

The Slippery Slope of Concession

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Introduction

- conflict is costly, why does it occur?
- both parties believe they are the probable winner conflict is the obvious consequence.
- Why do we fail to observe the expected loser appeasing the expected winner, thereby avoiding conflict and even worse losses?
- Israeli-Palestinian fight

dynamics of conflict and time-consistency

- potential loser may not be willing to make a concession, because the potential winner cannot credibly commit to avoiding a conflict
- after receiving the concession winner's position strengthened, and he can demand more
- loser might choose not to make the initial concession, believing it will lead to slippery slope of further demands and further concessions
- in the baseline case of common beliefs and identical time preferences, and costly conflict, conflict can always be avoided by a series of small concessions, with both parties recognizing that there will be additional concessions in the future.
 - extension of voting franchise in England during the 17th-20th centuries.
 - Spanish response to Catalanian and Basque demand for autonomy

inevitability of conflict

➤ Differing rates of time preference

potential winner much more impatient than loser

➤ Indivisibilities

fixed cost for making a concession cannot have series of small concessions

indivisibilities in resources under dispute

natural boundaries (Sudetenland)

ethnic mixing (Kosovo)

other physical or social features

The Model

two players $i = 1, 2$

divide single resource x - “land” or “territory”

sequence of time periods $t = 1, 2, \dots$

$x_t^i \geq 0$ amount of the resource held by player i at time t

initially there a single unit of the resource $x_1^1 + x_1^2 = 1$.

bargain each period over the division

impasse results in conflict

(in other words) each player may unilaterally start a conflict

in period t player i makes a demand $y_t^i \geq 0$

write $x_t = (x_t^1, x_t^2)$, $y_t = (y_t^1, y_t^2)$, and so forth

final allocation of resources each period determined by initial allocation, demands of two players, presence or absence of a past conflict

if no past conflict

Agreement: if $y_t^1 + y_t^2 \leq x_t^1 + x_t^2$ then $x_{t+1}^i = y_t^i$ and there is no conflict.

Disagreement: if $y_t^1 + y_t^2 > x_t^1 + x_t^2$ then a conflict takes place between period t and $t + 1$.

if conflict takes place game ends

given state x_t conflict implies a probability distribution over future allocations $\mu_{x_t}^i[x_{t+1}]$

closely related to Hirshleifer [1988] contest success function but includes the opportunity costs and damages of conflict, as well as the resources that are gained.

utility depends on resources controlled each period $u^i(x_t^i)$

continuous and strictly increasing

intertemporal preferences described by discount factors δ^i

average present value of utility

$$(1 - \delta^i) \sum_{t=1}^{\infty} (\delta^i)^{t-1} u^i(x_t^i).$$

average present value expected utility that results from conflict

$$V^i(x) \equiv \int u^i(z^i) \mu_x^i(dz)$$

assumed continuous and $V^i(x^i, 1 - x^i)$ strictly increasing in x^i

equilibrium concept is subgame perfection

three questions about conflict

- is conflict possible? are there subgame perfect equilibria that involve conflict?
- is conflict inevitable? do all subgame perfect equilibria involve conflict?
- if conflict not inevitable, what is the nature of the settlement paths that avoid conflict?

conflict is always possible

suppose $V^i(x) > u^i(0)$ for both players

both demand the entire pie

given strategy of the other player choice is

concede to the other player and get $u^i(0)$

“agree” to conflict and get $V^i(x)$

might not be true in more effective and realistic bargaining mechanisms

focus on the question of whether conflict is inevitable

is conflict inevitable?

is there an equilibrium in which there is no conflict, and in which no resources are discarded

easy to characterize

a sequence of demands y_t with $y_t^1 + y_t^2 = 1$

for both players $i = 1, 2$ present value from agreement at least that from conflict

$$(1 - \delta^i) \sum_{\tau=t}^{\infty} (\delta^i)^{\tau-t} u^i(y_{\tau}^i) \geq V^i(y_{t-1})$$

where it is convenient to define $y_0 = x_1$.

comparison to other models

standard bargaining framework of Rubinstein [1982] and Stahl [1972]

a model of post-conflict negotiation: losses incurred until an agreement reached then the game ends

model of negotiations designed to end an ongoing conflict

we model negotiations designed to prevent a conflict from starting

war of attrition - Rubinstein/Stahl with indivisibility

Hirshleifer [1989] considers the status quo may lie below the utility possibility frontier

one player has fish the other corn

if they have not learned to trade, conflict may be a substitute – I steal some of your fish, you steal some of my corn, we are both better off

Classification of Environments

(1) $u^i(x_t^i) \geq V^i(x_t)$, $i = 1, 2$ both players agree conflict undesirable

conflict not inevitable

both players setting $y_t^i = x_t^i$ is subgame perfect.

