

AD 750623

November 1971

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TITLE

THE IMPLICATIONS FOR ARMS CONTROL  
OF PERCEPTIONS OF STRATEGIC WEAPONS SYSTEMS

Volume III: STUDY OF SOVIET PERCEPTIONS

ACDA/E-163 III

PREPARED FOR  
The U.S. Arms Control and Disarmament Agency

PREPARED BY

THE RESEARCH OFFICE OF SOCIOLOGY  
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of  
THE UNIVERSITY OF PITTSBURGH

Pittsburgh, Pennsylvania

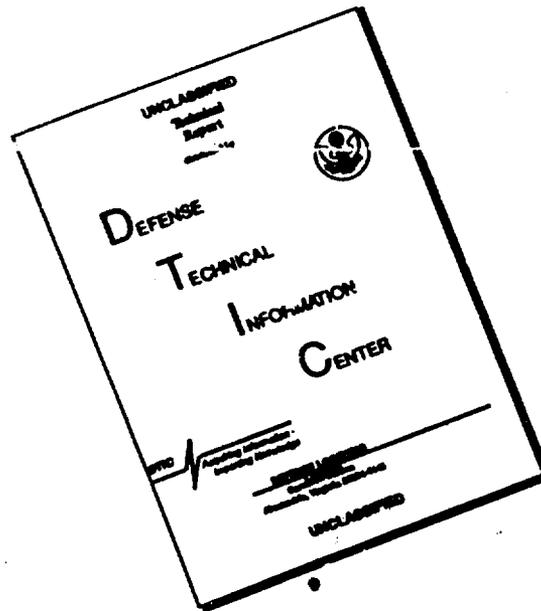
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THE IMPLICATIONS FOR ARMS CONTROL  
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Volume III: STUDY OF SOVIET PERCEPTIONS

ACDA/E-163 III

Prepared for  
THE UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY

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VOLUME III: STUDY OF SOVIET PERCEPTIONS

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STUDY OF SOVIET PERCEPTIONS

Part 1: SURVEY OF SOVIET PERCEPTIONS

Prepared by: Steven J. Rosen

Purpose

The purpose of this task, as defined in the contract is to "make a brief survey of what is known of Soviet perceptions of values and costs of strategic weapons systems and explore the feasibility of an in-depth study of Soviet perceptions in this area in terms of methodology, personnel, cost."

Research Approach

Pursuant to this aim, a research approach was devised, which involved:

- a. Scanning relevant works, primarily previous ACDA-sponsored studies on Soviet attitudes towards arms control, as embodied in papers prepared for these studies and in books such as Alexander Dallin's The Soviet Union, Arms Control, and Disarmament\* and Thomas B. Larson's Disarmament and Soviet Policy, 1964-1968.\*\*
- b. Interviewing six (6)\*\*\* prominent Sovietologists, to ascertain both their views on current Soviet perceptions of the values and costs of strategic weapons systems and their ideas concerning the feasibility and nature of Soviet perceptions;
- c. Querying five (5) other Sovietologists concerning the feasibility of studying Soviet perceptions in depth and the method(s) which they would suggest utilizing for this

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\*New York: Columbia University Press.

\*\*New York: Prentice-Hall

\*\*\*Four (4) of these were asked both kinds of questions, while two (2) were asked only questions about method.

purpose.\* (For the kinds of information requested, see the letter of December 17, 1969 attached.)

d. In the light of these inputs, preparing both:

- (1) A Summary Report; and
- (2) A research design for a study of "Soviet Perceptions of Strategic Weapons Systems and Their Implications for Arms Control."

Since all respondents were assured that their comments were not for attribution, the Summary Report emphasizes the substantive findings of the overall survey, rather than the particular comments of specific individuals. Furthermore, this report must be considered as an aid to understanding the problem rather than as a definitive exploration of Soviet perceptions, which must await an in-depth study such as that outlined in the research design mentioned above.

#### Substantive Findings

The first set of questions addressed related to the impact of strategic weapons systems on the Soviet economy. In general, the Soviets are acutely aware of the effect of allocations for strategic weapons systems on possible expenditures for other purposes. The centralized economic planning structure focusses attention on the competition between military and civilian demands, and requires explicit choices among them. The competition between expenditures for strategic weapons systems and expenditures for other (principally domestic) goals is especially intense at this moment; in fact, pivotal decisions may well be made within the next two years that will determine the shape of the Soviet military structure (and the industrial base required to support it) and consumer-oriented production and construction.

