

1979

Set and Drift

Ralph V. Buck

W.F. Long Jr.

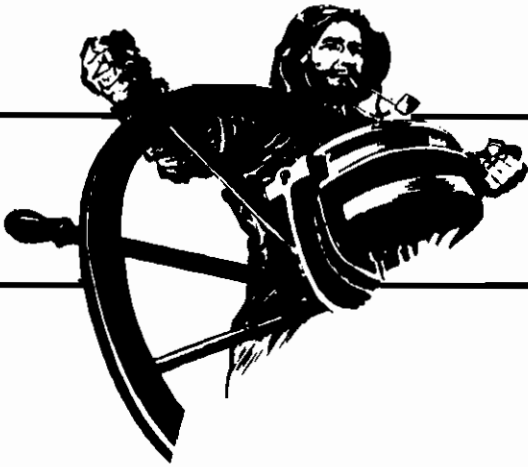
William R.D. Jones

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Recommended Citation

Buck, Ralph V.; Long, W.F. Jr.; and Jones, William R.D. (1979) "Set and Drift," *Naval War College Review*: Vol. 32 : No. 2 , Article 9.
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SET AND DRIFT

ASSESSING THE CAPABILITY OF NAVAL FORCES

by

Commander Ralph V. Buck, U.S. Navy

Introduction. In assessing military capability, careful judgments by seasoned military and civilian professionals never can be entirely supplanted by mathematical analysis. However, such judgment can be aided and improved through the use of selected quantitative measures and assessments. The degree to which this process is successful depends on how well it meets the needs of a particular assessment problem and the understanding that operators and analysts have of the role of combat modeling.

Historically, analysis of military capabilities has proceeded from the simple to the complex; from the description of physical performance characteristics, to single system encounters, to battle and theater force actions. Many attempts have been made to carry the level of detail from the simple to the complex by a form of building block, or modular, aggregation. Such attempts, while intuitively appealing, are carried out at great monetary cost (development, computer running time, etc.) and understanding (loss of

general knowledge of model details, and proliferation of the number of possible combinations of the inputs).

Key difficulties encountered can be grouped as follows:

- Complexity of military activities often exceeds computation capacity and time available to develop the model.

- Level of detail is often aggregated to reduce complexity, thereby biasing the results by the necessary assumptions.¹

- Physical theory is deficient in uniformly predicting results from initial conditions. Static measures such as fire-power indices do not easily decompose to show the time history of each element's contribution.

- The modeling hierarchy is non-linear in the sense that higher level resource allocation models depend on interaction factors developed in lower level models, which in turn depend on the output of the upper models.

To address these difficulties, some assessments² have taken a top-down approach, in which highly aggregated models develop those interaction

processes that are central contributors to the outcome. Additional details are then supplied as the analysis proceeds step-by-step down the hierarchy, tracking through relevant details of the problem. This approach depends on certain heuristic rules, to ensure a reasonable link between physical parameters and aggregate capability measures, and looping methods, involving the exercise of models at several levels in carefully prescribed sequences.

A top-down approach tends to involve military experience and judgment in the early stages of an assessment in which general courses of action are identified. Subsequent elaborations then integrate the knowledge and judgment of specialists in operations, systems, and technology.

This article examines various quantitative assessment measures for military forces, ranging from static comparisons of combat strength to dynamic simulation and gaming models and their aggregated inputs and outputs. The methodology of assessment will be discussed and related to its techniques and applications.

Static Analysis. Because the general objective of assessing military capability is a comparison with some threat, most net assessments of military balance start by comparing numbers of opposing combat forces. Some base the count on like items of similar equipment, such as fighter squadrons, patrol gunboats, or divisions. Such counts are overly simple as opposing forces are seldom symmetrically composed or arrayed but they are easy to present in overview form. Some experienced strategists³ and naval leaders⁴ have argued for basing counts on a comparison of forces whose objectives are opposed, e.g., offensive vs. defensive weapons or sea control vs. sea denial forces. Such counts are not easily presented and run the risk of double counting, as many major systems are multipurpose.

Some assessments attempt to show how technology and manpower are related. The analytical techniques are usually based on a form of production theory, in which unlike inputs are merged and organized in a complex process to produce "levels of defense." The analytical difficulty arises from a need to consider qualitative differences between elements that make up the inputs⁵ and to define output measures that are useful in comparing opposing forces.

