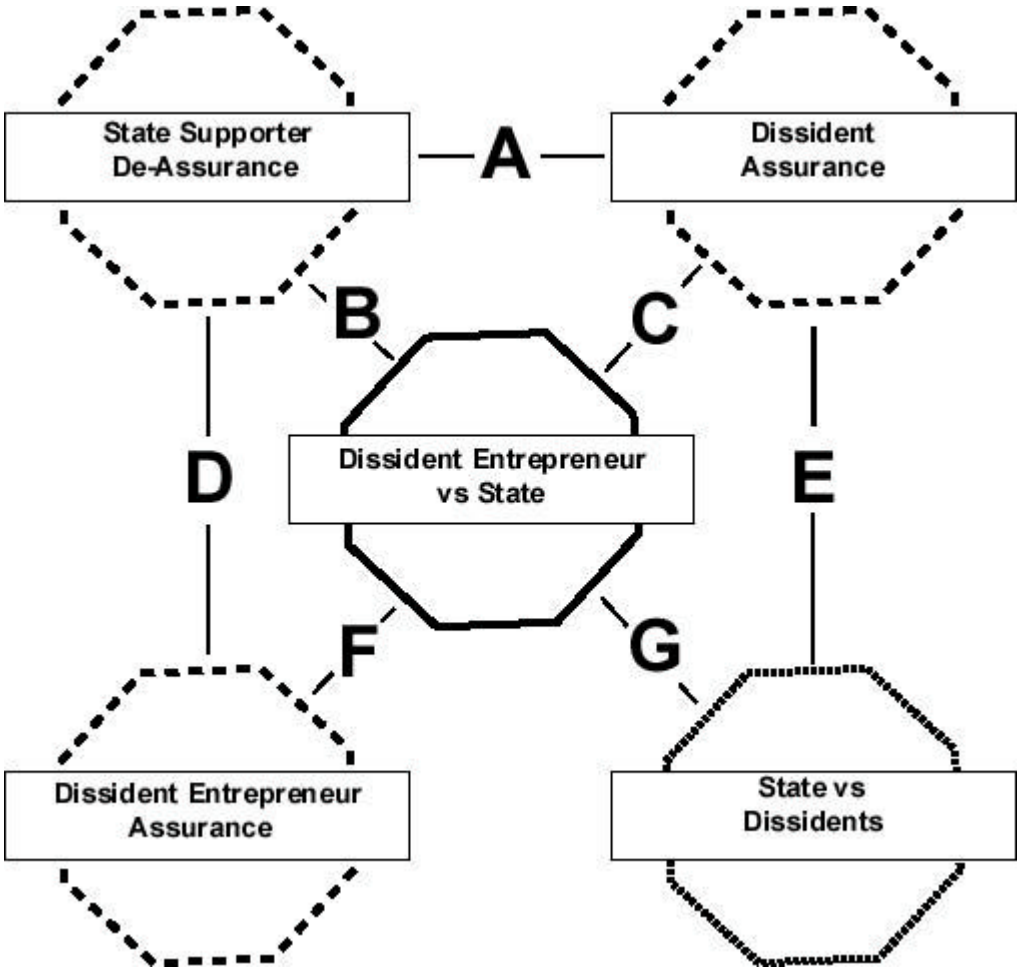

Figure 6.0

A: As potential dissidents amongst state supporters abandon the regime, tipping points are lowered for other dissidents.

B: Probability of weak state lowers potential benefits of state support. Abandonment of state demonstrates weak status.

C: Increased dissident entrepreneur support improves potential for resolution of "rebel's dilemma."

D: Increased participation by dissident entrepreneurs lowers tipping points for potential dissident entrepreneurs amongst state supporters.

E: Escalation of dissent lowers tipping points for all dissidents as the probability for any single individual or group being repressed decreases.

F: Increased certainty of weeak state lowers tipping point for involvement of potential dissident entrepreneurs.

G: Various equilibrium points of Dissident Entrepreneur vs State game determine optimal state action.

exact mixtures of these strategies are dependent upon the value of p. As the probability that a state is weak approaches one the state's strategy will shift toward concession and the DEs strategy will shift toward support.

