To arrive at the equilibrium position
in the absence of threats we might
use a function analogous to the threat
function — a non-cooperation function.

The threat function states the probability
of making a concession of given size as
a result of a threat of given size, issued
with given perceived probability of being carried out.
If we think of bargaining without threats
as a process of <u>tatonnement</u> in which each
players "threatens" non-cooperation unless he
gets a concession relative to the tentative
agreement reached, we can say that
each has a function connecting the
probability of conceding to a given demand
according to the size of "threat" and
its credibility. (The size of the "threat" is
the amount the player would still stand to gain
in the proposed position.)

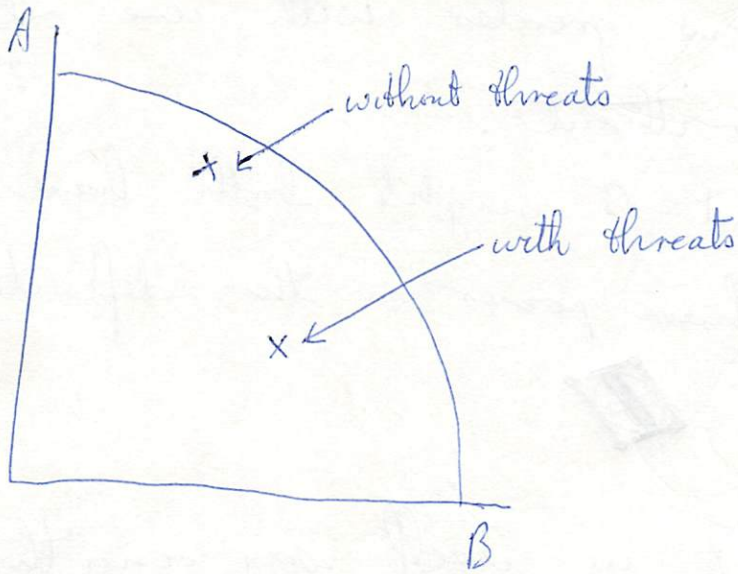But of course what determines credibility is the other side's potential loss from withdrawal of cooperation

If a player does better when threats are used (as B does in the illustration) we can say that he benefits from the use of threats; and if a player does worse we can say that he is damaged by the use of threats (as A is in the illustration).

It may be that neither gains from the use of threats (because of the possibility of threats being carried out and of threats simply producing deadlock in the status quo position); exceptionally both might gain if threats are successful in pushing them towards agreement near the P-optimal frontier in the top right quadrant.

Possible conception of power:

A has power over B if A's
expected utility is greater with use of
threats than without.
(Note : A and B might both have power
or neither have power on this definition)

NB this doesn't in itself say anything
about where the outcome is without
the use of threats (where threats = saying
you will make the other person worse off
than in the non-agreement position; non-
co-operation is present as a tactic in the
non-threat situation since it means
saying that you will see the other
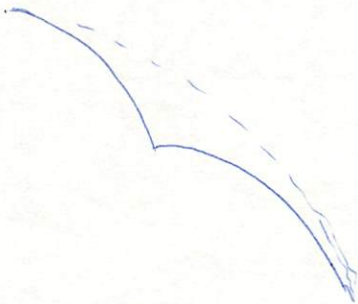person gets the non-agreement position.

Note that P-optimal line can be constructed graphically by taking the envelope containing the most upper-right points when all trades are represented graphically.

COMMENTS ON "POWER IN NON-VOTING GROUPS"

by

Brian Barry

July 1971

Response to invitation to submit advance comments on
"power in non-voting groups".

Brian Barry,
University of Essex.

1. Is there any need for a special concept of "power in non-voting groups"?   I think not, but this is because I do not think there is anything special about power in voting groups. Power, as I understand it, is, roughly speaking, the ability to get other people to do what you want. In relation to voting groups this might apply to (a) the power of the group collectively to get others to do what it wanted or (b) the power of a given member to get other members to do what he wanted. In neither case would the fact that it was a "voting group" be of any importance. To use "power" to refer to the a priori or observed frequency of being pivotal seems to me a misuse of the term.

2. What is the point of employing a concept of power in social analysis? · We often want to say, in advance of any actual confrontation between potentially conflicting parties that one has a "strong position" and so on. Such statements are connected by an empirical generalization to the prediction that, other things being equal, a party in a strong position will tend to get what it wants if it comes into conflict with a party in a weak position. To have a "strong position" in this sense is to have power and the analysis of power consists in (a) discussing what makes up a "strong position" and (b) discussing how the process of exploiting a "strong position" works.

3. Definition of power.   It does not seem to me that the main problem lies in the definition of the concept of power. There is nothing wrong with the often-repeated kind of definition in terms of the ability of an actor to get what he wants over the resistance of some other actor or actors. The problems occur when one tries to specify

what makes for a greater or less ability and how the
ability can be put into effect. Without a full and
reasonably rigorous analytic framework discussions of
these questions easily founder on unstated assumptions,
ambiguities in the specification of hypothetical cases, etc.

4. <u>Object of the paper.</u>   At present we have a quite
elaborate formal literature on bargaining and on the
<u>tactics</u> of conflict and we have a non-formal literature
on power. The need is, I suggest, to bring these two
approaches together and attempt to treat power in the
context of a formal theory of bargaining and conduct
generally in conflict situations. This short paper is
offered as a modest contribution to that end. I have
deliberately restricted myself to setting out the main
ideas without elaboration because I think it will prob-
ably serve the purposes of the conference best to con-
centrate attention on the broad outline rather than get
bogged down in detail.

5. <u>Four basic curves.</u>   Schelling has pointed out
that a payoff matrix allowing each player a quite limited
choice of strategies at each point in a sequence of a
few moves each can easily generate over 10^{100} cells.
Obviously some simpler way of representing possible out-
comes is needed. I suggest that, taking a two-person
situation as our object of analysis, we can in principle
represent the most important facts about their relation-
ship in terms of four curves: (i) for any level of sacri-
fice of utility by A, the highest amount of utility with
which he can provide B; (ii) for any level of sacrifice
of utility by A, the largest loss of utility which he can
inflict on B; (iii) and (iv) the equivalents of (i) and
(ii) substituting B for A and <u>vice versa</u>.