(2) $u^i(x_t^i) < V^i(x_t)$, $i = 1, 2$. both players agree conflict desirable status

conflict is inevitable

(3) $V^2(x_t) > u^2(x_t^2), V^1(x_t) < u^1(x_t^1)$ or $V^2(x_t) < u^2(x_t^2), V^1(x_t) > u^1(x_t^1)$

one party benefits, the other does not

we always study first case: player 2 expects to benefit from the conflict.

Main Result

beliefs are common $\mu^1 = \mu^2$

conflict is socially costly, so $V(x)$ lies below the Pareto frontier

common rate of time preference $\delta^1 = \delta^2$

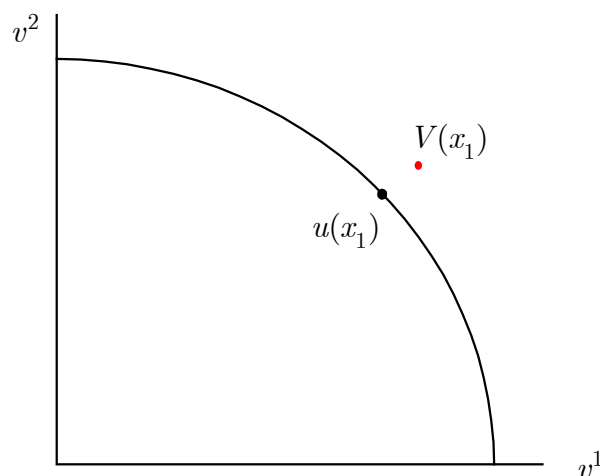
conflict is not inevitable.

a sufficient condition: the Pareto frontier is strictly concave and the outcome of conflict is uncertain

while conflict can be avoided, solution not Pareto efficient if utility possibility frontier strictly concave

Conflict not Costly: Concave Case

$$\delta^1 = \delta^2$$



expected result of conflict $V(x_1)$ not socially feasible

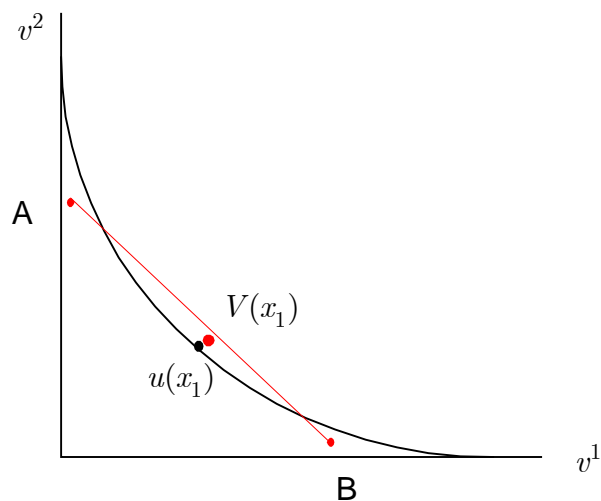
only because two players have different beliefs $\mu^1 \neq \mu^2$

both players think they will win

Conflict not Costly: Convex Case

$$\delta^1 = \delta^2, \mu^1 = \mu^2$$

“this town ain’t big enough for both of us.”

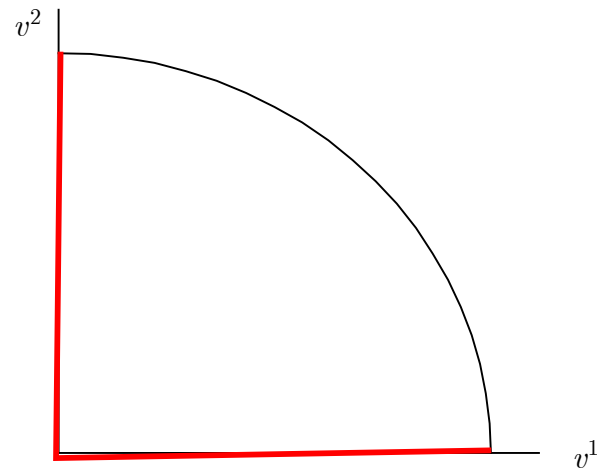


can do better than V by alternation between A and B, but not time consistent

Yugoslavia with alternating presidency after Tito's death in 1980
with collapse of communism and rise of nationalism potential for
conflict arose

after the constitutional reform in 1989, Slovenia went first, Serbia went
second, but refused to step down

complete indivisibility



Concession Indivisibilities

we have assumed the resource is divisible so small concessions are possible

if indivisibilities are large, it may be impossible to satisfy the loser

concession by Czechoslovakia of Sudetenland

(led to Chamberlain's infamous "peace in our time" speech)

Sudetenland mountainous area on the border

essential to defense of Czechoslovakia

not easily divisible

concession so large that next demand by Nazi Germany was for all of Czechoslovakia

appeasement might not work with large indivisibilities

usual conclusion is that appeasement doesn't work

but it can work with small indivisibilities