Interpretation

The three equilibriums for this game represent differing situations in which a state may find itself. Arguably most authoritarian regimes exist within the pooling equilibrium of section II. Both types of state will repress and the DEs will not expend their resources to support to protest movements. Protest will continue to exist but at low levels, lacking in both organization and resources. Such protest is relatively easily repressed and the costs of doing so are low for all but the weakest of regimes. Disturbance from this equilibrium can come either through an event which drastically increases the cost of repression or an increase in the perception of the status of the state as weak. In the first instance a weak state will find itself in a separating equilibrium where the costs of repression are extreme enough to jeopardize regime security. If the state is strong, repression will occur despite the cost, calling to mind the atrocities of Pol Pot's Cambodia, Stalin's USSR, and Hitler's Germany. In the second instance each can gain by varying their strategy choice. The state will mix repression (to reinforce the image of a strong state) with concession (to limit the costs of potentially failed repression) while the DEs will choose increasing levels of support depending on the perceived probability of state weakness. It is here where protest has the opportunity to affect change of the type that is likely to result in the attainment of personal and public good.

Game Interactions

Having specified the games, which make up the model, their interactions remain to be investigated. Figure 6.0 is a representation of their relative influences. Recall that the rationale for the inclusion of the nested games is to provide for variation in the payoff values in the principal game. The games that most directly affect those payoffs are the Dissident Assurance game (DA) and the Dissident Entrepreneur v. State game (DES). The State Supporter De-assurance (SSD) and Dissident Entrepreneur Assurance (DEA) games both impact principal game payoffs but only indirectly through the other two games. Analysis begins with an examination of state payoffs since the shift from H_{s1} to H_{s2} is a necessary condition for backlash behavior.

State Payoffs

To make backlash possible, the state payoff hierarchy in the principal game must, under some circumstances, change from the "deadlock" game ordering of H_{s1} to the "prisoners' dilemma" ordering of H_{s2}. To accomplish this shift requires only that $R_s > P_s$. This is analogous to the shift that occurs from the pooling to separating equilibriums of the DES game. This follows from the safe presumption that increased support from DEs facilitates dissident turnout.[10] If one then equates the support option of the DEs in the DES game with the escalate option for the dissidents in the principal game, the inequality $P_s > R_s$ is analogous to the comparison of the $(A_s\text{-}c)$ and L payoffs for weak states and the A_s and L payoffs for strong states. Since, by definition, $A_s > L$ for strong states, the payoff transition can only occur in the presence of a weak state. Further, said transition must obey the condition that $c > A_s\text{-}L$. Recall however that within the separating equilibrium the dominant strategy for the DEs is not to support. This is problematic for the existence of backlash behavior if dissident mobilization is purely a product of the actions of the DEs.

The Dissident Assurance Game (DA)

Fortunately the DA game provides some indication that dissident actions are not solely determined by the dissident entrepreneurs. The decision on the part of any given potential dissenter to participate (the escalate option of the principal game) is captured by the location of their tipping points. Outside shocks and influences (such as the effect of Des, or the "information cascade" of Lohmann, 1994) can raise or lower these tipping points by adjusting the utilities associated with participation and non-participation. This is a key point to understanding the relationship between the DES and DA games. Support from DEs is necessary to affect a downward shift in the tipping points of the dissidents, however, once participation moves past the tipping points, further DE support may be unnecessary. The natural bandwagon effect described by Karklins and Peterson takes over as the principal force for mobilization. There is little benefit at this point to DE participation since the expenditure of resources on their part has minimal

[10] I characterize this assumption as safe since it is the principle upon which much of the resource mobilization literature is based.

private gain. The path described above highlights another important facet of the relationship between these games.

Before the bandwagon effect can occur, the tipping points of the dissidents must be lowered. This occurs principally through DE support of the dissident movement. Such support, according to the DES game, can only occur when state / DE interactions are in the form of a semi-separating equilibrium. The path to backlash behavior therefore runs from the pooling equilibrium, to the semi-separating equilibrium, and finally to the separating equilibrium. If in the process of doing so there is reason to believe that our second and third features are also present, the model will have established a plausible framework for backlash behavior. The model can account for several mechanisms by which the value of repression might decrease. The first involves the indirect action of the SSD game.