Turning now to specific attributes, such as the question of economic growth, there is a general impression that the Soviets believe themselves to be sacrificing a measure of growth in order to maintain strategic (and other) weapons systems. Despite this, the resources allocated to defense are expected to increase, although probably not at a rate greater than the rise in the national product.

In terms of manpower utilization, the Soviets see both advantages and disadvantages. On the one hand, new skills are created by research,

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\*Although sixteen (16) letters were sent out, only five (5) substantive replies were received.

development, and weapons deployment, and these improve the quality of the overall Soviet manpower pool. On the other hand, specialists in some of the more recondite technologies are already in short supply, and the diversion of scarce skills to the production of strategic weapons necessarily hurts other sectors, ranging from civilian computer development to industrial construction.

The major set of problems perceived by some elements in the USSR is that expenditures of monies and allocations of resources for strategic weapons systems inhibit increases in the standard of living, make more difficult the expansion of welfare programs, and by and large cut heavily into the amenities available to the average Soviet citizen. In short, some of the same pressures operating in the U.S. are also affecting the USSR.

As far as political attributes are concerned, those people interviewed generally agreed that the Soviets see strategic weapons systems as providing security against attacks by the United States, West Germany, China, and other potential enemies. They feel that the Soviets place great value on these weapons as a deterrent against China.

There is disagreement as to whether the Soviets themselves see strategic weapons systems as usable in limited war. While some Sovietologists view strategic weapons systems as providing an umbrella which prevents the escalation of local conflicts into general war, others can imagine circumstance in which the Soviets might use their strategic capabilities in a limited war, particularly in a conflict with China but possibly even in Europe.

The Sovietologists consulted largely agreed that the Soviet deterrent promoted bloc cohesion by similarly safeguarding the countries of Eastern Europe against renewed German aggressiveness; however, they could not say whether the Soviets themselves perceived this as a benefit and, if so, whether they were deliberately fanning fears of German revanchism in order to capitalize upon them.

In terms of the international environment, the specialists consulted feel that the Soviets believe that strategic weapons systems confer overall stability but, on the other hand, greatly increase the risks and consequences of miscalculation and error. As of 1969, Soviet strategists were thought to have great confidence in the contributions of ABM's and other defense systems to international stability, but also to have great fears of MIRV's and other offensive innovations.

The analysts do not see that Soviet possession of strategic weapons systems has lessened general xenophobia and distrust, though it may have reduced fear of Germany. In this connection, one interviewee went so far as to say that "The present leadership is more provincial than any recent

leadership of the Soviet Union."

One effect of the development of strategic weapons systems has been to enhance the prestige of scientific and technical elites in Soviet eyes. Despite the efforts of some members of this prestigious elite (e.g., Sakharov) to "combat militarism," divisions over this attempt and over the usefulness of the military have not become public issues.

Finally, the question of the effects of strategic weapons on Soviet science and technology was examined. Some Soviets, like Glagolev, seem to believe that the demands on science and technology made by the military (and particularly by the Strategic Rocket Forces and the Air Defense Forces) detract from the overall growth of Soviet science. Our analysts indicate that the Soviet leadership does not emphasize the "spinoffs" from defense technology as much as do American leaders; whether this is because they are less aware of these subsidiary benefits or because they are more honest in an unanswerable question.

#### Future Lines of Inquiry

As indicated earlier, twenty-two (22) Sovietologists were asked to give their views on the feasibility and desirability of the further study of Soviet perceptions and to suggest ways of conducting such a study. The eleven (11) who gave substantive replies all favored further research on Soviet perceptions of the values and costs of strategic weapons systems, even though they recognized that this may pose difficulties.

One such difficulty pointed out by our respondents is that of assessing Soviet public opinion, in view of the absence of polling data, the virtual impossibility of attitude surveys, etc. However, a number of the respondents feel that the inability to ascertain mass opinion is not in itself of great consequence, inasmuch as elite opinions are more meaningful; in fact, all emphasize the paramount importance of such opinions. Among the methods suggested are private discussions with members of Soviet elites, participation in specialized conferences which Soviets attend (such as the Pugwash meetings and those of the International Peace Research Association), interviews with non-Soviets who do have extensive contacts within the USSR, and, above all, content analysis of selected literature. Obviously, some of these methods are more feasible--if more costly--than others.