6.   <u>Shape of the curves.</u>   In general it seems rea-
sonable to suppose that all four curves will show the
cost of producing either good or ill for the other actor
rising at an increasing rate. The "cost" may in some
cases start off as a positive utility - A actually likes
doing what makes B better off (or worse off) - but on the
same "diminishing returns" assumption we should not ex-
pect this to be so for indefinitely large amounts of gain
or loss by the other actor. Taking the status quo as the
origin a set of four typical curves might look like this:
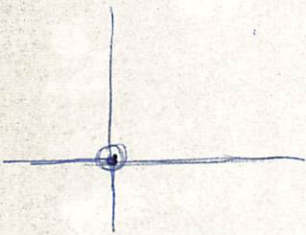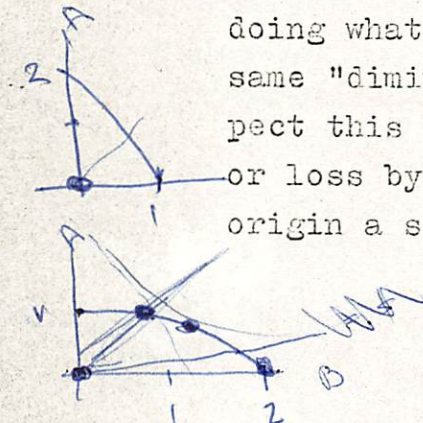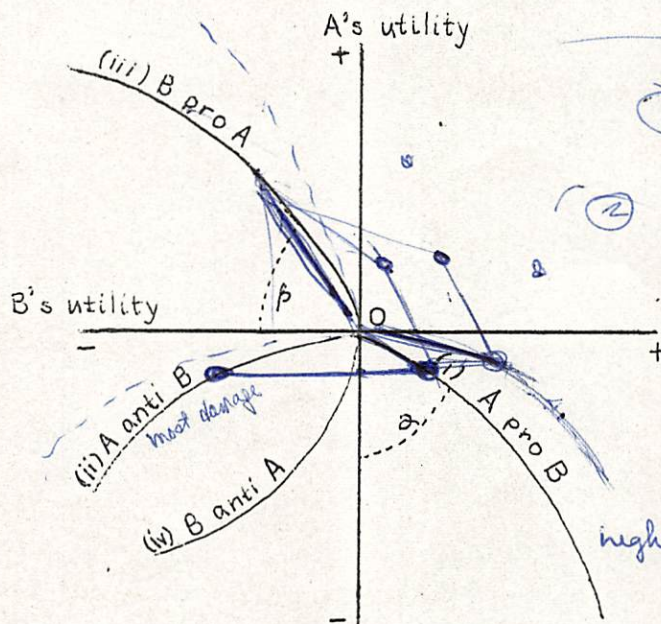
<u>FIGURE 1</u>

7.   <u>Gains from trade.</u>   If the curves (i) and (iii)
exhibit "diminishing returns" and the angles α and β
sum to more than 90° near the origin, gains from trade
are possible. (If the curves are of any other shape
things are less simple but there may also, of course,
be possible gains from trade over certain ranges.)
A situation in which there were potential gains from

trade would be one in which, if A has the opportunity of getting B to move x units to the left of the origin along curve (iii), then for some x there would be a position preferred by both A and B in which B moved further along (iii) and A moved some way along (i), i.e., in which instead of a unilateral transfer there was a one-sided exchange. The discussion of gains from trade has been dominated (unfortunately for other purposes) by the special case of noncoercive bargaining where, unless A and B both benefit from a departure from the status quo, the parties stay at O. This has led to a tendency to think in terms of a false dichotomy: gains from trade and noncoercive bargaining on the one hand, unilateral transfer and coercion on the other.

8. **The Pareto-optimal frontier.**   A simpler way of envisaging gains from trade is graphical: gains from trade are possible when the Pareto-optimal frontier is at some point to the upper right hand side of the curves (i) and (iii) which meet at the origin. The Pareto-optimal frontier is, of course, simply the line about which we can say that, given the objective possibilities of the situation, if A and B are on it then A can only get better off if B becomes worse off and _vice versa_. If there is no possibility of gains from trade, the Pareto-optimal frontier just consists of curves (i) and (iii); since this combined curve runs through O that tells us that the only way A can improve on the status quo is to make B worse off than in the status quo and _vice versa_. If there are gains from trade possible this means that some points on the combined line are dominated by others which represent the net effects of bilateral transfer. We arrive at the Pareto-optimal line by considering all the conceivable exchanges between A and B running from A giving nothing to B while B gives the maximum possible amount to A through to the opposite extreme. Each of these conceivable exchanges gives rise

to a pair of net utilities for A and B. If we eliminate
all those pairs which are dominated by some other pair
(e.g., A 6 units B 5 units by A 6 B 6) we are left with
the "efficient" points. If there are no possible gains
from trade these will simply be unilateral transfer, all
the bilateral transfers having been dominated; if there
are possible gains from trade we get a curve like that
shown below.