The State Supporter De-Assurance Game

By definition of the DES game, the state's payoffs for repression by a weak state are less than those for a strong state. However, the binary categorization of the state in the DES game prohibits meaningful exploration of the weak state / strong state distinction. The model accounts for this through the indirect influence of the state supporter de-assurance game (SSD). As with protesters, the supporters of the state utilize a variety of tipping points to determine their best course of action. In the case of the state supporters these tipping points indicate the intersection of the utility of continuing to support the state and the utility of withdrawing that support. Presumably the benefits of state support must be considerable for these individuals to willingly support an authoritarian regime. Their tipping points are likely to be much higher therefore than those of the potential protesters.[11] As with the DA game, bandwagon behavior can occur as the various subgroups within the state supporter population key on the defections of subgroups with lower tipping points. Olson (1990) indicates that the perceptions of the state supporters are key to the persistence of the state and that authoritarian regimes are inherently unstable because of this reliance. This forms the basis of the SSD game's importance to the weak state / strong state distinction. The

[11] Note that Karklins and Peterson include state supporters in their Schelling diagram for protestors indicating that at some point these populations are linked.

hypothetical strong state, for which repression has no cost, is immune to abandonment by its supporters. Under all other conditions the state is, to some degree, weak. Any open defection from supporters increases the probability that the state is perceived as weak and thereby enables the transition to the semi-separating equilibrium of the DES game.

The SSD game may also have spillover effects into the DA and DEA games that, in turn, affect the payoffs of the principal game. Recall from the DES game that any action that increases c, the cost of repression, decreases the value of repression. The SSD game can impact this value in several ways. Open abandonment of the regime by former supporters can serve to lower the tipping points of dissidents thus increasing both the number and diversity of the active dissidents and thereby raising the costs of repressing them. Inclusion of state supporters amongst the potentially repressed lowers the value of state support since one presumed benefit is freedom from repression. This forces the state into a catch 22 situation in which it must choose between not repressing and repression that may elicit further abandonment. The impact of the SSD game may also be felt indirectly through its effects upon the DEA game.

Dissident Entrepreneur Assurance Game

Dissident Entrepreneurs perform the same self-interested calculations that characterize the SSD and DA games. They search for indicators that the risks of protest support have lowered by examination of the behaviors of the DE population, their subgroup within that population, and the tipping points of reference groups within the society. The lower these tipping points the larger the pool of dissident entrepreneurs which participates in the DES game and correspondingly the larger the amount of resources the DEs can place at the disposal of the dissidents. The SSD game can impact the DEs in the same manner that it does the dissidents - the provision of an indicator of a measure of security for the protest. However there is a linkage between the DEs and state supporters that provides another route of influence. DEs must have available resources that they can use to help mobilize the dissidents. However, the very individuals most likely to have access to such resources are the individuals whom have benefited from the regime i.e. the state supporters. Thus, as more supporters abandon the state the more potential DEs there are. Further, the former supporters have the

most to gain from protest support once they have abandoned the state. Not only are they no longer part of the privileged class, they now face the prospect of being associated with the regime in the event of collapse. Open protest support may be an effective way of limiting the probability of that occurrence. This expansion of potential DEs obviously impacts the DES game and correspondingly the DA game and through them influences the payoffs of the principal game.

Dissident Payoff Changes

Recall that feature three is the presence of a mechanism for increasing the dissident payoffs for non-cooperative behavior in the principal game. Again, the DES game provides the necessary key to seeing this shift. This is partially implicit in the understanding that increased DE support improves the potential for resolution of the "rebel's dilemma" and therefore increases the incentives for dissident escalation. However, it can also be understood in terms of improving the potential for state concession. Increased participation by dissidents, as a result of DE support, increases the certainty that the state is weak. As noted previously such an increase is accompanied by a shift in the mixed strategy of the state toward concession.

Game Interactions – A Summary

The preceding paragraphs have demonstrated some of the intricacies that characterize the dynamics of these five games. In the process it has also been shown that this model incorporates the features necessary to account for backlash behavior. The transition path of the DES game, from pooling to separating equilibriums, provides the mechanism for the variation in payoffs necessary to transition from the H_{s1} to H_{s2} hierarchies. During this transition, payoff shifts of the kind necessary to induce "cooperative" behavior in iterated games are demonstrable, so too are the shifts necessary to induce "non-cooperative" behavior on the part of the dissidents. The influences of the DA, SSD, and DEA games are integral to the functioning of these mechanisms and thus justify their presence in the model.

