

UDK 316

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A MODEL OF WORLD SYSTEM POLARIZATION

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The article explains main properties of world system polarization.

Keywords: polarization, rules and properties of polarizations, synergetic, antagonistic and conflict world system.

Introduction

The problem of world system polarization is not a new one [1]. The following two causes make this problem especially actual in the present time. Firstly, dissolving Soviet Union and finishing 'Cold War' at the end of past century have transformed the polarization problem from theoretical into practical one. Secondly, absence of generally accepted theory of world system polarization opens unlimited possibilities for inventing various political myths.

The main aim of this paper is disproving one such a political myth. Namely, the myth about possibility of very long and stable existence of the multipolar world. This myth was born in Russia as result of searching reasonable alternative of died 'Cold War' politics. The main results of an unified theory of conflict analysis and resolution are used [2; 3; 4; 5; 6; 7; 8; 9; 10; 11].

The model. Let us assume:

1. The world system consisting from three nation states: $WS = (a, b, c)$.

2. Primitive relations (where constants a and b are arbitrary):

- P_{ab} = 'positive' relation between a and b
= $\Pr(b/a) > 0.5$

- N_{ab} = 'negative' relation between a and b

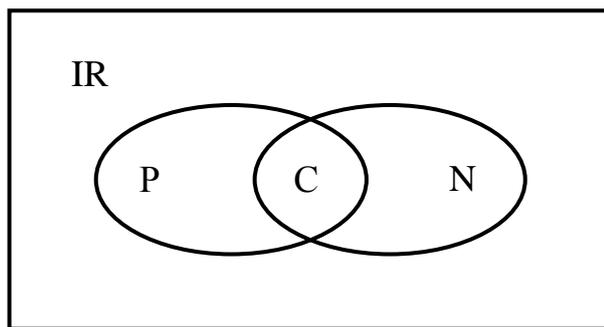
$$= \Pr(b/a) < 0.5$$

3. Derivative relations:

- IR_{ab} = 'irrelevance' relation between a and b
 $= \Pr(b/a) = 0.5$
 $= \neg P_{ab} \ \& \ \neg N_{ab}$
- C_{aa} = 'conflict' relation
 $= N_{aa} = P_{ab} \ \& \ N_{ba}$

From given definitions it follows that 'irrelevance relation' is supplement of logical sum (disjunction) of 'positive' and 'negation' relations; that 'conflict' relation is negative feedback relation. One should add that 'conflict' relation is reflexive, symmetric, but not transitive.

The universe of all relations will be looked as follows:



4. The multiplication table is as follows:

\otimes	P	N	C	I	R
P	P	N	C	I	R
N	N	P	C	I	R
C	C	C	C	I	R
I	I	I	I	I	R
R	R	R	R	R	R

5. We shall say that nonempty set of nation states forms a pole if and only if no one of them has 'negative', or 'irrelevance' relation to any other one. Therefore, all inner relations between nation states of each pole may be only positive.

6. Then polarization may be defined as is partition of the world system into nonempty set of poles according to the following well-known interpersonal rules:

▶ A friend of my friend is my friend.

(If a is positively relevant to b and b is positively relevant to c , then a positively relevant to c , that is a , b and c form together one pole.)

▶ An enemy of my friend is my enemy.

(If a is positively relevant to b and b is negatively relevant to c , then a is negatively relevant to c , that is c forms new pole antagonistic which is to the pole created by a and b .)

▶ A friend of my enemy is my enemy.

(If a is negatively relevant to b and b is positively relevant to c , then a is negatively relevant to c , that is b and c forms new pole which is antagonistic to the pole created by a .)

▶ An enemy of my enemy is my friend.

(If a is negatively relevant to b and b is negatively relevant to c , then a is positively relevant to c , that is a and c forms new pole which is antagonistic to the pole created by b .)

▶ A man who is irrelevant to my friend is irrelevant to me.

(If a is positively relevant to b and b is irrelevant to c , then a is irrelevant to c , that is c forms new pole which is irrelevant to the pole created by a and b .)

▶ A man who is irrelevant to my enemy is irrelevant to me.

(If a is negatively relevant to b and b is irrelevant to c , then a is irrelevant to c , that is c forms new pole which is irrelevant to the antagonistic poles created by a and b .)

7. On definition, every individual nation state forms one-polar system (because of it is positively relevant to itself, $\text{Pr}(a/a) = 1$).

Two nation states form one-polar system if and only if they are mutually positively relevant to each other. Otherwise, they form two-polar system with P or IR relation as outer.

8. If world system is divided into two poles, outer relations between all members both poles can be only mutually negative or irrelevant.

9. The main results are the following:

► Irrespective of number of the nation states and actions accessible to them, the stable world system cannot have more than two poles. If it has one pole, it is synergetic system and if it has two poles, it is antagonistic one.

► All synergetic systems are in strict, strong equilibrium in drama-theoretic sense. It means that nation states of synergetic systems do not face any dilemmas.

► Nation states of both poles of antagonistic system face deterrence dilemma in drama-theoretic sense.

► In the course of time all one-polar (synergetic) systems only increase its synergism and aim to remain thereby conflict free ones.

► In the course of time all two-polar (antagonistic) systems only increase its antagonism and aim to remain thereby conflict free ones.

► The conflict world system cannot have any pole.

► By analogy with conflict free state there are only two conflict ones – antisyergetic (every positive line of synergetic system transforms into negative one) and antiantagonistic ones (every positive line of antagonistic system transforms into negative and every negative line of such a system – into positive line).

► In the course of time all antisyergetic systems will

(1) remain antisyergetic and thereby conflict systems, if the values of all ratios x , y and z (between elements a , b and c in triad) are identical;

(2) transform in antagonistic, that is in the conflict free systems, if and only if product of two strongest ratios, say x and z , is greater on an absolute value than a ratio of weakest connection y .

► In the course of time all antiantagonistic systems will

(3) remain antiantagonistic if the values of all ratios x , y and z are identical;

(4) transform in synergetic if and only if a value of negative ratio y is smaller on an absolute value than product of two positive ratios x and z ;

(5) transform in antagonistic if and only if product of two strongest ratios is greater on absolute value than a ratio of weakest positive connection.

Conclusions. Contrary to opinion of most of analysts multipolarity of world system in itself is not unambiguous solution of its steady existence. Only synergetic or antagonistic conditions of world system are dynamically conflict free and steady.

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