FIGURE 2

A pro B + B pro A, optimal
combination at each point
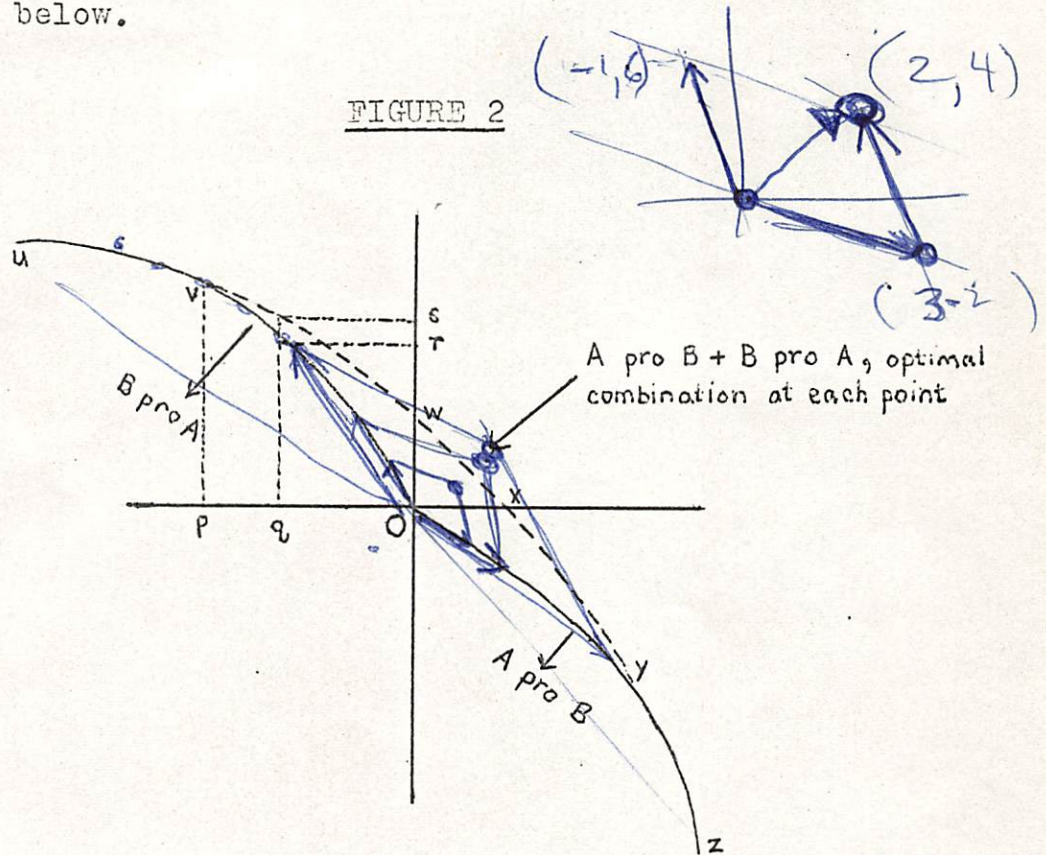
9.   Exchange and unilateral transfer.   (1) Notice that
at some point the Pareto-optimal line, even when gains
from trade are possible, coincides with the curves for
unilateral transfer. (In Figure 2, it extends beyond
them along the line vwxy.) This means that, if A is able
to extract from B (presumably by coercion) a utility loss
greater than pO it will be most efficiently accomplished
by B doing something that A wants but A doing nothing for
B. Thus the fact that there are "gains from trade" as
defined does not guarantee that every transaction will be
most efficiently accomplished by an exchange.

(2) Perhaps more counter-intuitive is the converse point,
already touched on, that, if A is able to get B (again
presumably by coercion) to accept a loss of utility (rela-
tively to the status quo) of an amount less than pO, he
can do better for himself by proposing an exchange than
by insisting on a unilateral concession by B. Thus, re-
turning to Figure 2, if A can extract from B a utility
loss of qO he can get a gain in utility of Or by insisting
on a straight transfer but, by requiring the optimal ex-
change with a net loss of utility of qO to B he can secure
Os - a gain of rs.

10. Excursus on conflict and conflict of interest:
(1) Conflict of interest. The situations we are dealing
with exhibit conflict of interest in that the outcome most
preferred by A is not that most preferred by B. To get an
idea of what is at stake in a confrontation we can look at
the points which A and B respectively most prefer, shown
as A max and B max in Figure 3. (The significance of the
turning points such as A max is that, beyond this point,
although there are things that B would dislike doing more
than those represented by the point, they would not give
A as much satisfaction. Hence A has no incentive to try

FIGURE 3(1)

FIGURE 3(2)
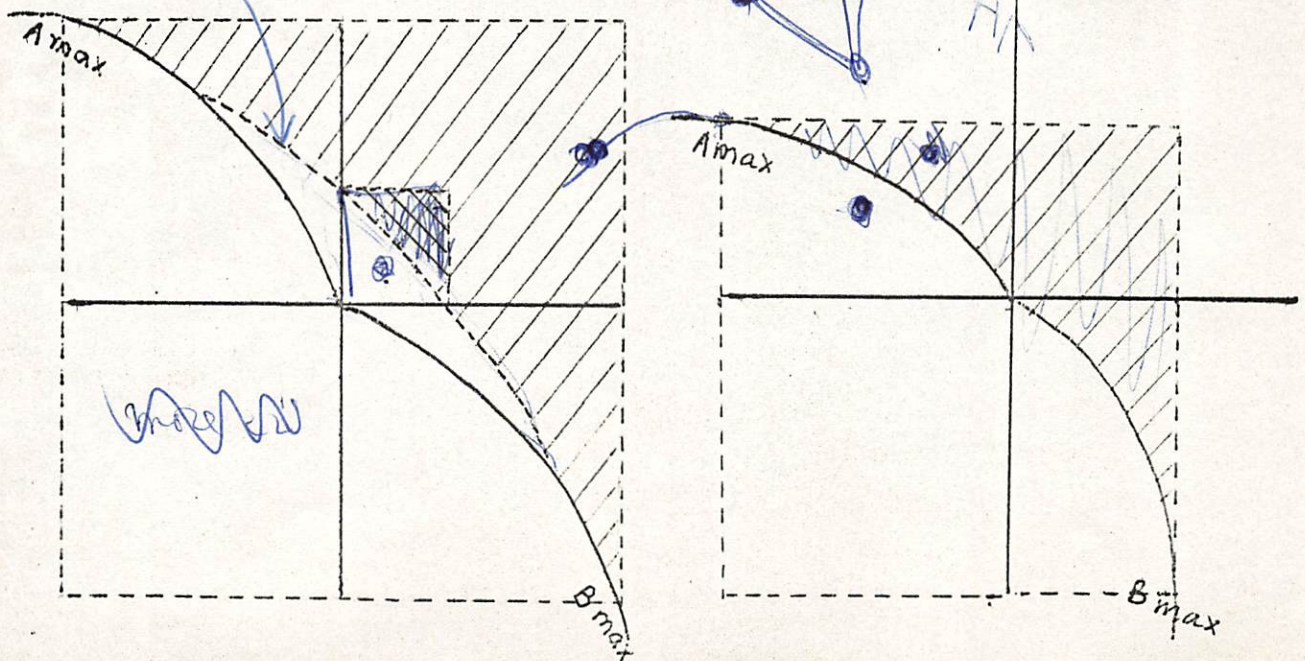
to secure them, and they are not Pareto-optimal since they are dominated for both A and B by A max. N.B. that if what gives A pleasure is B's suffering as such there will not be a turning point and A max will simply represent the maximum suffering possible for B.) Generally speaking we can say that there is "more at stake" between two actors (a) the higher the utility gain to A at A max, (b) the higher the utility loss to B at A max, (c) the higher the utility gain to B at B max and (d) the higher the utility loss to A at B max.