Another difficulty they mention is that of the uneven quality of material on, and current research into, Soviet perceptions of the attributes of strategic weapons systems, i.e. of the reasons why these are regarded as having costs or values. The comments of one specialist reflect generally the more specific inputs made by others:

In brief, I would say concerning the List of Attributes

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[reprinted on pp. 8 to 10, infra] that (a) the data for the Economic Section will be highly uneven (b) the data for the Political Section will be spotty and generally 'soft,' (c) the data for the Psychological Section while relatively soft lends itself to reevaluation on the basis of past Soviet policy and performance, (d) the data for the Sociological Section is partially researchable and documentable, with some areas having been the subject of intensive study in the West and (e) the subject of Science and Technology has been fairly extensively studied.

This is, however, a long way from saying that such research is not doable, and not only this respondent but all the others who replied believe that a generally accurate picture of Soviet perceptions can be obtained.

A number of other difficulties are mentioned, such as that of obtaining reasonably accurate data on the economic costs of strategic weapons systems, against which to correlate shifts in Soviet perceptions. However, it is agreed that trends in costs, by whoever's estimate, are more important than actual costs. (Moreover, comparisons of shifts in Soviet perceptions of strategic weapons systems with the actual economic costs of these weapons systems is only one of three such correlations, and constitutes a very small part of the proposed research design.) The general feeling was that all these difficulties (and particularly the one of how to "read" differences of opinion expressed in or by various sources) could be overcome by utilizing sophisticated "Kremlinologists," for the selection of sources and the interpretation of data.

APPENDIX A

LETTER OF DECEMBER 17, 1969



FACULTY OF ARTS AND SCIENCES  
UNIVERSITY OF PITTSBURGH  
PITTSBURGH, PENNSYLVANIA 15213

RESEARCH OFFICE OF SOCIOLOGY

December 17, 1969

As you may know, we are conducting for the U.S. Arms Control and Disarmament Agency a study of perceptions of the values and costs of strategic weapons systems, such as bombers, ICBM's, ABM's, etc. As part of that study, we are interested in ascertaining how Soviet political leaders, military officials, foreign affairs analysts and other elite groups view these weapons systems, and particularly, what political, psychological, economic, sociological, and scientific and technical values and costs they attribute to such systems, or to nuclear weapons in general.

This is, of course, a very difficult task, since many of the customary methods of garnering views (such as attitude surveys, interviews, etc.) are not practicable in the USSR. Moreover, other methods (such as content analysis) may be less revealing than in countries where officials are more outspoken, and differences of opinion are more freely aired. Accordingly, we would like to solicit your help in orienting future research in the most useful directions.

To be specific, we would very much like to obtain your answers to the following questions:

1. To what extent, in your judgment, is it possible to obtain reasonably valid information concerning the political, psychological, economic, sociological and scientific and technical values and costs which the Soviets attach to various strategic weapons systems? (To help you in this task, we are enclosing a list of values and costs which we have used in other surveys, and which may be applicable in part to the USSR.)
2. Where would one look for such information: in major newspapers, in

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December 17, 1969

- specialized publications such as Red Star, in domestic and foreign radio broadcasts, in speeches given on significant occasions, etc.?
3. What method or methods would you recommend be used to extract such information: content analysis, interviews with non-Soviets who have access to Soviet officialdom, conferences of Sovietologists such as yourself, etc.?
  4. Which books or journals, by either Soviets or non-Soviets, would in your opinion be most helpful in making a preliminary assessment of the utility of various strategic weapons systems in, say:
    - a. Furthering Soviet politico-psychological goals, such as deterrence of war, promotion of bloc cohesion, extension of Soviet influence, enhancement of the Soviet bargaining position in negotiations, etc.?
    - b. Affecting economic growth, technological advancement, scientific progress, internal alignment of elites, and other socio-economic goals?

We recognize that this is a good deal to ask of you, and would be grateful for even a partial reply. To make such a reply easier, don't hesitate to write on the reverse of this letter, to put your thoughts on tape for subsequent transcription, or to phone one of us collect at 412 (21-3400 extension 6433 (for Professor Rosen) or 7576 (for Professor Laulicht)).