Model Application

Unauthorized Repression

Francisco has noted that backlash behavior may be related to accidental or unauthorized uses of force by the state but that the logical underpinnings of this mechanism are unknown.[12] The nested game model provides a tool by which this mechanism can be investigated. The question can be restated. Is there some aspect of the unauthorized nature of the repression that leads it to engender backlash when authorized repression would not do so? Answering this question in the affirmative necessitates the fact that unauthorized repression must increase the value of *c* such that the state's payoffs in the principal game transition from the "deadlock" to "prisoners' dilemma" hierarchies. As noted previously one such route is through the SSD game. Unauthorized repression's effect upon state supporters is two fold. First, it demonstrates that the state no longer has complete control over its coercive resources. This limits the utility of one of the largest benefits of state support: freedom from repression. Repression outside of state intent necessarily implies that the state cannot guarantee the safety of its supporters. Second, the existence of unauthorized repression may point to a weakening of either state control over its own forces or the state monopoly on the legitimate use of force. In each of these instances the tipping point for abandonment of state support is depressed. This weakening of the state manifests in a higher probability of weakness in the DES game and the increased influence of DEs through the DEA game. Taken together, these factors are a potent indicator of the possibility of the payoff shifts necessary for backlash behavior.

Critique and Conclusion

The model is limited in several aspects. Perhaps most critical is the lack of formalized relations between each of the games in the network. Although interactions between the games have been addressed, this has largely been through informal commentary. Several of the games are likely to exhibit reciprocal interactions and the ramifications of this are not discussed. Specification of the payoff relationships between them would allow for greater confidence in the conclusions drawn and better analysis of the potential for feedback.

Obviously, some of the assumptions made with regard to the model could be investigated in greater detail. The model's use of repression, for example, is deserving of more sophisticated treatment. As it stands, no distinction is made between varying levels of repression when clearly the state has multiple forms and levels of repression available. Similar problems manifest in the context of the DES game. The question of the binary typing of the state has been previously noted as a tradeoff for model simplicity. However, the fixed value of state concessions is likely to be an area that could benefit from greater sophistication. Likewise, the lack of DE responses to state concessions should be considered as a possible point in need of expansion. Greater exploration of the payoff shifts of the dissidents in the principal game is also called for.

More fundamental objections can be raised with regard to whether the conclusions drawn are representative of actual processes or are artifacts of the game design. As simplifications of reality all models run the risk of this distortion. This issue of confidence in the model's outcomes is exacerbated by the absence of empirical testing. Given the difficulties one must face in the specification of actions and measurement of payoffs, the results of any such test are likely to be inconclusive. One potential method for approaching future evaluation of this model is through direct comparison with other models of the same behaviors. High levels of agreement with other approaches would lend support to the applicability of this approach.

Despite these weaknesses, this nested game model has important strengths. Although originally conceived of as model for backlash behavior, the game interactions are applicable to a variety of other protest and repression dynamics. Given the parameters of the DES game, an investigation as to the conditions for state failure would seem a logical application. Similarly, the model can help to explain other apparently sub-rational behaviors such as state durability in the face of massive regime protest. Nearly hidden in the model is its combination of elements of the resource mobilization and political opportunity structure literatures. The influences of the assurance games clearly represent rational utility calculations and the impact of the dissident

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[12] Lecture notes. October 25, 2000. *Political Science 663 – Protest and Revolution.* Ron Francisco. University of Kansas.

entrepreneurs clearly speaks of its connection to the collective action work. However, the differentiation of equilibriums present in the DES game indicates a link to the SPOT research program for the boundaries of the semi-separating equilibrium are highly indicative of the presence of a political opportunity structure.

Thus, while the model is not without serious weaknesses these are countered by what is, hopefully, a significant bridge between the two dominant paradigms of protest research. The model does provide a relatively sophisticated method for approaching the dynamic interaction between protest and repression and it does so without undue complexity. These factors, and its applicability to behaviors other than backlash speak in favor of its capability to contribute meaningfully to current research efforts in this field.

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