11. <u>Excursus: (2) Axelrod.</u> Robert Axelrod, in his book <u>Conflict of Interest</u>, defines the concept for a bargaining game in which each player can guarantee himself the status quo as the cross-hatched area in Figure 3(1) or, in relative terms, as the cross-hatched area as a proportion of the rectangle in which it is situated. He also discusses "Prisoner's Dilemma" games but does not discuss the general case where players have means of coercion at their disposal. In the spirit of his treatment of the Prisoner's Dilemma, however, we might take the rectangle whose corners are A max and B max and then look at the shaded area to the upper right of the Pareto-optimal line. It is worth noticing that even in terms of relative conflict of interest on this criterion there may well be more conflict of interest where gains from trade are possible (Figure 3(1)) than when they are not (Figure 3(2)). It should also be borne in mind that until we analyse the threat curves of A and B (curves (ii) and (iv) in terms of our earlier discussion) we are unable to say whether the whole range between A max and B max is really "available" to the actors. All we are saying at the moment is that this is the widest area of disagreement there could be given the actors' preferences and the actual transfer-of-utility relationship between them. Even this, however, should not be understood as entailing that B cannot do worse than at A max or A than at B max: if the actors
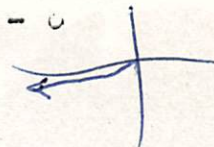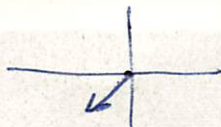
apply sanctions to one another they might both finish up
to the lower left hand side of the rectangle.

12.   Excursus: (3) Conflict.   This kind of measure of
conflict is introduced by Axelrod as an empirical predic-
tor of actual conflict. But "conflict" as Axelrod defines
it is not what most people would think of as conflict
since it is simply the failure to reach agreement on a
mutually advantageous trade. He later extends it to cover
the case where both players in a Prisoner's Dilemma game
make the unco-operative or "double cross" move but this is
still a long way away from the complexities of real-life
conflict that we are trying to capture. Most people, I
suggest, think of conflict as what is going on at the
moment in Vietnam, East Pakistan, Northern Ireland, etc.,
that is to say the imposition of sanctions by one party
on another or (more clearly) the mutual imposition of
sanctions by two or more parties. Notice that this means
successful coercion does not constitute conflict: if I
threaten you with sanctions unless you do x and you com-
ply with my demand this is not conflict. Law-abiding
citizens are not in conflict with the police even if it
is only the presence of the police that keeps them law-
abiding, nor was there conflict in Northern Ireland
during the years of unchallenged Protestant ascendancy.
There is no advantage in conflating the concepts of
coercion and conflict. At most we might want for some
purposes to say that obedience based on coercion carries
the seeds of possible future conflict.
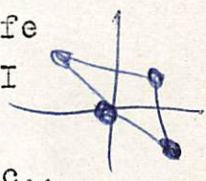
13.   Winning and conflicting as outcomes.   Power, as
I have defined it (along with Max Weber and other worthies)
has much the same relationship to winning a particular
encounter (getting what you want) as has conflict of in-
terest to actual conflict in Axelrod's conception. Both
features of outcomes - who won and were sanctions used? -

are of interest to people for a whole variety of reasons,
which is why they are singled out for special attention.
And since winning and the use of sanctions are important
features of outcomes it is not surprising that we want
to identify features of situations which are likely to
give rise to these outcomes.

14. <u>Difficulties in power and conflict of interest.</u>
But in both cases there are two kinds of difficulty.
First, the things to be explained (or predicted) have a
number of different aspects and there is no obviously
right way of bringing them together as an "amount" of
winning or conflict. (If winning is getting what you
want over resistance, how do we weight the two compo-
nents - is it a bigger win to get a lot of what you want
over little resistance or to overcome an immense amount
of resistance to get a little of what you want? How do
we weight retaliation against primary coercion, and where
do attempts to destroy coercive or retaliatory capacity
fit in?) Second, once we get away from simple, highly-
structured situations of the kind dealt with by Axelrod
we have to admit that there are a number of features of
a strategic situation which can affect the probability
of a given party winning or of the parties becoming in-
volved in conflict and again there is no straightforward
way of reducing them to a common measure. We may have
to confine ourselves to a series of statements of the
form "Other things being equal, the more x the greater
probability of A winning (of conflict)" with perhaps
some indication of the relative importance of these
factors.

15. <u>Implications.</u> This, it should be said, is not
an argument either for abandoning concepts like power or
<u>conflict of interest</u> (better here: <u>conflict-prone rela-</u>
tionships) or for producing more differentiated definitions.