With many thanks for your consideration of this request, we are

Yours sincerely,

Enclosure: List of Attributes

LIST OF ATTRIBUTES

ECONOMIC

- E 1 Allocation of money for strategic weapons systems (alternative costs)
- E 2 Economic growth
- E 3 Use of manpower for producing, maintaining, and operating strategic weapons systems
- E 4 The development of socially and economically useful skills
- E 5 Growth of industrial production
- E 6 Consumption of raw materials or stimulus to the production of raw materials
- E 7 Balance of payments
- E 8 Nature, level, and distribution of foreign trade
- E 9 Capital exportation
- E 10 Nature, level, and distribution of military and economic assistance
- E 11 Level of employment

POLITICAL

- P 1 Power or ability of nation to manipulate outcome of negotiations or diplomatic exchanges
- P 2 Achieving major political objectives, e.g. in West Germany, reunification; in France, leadership of Western Europe
- P 3 Prestige of nation as judged by nationals, allies, neutrals, and potential adversaries
- P 4 Deterring nuclear war
- P 5 Deterring limited aggression and local wars

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- P 6 Inhibiting the extension of an adversary's political influence or control
- P 7 Ability to influence actions of allies, neutrals and the United Nations
- P 8 Level of integration, cooperation or cohesiveness among allies
- P 9 Promotion of international stability
- P 10 Facilitating the limitation or control of the weapons system
- P 11 Enhancing national security
- P 12 Enabling increased participation in decisions on the use and/or control of nuclear weapons

PSYCHOLOGICAL

- Psy 1 Level of anxiety concerning likelihood of war
- Psy 2 Level of perceived world tension
- Psy 3 Degree of concern about national position, prestige and influence
- Psy 4 Perceived threat from other nations
- Psy 5 Rigidity of attitudes and opinions concerning other nations
- Psy 6 Willingness to take risks in pursuit of national objectives
- Psy 7 Concern over morality of possessing or using nuclear weapons systems
- Psy 8 Attitudes toward the tendency toward isolationism

SOCIOLOGICAL

- S 1 Level of social integration or social cohesion within a society (as indicated by level of antagonism between groups of different races, ages or interests)
- S 2 Acceptance or rejection of, or alienation from, major values and institutions of society

- S 3 Similarity of views on foreign policy of government and people
- S 4 Level of prestige of the military, scientific, and other elites
- S 5 Level of influence of the military, scientific and other elites
- S 6 Potential changes in educational system (as indicated by total funds allocated, changes in emphasis or desirability of training among science, humanities and social sciences, and concern with educational system)
- S 7 Changes in welfare system (as indicated by allocation of funds, concern with welfare system problems, willingness to consider a "guaranteed income," etc.)
- S 8 Ability and willingness to deal with non-military issues, such as urban problems or international education
- S 9 Social mobility (personal and group)

SCIENTIFIC AND TECHNOLOGICAL

- S&T 1 Level and nature of scientific programs
- S&T 2 Rate of increase of scientific knowledge
- S&T 3 Rate of technological growth
- S&T 4 Transfer of technological knowledge from strategic weapons programs to other military programs
- S&T 5 Transfer of technological knowledge to civilian uses and applications
- S&T 6 Effect on the environment (ecology)

## Part 1: DESIGN FOR A STUDY OF "SOVIET PERCEPTIONS OF STRATEGIC WEAPONS SYSTEMS AND THEIR IMPLICATIONS FOR ARMS CONTROL"

Prepared by: J. I. Coffey

Background

The current negotiations between the U.S. and the USSR on the limitation of strategic armaments, and the even more important interactions between the two countries with respect to weapons systems procurement, point up the desirability of knowing more about Soviet perceptions of the values and costs of these weapons systems. If, for example, virtually all elements in the USSR attach high importance to strategic defenses, it may be difficult to persuade Soviet negotiators to accept severe limitations on the deployment of ABM's, or to cut back on their air defense system. If, on the other hand, some important groups do not register support for strategic defenses, or if opinions about the value of these defenses seem to be changing with time, there may be better prospects for inducing the Soviets to come to terms.

Previous research on the perceptions of strategic weapons systems had led to the development of a list of attributes of strategic weapons systems (i.e., reasons why individuals might attach values and costs to those systems) and to a preliminary determination of the attributes which seem most important. In the process, it uncovered two interesting facts: that the eleven (11) articles by Soviet authors which were examined made no reference at all to bombers, to missile submarines or to air defenses, and that their comments on Soviet strategic offensive systems in general identified these as more costly than valuable.\* While little reliance can be placed on an unstructured analysis of a small sample of Soviet literature, it is apparent that better-supported findings to this same end could be useful to the arms control analyst, to the diplomat, and to the information officer.