To bring together two points made already in different
places: first, winning and conflict are things we are inter-
ested in for all kinds of evaluative, practical and other
purposes; and any attempt to cut them down by arbitrary
restrictions on their scope to make them more manipulable
will almost certainly exclude aspects which are important.
Second, if we have an adequate analysis of the whole phe-
nomenon of strategic interaction in which both concepts
are embedded we shall be able to see our way around both
concepts, see where the conceptual choices lie, and so on;
if we do not, no amount of definitional elaboration will
be a substitute.

16. _Winning: efficient outcomes._   If the object is to
say what kinds of position conduce to getting what you
want we need to establish more precisely the criterion
of getting what you want.   For the present purpose I shall
not compare different strategic situations but merely ask
what in a given situation would count as getting what you
want.   Taking our two kinds of situation again, we can
see that in Figure 4 case (2) does not present problems
if the actors finish up on the Pareto-optimal line, since
the only move from the status quo (by definition, a draw)
is either into the fourth quadrant (A wins, B loses, re-
latively to the status quo) or the second quadrant (B wins,
A loses, relatively to the status quo).   In Figure 4(1)
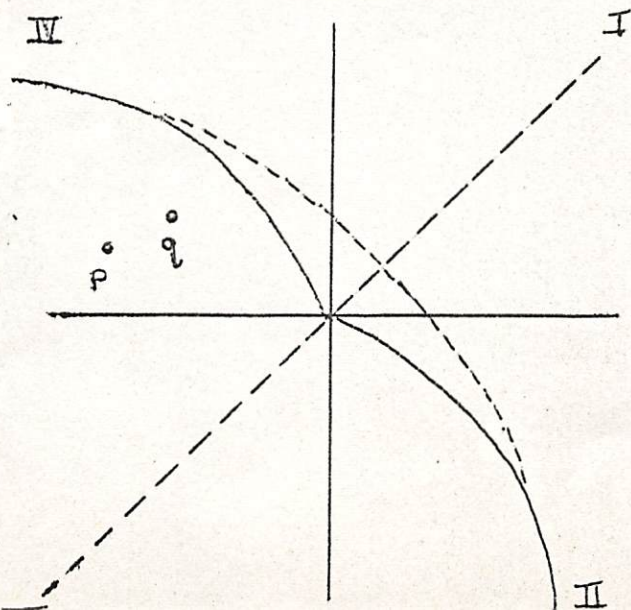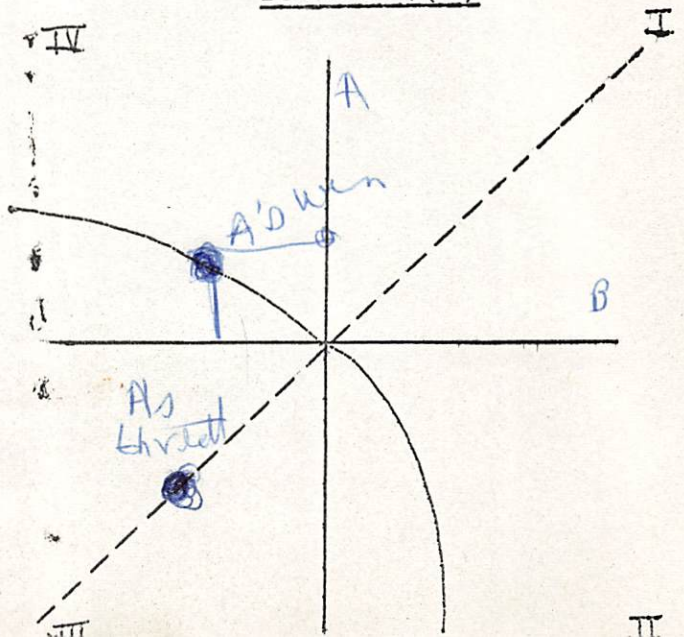
FIGURE 4(1)   FIGURE 4(2)

there is again no problem if the result is on the Pareto-optimal line and falls in quadrants II or IV. If, however, it falls in the first quadrant both parties gain relatively to the status quo. Does this mean that both got what they wanted, and we stop there? No: the line between quadrants is only a line and what we really have is a continuum. We often speak of someone "getting the best of the bargain" and by this we mean that, although both parties gained, one gained more than the other. The line of equal gain is, obviously, a line running from the origin and bisecting the first quadrant: to the left of this A gains more than B, to the right of it B gains more than A.

17. <u>Winning: inefficient outcomes.</u>   Any point is one where (a) A gains more than B, (b) A gains and B loses, (c) A loses less than B, (d) B loses less than A, (e) B gains and A loses, or (f) B gains more than A. The areas corresponding to these possibilities are shown in Figure 5.

FIGURE 5
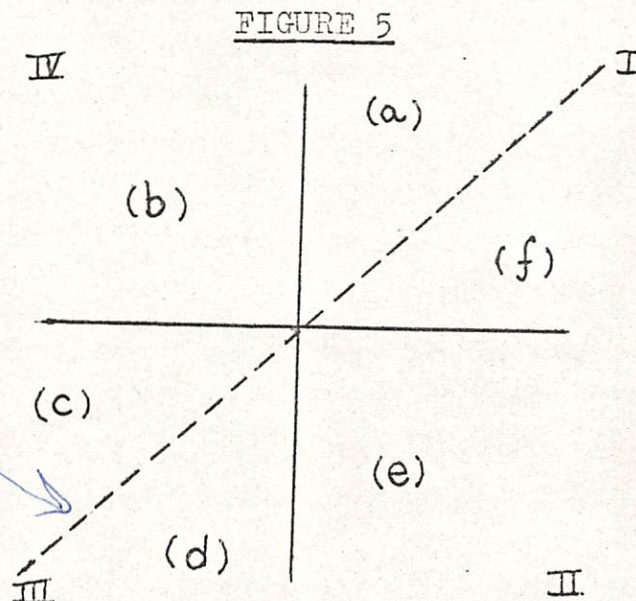
The dividing line between the first three, in which A comes out ahead of B, and the last three, in which B comes out ahead of A, is, of course, the dotted line shown. Outcomes (c) and (d) are ones in which neither

party gets what it wants and, although we/compare losses,
^{can} no outcome in the third quadrant can be described as a
successful attempt to exercise power by either party.
The comparison of other non-Pareto-optimal positions or
of Pareto-optimal positions with non-Pareto-optimal ones
presents difficulties. Consider, for example, points p
and q in Figure 4(1): q gives A a slightly better out-
come but p is much worse for B. How we relate these de-
pends on our purposes: if we are mainly interested in
the particular case we may concentrate on how well A did
but if we are looking for an indication of the strategic
relationship we may well be more impressed by the loss
that A has succeeded in getting B to accept. We should
not, in my view, be in too much of a hurry to lose in-
formation and should think of an outcome as in general
consisting of two elements, A's gain/loss and B's gain/loss.