Admittedly, it is difficult to ascertain Soviet perceptions of the values and costs of various strategic weapons systems, partly because the sources of information are fewer and less easily tapped than are those in the United States. (For instance, the Soviet Government does not publish annual statements by its Minister of Defense, does not allow newsmen free access to its senior officials, and does not permit the conduct of opinion polls and attitude surveys.) Furthermore, members

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\*See Table 10, Vol. II, Literature Survey.

Some elite groups are not as outspoken as their U.S. counterparts, and tend to follow rather than to anticipate or to oppose decisions on military matters. And it is not always easy to determine when particular opinions are pro or anti-Soviet, in part (with official blessing) a trial balloon, or reflecting their own, or their group's, views--any more than they are in the United States. Despite these problems, it is both essential to complement political assessments of Soviet attitudes toward strategic weapons systems by more structured analyses of politico-military, psychological, economic and sociological costs and values and possible to do so, as shown below.

#### Approach to the Problem

Any such analyses must draw upon a variety of sources, in order to insure that the views of major elite groups are represented and that the data base is large enough to permit of valid inferences concerning perceptions of strategic weapons systems. They must look at these perceptions over time, and correlate any shifts in opinions with the introduction of new weapons, with trends in the Soviet economy, and with perturbations in the international environment. They must employ several analytical techniques, in order to guard against biases resulting from reliance upon one research method. And they must take full advantage of all relevant studies in order to bring the cost and the effort required within manageable proportions.

To those ends, it is suggested that any study of Soviet perceptions of strategic weapons systems include:

- Task 1: A refinement of the research approach, which would involve bringing together a number of eminent Sovietologists\* to join the staff of the study and members of ACDA in:
- a. Exploring the utility and relevance of work currently under way, such as that on Soviet space programs at the University of Indiana and that on Soviet science and technology at the University of Miami;
  - b. Helping to select the individuals whose views may be important (either because of their own position and status or because they may be considered as spokesmen

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\*Although no commitments have been sought, individuals such as Morris Bornstein, Urie Bronfenbrenner, Alexander Dallin, Robert Campbell, Leon Goure, and Roman Kolkowicz might be asked to join in this endeavor, and several of them have expressed interest in so doing.

for particular groups), the source materials to be examined, and the time frames within which such examinations should be conducted;

- c. Advising on the selection of attributes (reasons for attaching values and costs to strategic weapons systems) to which primary attention would be paid in subsequent tasks. (For a preliminary list of such attributes, see Annex A: Important Attributes of Soviet Strategic Weapons Systems.)

Task 2: The content analysis of relevant items in selected literature, to include newspapers (Pravda, Izvestia, Red Star, Soviet Aviation, etc.), professional publications (The Military-Historical Journal, Problems of History, etc.), books on military topics (such as Sokolovskii's Military Strategy, Grechko's War and the Nuclear Age, etc.), and speeches by key leaders. In this analysis, particular attention should be paid to shifts in the views of those individuals and group spokesmen who express opinions about the values and costs of strategic weapons systems. Consideration would also be given to the publications in which their writings and speeches appear; an article by Marshal Chuikov about the importance of ballistic missile defenses which is printed in Pravda may be more reflective of high-level thinking than one in Red Star.

One could either utilize the original Russian-language sources (which could increase the accuracy of the analysis, at a considerable increase in costs) or rely mainly on English-language translations such as those appearing in the Current Digest of the Soviet Press or the Foreign Broadcast Intercept Service. Most of the experts consulted agreed that a combination of English-language translations and spot-checks of Russian-language sources would serve the purposes of the study, but one or two argued for more extensive use of original material. All agreed, however, that an analysis of Soviet news media could give important insights into both official thinking and differences among elites.\*

Task 3: The solicitation from about 25 American and European Sovietologists of their impressions of the costs and values which various

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\*In this connection, see Lawrence T. Caldwell, Soviet Attitudes to SALT, Adelphi Paper Number Seventy-Five, London: The Institute for Strategic Studies, February 1971, pp. 15-19.

elites in the USSR attach to different strategic weapons systems. These could be obtained by:

- a. Using questionnaires to ascertain both their impressions and the bases for them (informal contacts with Soviet citizens, output from direct research on the problem, indirect results of research on other topics, etc.); and
- b. Attempting to reach a consensus among them, either by means of the Delphi Technique\* or by asking them to evaluate and comment on the results of Task 2.