18. <u>Note on utility.</u>   It will be noticed that when
the outcome is in the first or third quadrants we have
to make an interpersonal comparison of utility. This is,
I suggest, unavoidable if we are to capture the notions
of "getting the better of the bargain" and of one person
losing more than the other. In fact, quite a lot of
things can be said without going beyond individual ord-
inal utilities (i.e., each party being able to say sim-
ply whether one outcome is preferable to another or
whether two outcomes taken together are better or worse
than some other outcome) or individual cardinal utilities
(i.e., outcomes taken together with assigned probabil-
ities compared with other outcomes). And it is obviously
worth while to see how much of the structure can be
reared on these more slender foundations. But as a matter
of intellectual strategy it seems to me that the first
priority is to be able to cover within an adequate
framework all the phenomena we want to be able to talk
about.

    In many bargaining parleys, reference is made -
    vaguely, to be sure - to interpersonal comparisons
    of values, and presumably mathematical abstractions
    of such situations should incorporate comparisons.
    (Luce and Raiffa, <u>Games and Decisions</u>, pp. 131-2)

19. <u>Rationale of the equal-advantage equilibrium.</u>   If
both parties have an accurate perception of each other's
utility schedules the position of equal gain may, in the
absence of attempts at coercion, have a conscious appeal
of symmetry. Luce and Raiffa thus argue for the point
at which the equal-advantage line intersects the Pareto-
optimal line as a "reasonable" solution (pp. 143-5). If,
on the other hand, the parties have a chance to misre-
present their utility schedules, each has an incentive to
pretend that it stands to gain less than it does, subject
to the danger that if both do this too vigorously they
may be unable credibly to accept what is in fact a mutually
advantageous bargain. (The recent negotiations between
Britain and the E.E.C. for British entry illustrate this,
with Britain, especially under the Labour government,
making gloomy noises about the costs and the French
especially on the other side saying that if any more con-
cessions were given it wouldn't be worth having Britain
in. A complication (which greatly weakened the British
position) was the need of the British government to avoid
being too pessimistic publicly in case this made it too
difficult politically to go in on terms the government
was prepared to accept.) But even here we can suggest
that the equal-advantage position makes some sense by
taking a stronger (and more plausible) version of the
idea used to support the Zeuthen-Nash bargaining model,
which did not in its original form involve interpersonal
comparisons of utility. Let us postulate that, in a
bargaining situation, the actor with the most to lose,
objectively, if the negotiations fail, will be the first
to make a concession. It then obviously follows that
the actor who is in a position of relative advantage will
offer a concession so the long-run <u>tendency</u> must be to
finish up on or near the 45° line.

20. <u>Non-co-operation and coercion.</u>   We can get to the
same conclusion if we imagine that an exchange has been

established on a regular basis and there is some question
of its ceasing. Blau, following Rupert Emerson, takes
this as a paradigmatic situation in which power can be ex-
ercised. Like so many theorists influenced by economic
models he considers only the curves representing the best
A and B can do for one another, and does not consider in
any serious way what is surely the essence of power, the
capacity to do deliberate harm. In this kind of myopic
analysis, we have already seen that mere non-co-operation
in striking a bargain is treated as if it were "conflict";
and we can now add that the withdrawal or co-operation is
treated as "coercion". Although this is perverse, we can
certainly say, with Blau, that if one party gains much
more than the other from an exchange then that party is
vulnerable to demands. (Blau, of course, obscures things
further by treating this kind of relationship as the core
of the phenomenon of power.) Thus, in Figure 6, if the
parties are at p, A is in a strong position to demand
something else as a condition of continuing to exchange
on these terms (thus bringing the net utility gain nearer
equality) because B stands to lose much more than A from
a withdrawal of the exchange. We can show the situation
alternatively by putting the established trading position
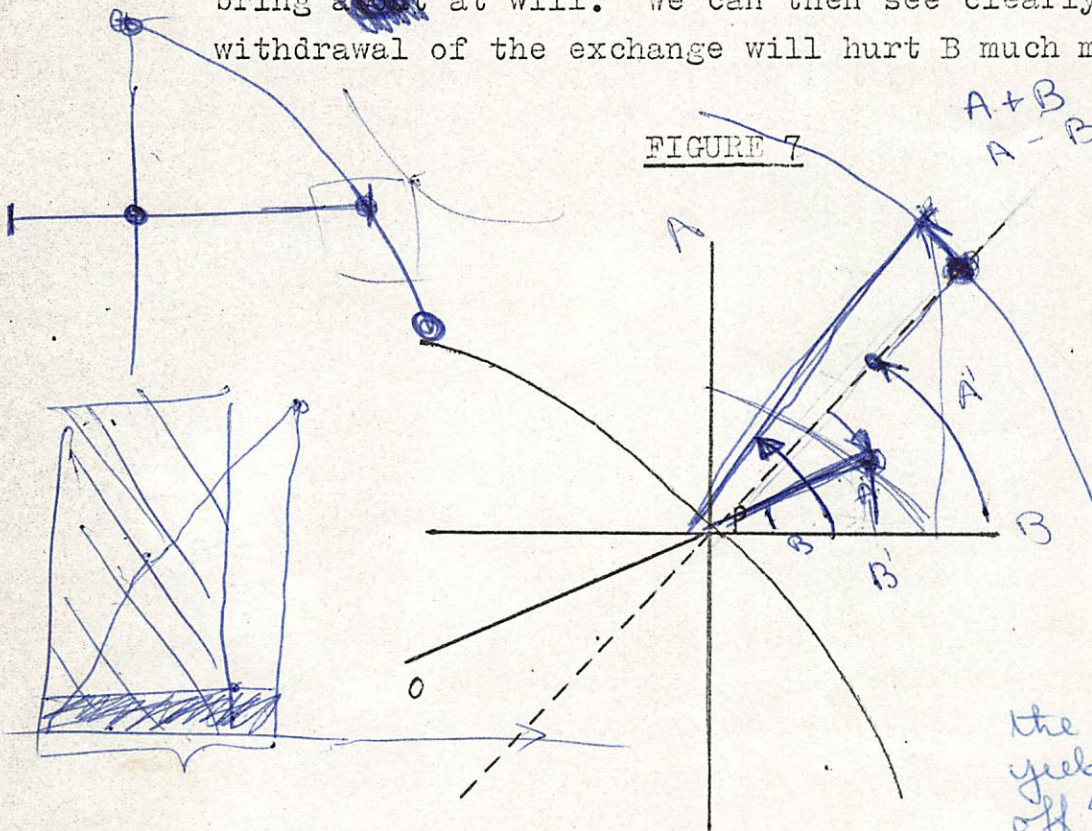as the status quo and drawing a line to the non-trade