Task 4: The conduct of interviews with informed observers of the Soviet scene who do have contacts with Soviet authorities and/or an opportunity to assess Soviet thinking: Rumanian diplomats, Polish economists, Yugoslav military attaches, French newspapermen, etc. These can provide impressions of Soviet views on the basis of access not possible to, and on the basis of perspectives different from those of most Americans: furthermore, they represent a largely untapped source of information, which can be valuable in and of itself. These interviews could help to verify the findings from Tasks 2 and 3, and thus provide an additional check on the results of those tasks.

Task 5: Assessing the resultant implications for arms control in the light of:

- a. The intensity and persistence of views expressed by or attributed to individuals and groups in the USSR;
- b. The correlations between these views and
  - (1) Perturbations in the international environment, as measured by, say, Walter Corson's "United States-Soviet Interaction, 1945-1965: A Quantitative Analysis."
  - (2) Broad trends in Soviet procurement of strategic weapons systems, as determined from unclassified publications such as The Military Balance\*\*
  - (3) Previous Soviet proposals for limitations on strategic armaments.

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\*The Delphi Technique involves scaling responses from a group of experts and asking those who deviate markedly from the mean to re-evaluate and/or rejustify their answers.

\*\*London: The Institute for Strategic Studies, each year.

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- c. In consequence, a better basis for assessing the readiness (or reluctance) of the Soviets to limit or to reduce various types of strategic weapons systems.

Administrative Factors

It is estimated that a study such as that described would require the following support:

OPTION A: PRIMARY RELIANCE ON RUSSIAN-LANGUAGE SOURCE

Tasks	Man-Months of Effort			Total
	Professional	Research Assistant	Administrative/ Clerical	
1	2	1	1	4
2	12	36	12	60
3	4	4	2	10
4	3	2	2	7
5	4	6	2	12
Project Direction	6	--	6	12
TOTAL	31	49	25	104

Such a study, including travel and other administrative costs, would cost about \$200,000.00.\* It would take 18-24 months to complete.

OPTION B: PRIMARY RELIANCE ON TRANSLATIONS OF RUSSIAN-LANGUAGE SOURCES

Tasks	Man-Months of Effort			Total
	Professional	Research Assistant	Administrative/ Clerical	
1	2	1	1	4
2	4	12	4	18
3	4	4	2	10
4	3	2	2	7
5	4	6	2	12
Project Direction	3	--	6	9
TOTAL	20	25	17	60

Such a study, including travel and other administrative costs, would cost about \$140,000.00.\* It would take 15-18 months to complete.

\*These estimates are based on current costs at the University of Pittsburgh, which is not interested in conducting such a study. They would, however, probably hold at most other universities, and at many research organizations.

ANNEX A

IMPORTANT ATTRIBUTES OF SOVIET STRATEGIC WEAPONS SYSTEMS

<u>Code</u>	<u>Title</u>
<u>Economic</u>	
E-1	Allocation of money for strategic weapons systems (alternative costs)
E-2	Economic growth
E-3	Use of manpower for producing, maintaining, and operating strategic weapons systems
<u>Political</u>	
P-1	Power or ability of nation to manipulate outcome of negotiations or diplomatic exchanges
P-3	Prestige of nation as judged by nationals, allies, neutrals, and potential adversaries
P-4	Deterring nuclear war
P-5	Deterring limited aggression and local wars
P-9	Promotion of international stability
P-10	Facilitating the limitation or control of strategic weapons systems
P-11	Enhancing national security
<u>Psychological</u>	
Psy-1	Level of anxiety concerning likelihood of war
Psy-4	Perceived threat from other nations

Sociological

- Soc-1 The level of social integration or social cohesion within a society (as indicated by level of antagonism between groups of different races, ages or interests)
- Soc-5 Level of influence of the military, scientific and other elites
- Soc-8 Ability and willingness to deal with non-military issues such as education, welfare, urban affairs, etc.

Scientific and Technological

- S&T-1 Rate of increase of scientific knowledge
- S&T-3 Rate of technological growth
- S&T-5 Transfer of technological knowledge to civilian uses and applications
- S&T-6 Effect on the Environment (Ecology)