FIGURE 6
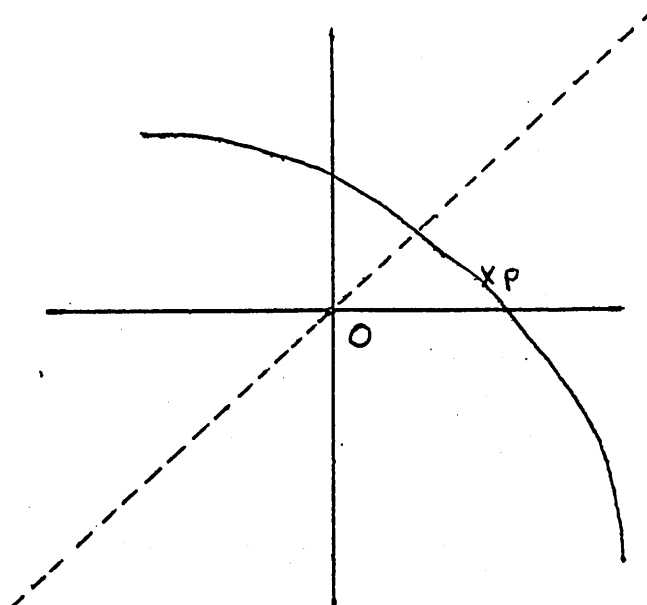
sure no trade

mix all fruit

~~trade~~ no fruit

position to depict a state of affairs either party can
bring about at will. We can then see clearly that the
withdrawal of the exchange will hurt B much more than A.

FIGURE 7

$A + B$
$A - B = 0$

$\dfrac{A'}{B'} > \dfrac{A}{B},$

$A'B > B'A$

Note then that once power exercised is no longer useable again (altho the same resources may yield more later). So once off 45° line, the origin and line presumably move [unless I a prior way of setting it as in true interphisif comp / w. But then kink in curves not nec. at origin]

21. <u>Exchange and power</u>.   To say, however, as Blau
does, that to be taking part in an exchange on disadvan-
tageous terms constitutes power, seems to me very pecu-
liar. In the absence of any other information we should
surely be more sensible to treat the fact that A is taking
part in a bad bargain as <u>prima facie</u> evidence that B is
exerting power over <u>him</u>. Even if we have the additional
information that neither party is in a position to employ
coercion against the other, we still have no need to
speak of the party with the worst of the bargain having
power; all we need say is that he could get a better deal
if he tried. By <u>power</u> we should mean the ability to get
the outcome <u>off</u> the 45° line in one's own favour - not
merely the fact that one is off it to one's own disfavour
and could get on to it.

Ok

But if one can improve oneself he has power. Being
unfairly treated may thus give you power
Question then is "how def where to put origin"
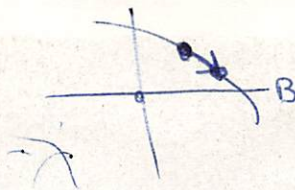
22. <u>Sanctions and power.</u>   We have thus, finally, arrived at the point where it can be seen that power depends upon the capacity to apply sanctions. This has, of course, often been asserted as part of the definition of "power" but we have arrived there not by definitional fiat but by an analysis of the prerequisites of being able to get what you want by overcoming resistance and "getting the best of a bargain". Admittedly, one may, by the exercise of guile, by taking advantage of the confusion or incompetence of the other party, or by using the kind of option-foreclosing moves described by Schelling, sometimes come out ahead in a bargain without threatening sanctions, or even occasionally get the other party to agree to something that makes him worse off than he is in the status quo situation. But to be dependably in a position to do this surely requires the availability of sanctions. (Of course, A may be able dependably to get B to do what he (or she?) wants simply in virtue of the fact that B wants to do what A wants him to do. But although this is a way of getting what you want it is not an exercise of power because it does not involve the overcoming of resistance: once A has stated a wish the optima of A and B coincide, the north-east corner of the Pareto-optimal curve is the most northerly and easterly point on it, and there is no conflict of interest — these are just three ways of saying the same thing.)
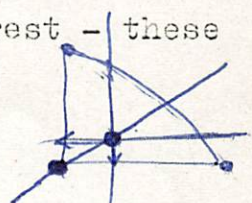
23. <u>Threat curves.</u>   The analysis of power is thus largely the analysis of the shapes of threat curves and the strategic implications of various combinations of threat curves when occurring with various combinations of transfer curves. The full treatment of these strategic possibilities, and an attempt to relate them in a serious way to empirical phenomena, would require a book, and I in fact intend to write it unless the comments of the other participants at the conference knock irreparable holes in the general notions presented so far. Clearly,

however, we can begin by saying what is a good shape for
a threat curve from the standpoint of its owner and what
is a bad shape. In Figure 8, of the two threat curves
shown for A against B, (1) is favourable to A and (2) is
unfavourable to A. By referring to the 45° line it is
easy to see that with curve (1) A can do B a lot of damage
at a little cost whereas with curve (2) he has to incur a
large cost to himself to inflict a little damage on B.

not necessary

FIGURE 8
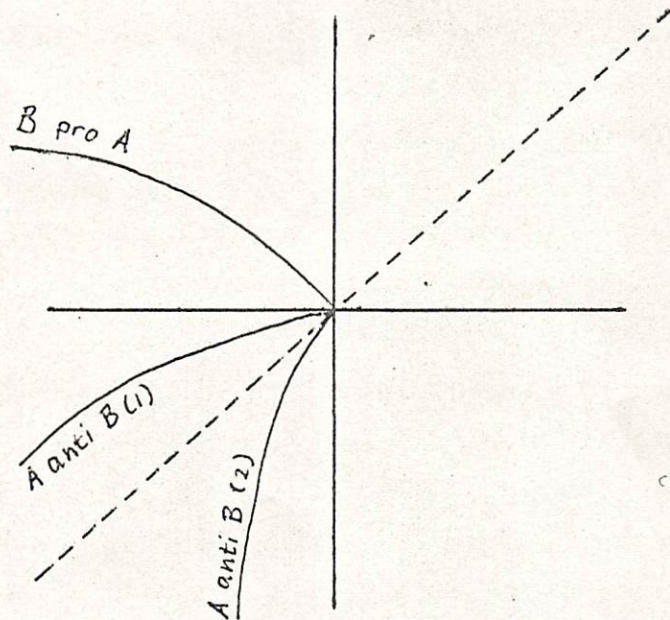
24. **Unilateral use of threats.**   Under the schooling
of writers such as Ellsberg and Schelling, we have grown
to accept that the essence of a threat is not "This will
hurt you more than it hurts me" but "Doing what I want
will hurt you less than I intend to make it hurt you not
to do what I want". In suggesting that a "strong position"
depends on the shape of the threat curve, am I ignoring
this? I think not. There are two basic questions to ask
about a threat: (1) Is it worth making? and (2) Will it be
successful? Whether it is worth making depends on the
answer to the second question plus the answers to three
other questions: (a) What is the gain if it is successful?

NOT NEEDED just need "This will hurt me (re me) a little and you a lot. I can take it. You can't." Only comparison needed is thru behav, ie in war whether the threat is easy to make you surrender.

(b) What is the loss from carrying it out? and (c) What
is the loss from not carrying it out? Whether the threat
is successful depends on (d) the estimate the other actor
makes of the probability of the threat's being carried out
if he does not comply and (e) how unpleasant the threat
would be if carried out compared with the unpleasantness
of complying with the demand. Of these five factors,
(b) and (d) depend on the shape of the threatener's
threat curve; (a) and (e) depend on the shape of the
threatener's transfer curve. Holding the shape of the
transfer curve constant, the more favourable the shape of
the threat curve the more likely it is that making a threat
in the hope of securing a concession will be a good bet.
Thus, in Figure 8, A looks well placed to make a threat
with curve (1) but not with curve (2). Further develop-
ments of this line of thought depend on the specification
of equations connecting the rates of change of costs,
benefits and probabilities. I have done some preliminary
work on this but any elaboration of it would require a
lot of space.

25. <u>Mutual use of threats.</u>   So far I have been writing
as if only one party had any threat capacity. There are
of course cases of this (e.g., securely-hidden kidnappers)
but more usual is the case where both parties have some
capacity to threaten even if it is very unequal. What
counts as a good shape of threat curve is not affected by
whether or not the other party has an available threat,
but what happens is liable to be affected. If A threatens
B, B may either counter-threaten B or threaten retaliation.
These are logically quite distinct: the first is a threat
by B to damage A unless A does something advantageous to
B; the second is a threat by B to damage A if and only if
A carries out his threat following non-compliance by B.
The range of outcomes opened up by these is different,
though including common items such as the continuation of
the status quo and both parties carrying out their threats;

But futures as threats (may
even be symmetric
in theory)

and both possibilities have in common that they may in prospect deter A from threatening B at all. It is apparent that any attempt to deal adequately with the strategic situation arising from two parties with available threats would require quite extensive treatment. I shall not therefore pursue the matter any further here.

26. <u>Further developments.</u>   Extension to more than two parties is too obvious a need to elaborate on. A development which seems to be essential, though it inevitably introduces additional complexity, is the explicit recognition that the cost of coercion should for many purposes be divided into short-run and long-run costs: coercion in a single case of non-compliance may be quite cheap provided the overheads have been incurred which are required to set up a coercive apparatus. (Banfield, in <u>Political Influence</u>, makes some moves in this direction.) Another complication, which can be introduced quite neatly within the existing framework but requires additions to the basic four-curve diagram, is the recognition of the significance of a "counterforce" strategy in certain situations: that is to say, an actor may find it advantageous to use resources to destroy the coercive capacity of another party rather than seeking to maximize his loss of utility. To end with, I should like to mention the development which seems to me the most interesting and potentially fruitful, though I feel I have so far only begun to find out how to deal with it. This involves getting away from the God's eye view of the curves embodied in the discussion so far and introducing into the heart of the analysis an explicit recognition that what is crucial is the perceptions by each actor of the utility schedules of the other actor. What is the relationship between uncertainty and conflict? Which sorts of misperceptions and in which directions increase or decrease the chances of threatening versus non-threatening, compliance versus non-compliance, carrying out a threat versus doing nothing, threatening retaliation