The most widely used measures for comparing unlike forces have been indices of firepower capability. The crudest of these is a ratio formed from the sums of major equipment items in opposing units,⁶ while a more sophisticated approach aggregates unlike systems. Most assessments will use one of two methods: judgmental or laboratory.

Judgmental firepower measures are usually produced by experienced military officers. Relative effectiveness estimates can also be compared with historical data and refined through consensus. This process is the basis for many recent balance assessments, including Presidential Review Memorandum-10.⁷ Each weapon is assigned a Weapons Effectiveness Index expressed as some standard such as "tank equivalent" or "air wing equivalent."

Laboratory indices are target specific and are usually derived from engineering design and test data on the lethal area of projectile fragments (or tank kill probability, etc., as appropriate). Summing the indices of all weapons in a unit yields an Index of Combat Effectiveness. Some have argued that as much subjective judgment enters the derivation of these indices as for the judgmental ones.⁸

While firepower indices are satisfactory for some assessments, military experience suggests that numbers and firepower alone may not always determine the outcome. Considerations of relative force quality can enter assess-

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ments explicitly in the form of readiness categories and behavioral/historical adjustments,⁹ and implicitly in the manner in which firepower scores are generated.

Allied to quality factors are adjustments made to reflect differences arising from attacking or defending strategies.¹⁰ Such adjustments have inconclusive historical basis, derive from traditional military thumb rules, and are meant to apply to limited engagements. Such adjustments can also enter into the calculation of firepower scores and should not be applied repeatedly in the assessment process.

Static analyses go beyond order-of-battle listings and, though limited to a given point in time, provide insights into possible results of conflict. They can even be constructed to show relative capabilities at several times during mobilization or confrontation but they do not portray the actual process of conflict. This is the special domain of dynamic analyses.

Dynamic Analysis. Dynamic analyses encompass a wide range of models, simulations, and games that concentrate on the course of conflict. They are generally based on data similar to those used to produce static measures, but extend the analysis through time-dependent capability estimates. This extension increases the complexity of assumptions, calculations, and interpretation. The increase in assumptions alone provides fertile area for disagreement on the outcomes of such analyses. For this reason they are most useful in assessing fighting potential "on the margin," as inputs are varied to reflect uncertainty in value.

To deal with the complexities in combat modeling, many techniques have evolved. One ranks various models according to the degree of conflict involved and the treatment of reality. Thus, analytical models are carefully bounded treatments with a range of

conflict axiomatically incorporated. War games are broader in scope and generally model intense levels of conflict. A number of gaming models have been developed and used for analysis of each level of force engagement. As mentioned earlier, results of each level have been used as inputs for higher and lower levels of analysis. Interactions normally follow this scheme:¹¹

- One-on-one engagement;
- Multiple system encounter;
- Battle analysis;
- Campaign or theater analysis;
- Global analysis.

A *one-on-one engagement* is an encounter between two opposing units. Examples are a single ship countering the attack of an antiship cruise missile or a single submarine in an antisubmarine warfare (ASW) barrier station attempting to detect and attack transiting enemy submarines.

One-on-one engagements are routinely examined for all weapon systems. The quantitative techniques that have been used range from hand calculations of simple equations to complex, detailed, computer simulations. This level of analysis treats the threat explicitly and requires estimates of the characteristics, capabilities, employment, and tactics of both U.S. and threat systems. Most of the inputs and assumptions are sufficiently uncertain that the engagements must be analyzed using a range of input values to determine the sensitivity of the analytical results to critical assumptions.

One-on-one analysis is particularly useful because of its simplicity and because a specific threat can be "played" against a weapon system under consideration. This level of analysis can be useful in evaluating complementary or substitute weapon systems in several possible roles (for example, a patrol aircraft in a barrier or area search role). However, one-on-one analysis does not consider the multiple threat or multiple weapon system employment

that characterizes most military engagements, and is therefore of limited use.

The *multiple system engagement* extends the scope of analysis to include a number of similar units of each side. For example, the single, antiship missile attack on a surface combatant can be expanded to a multiple missile attack on a surface ship formation. This analysis permits considering the effects of mutual support and coordination between units, command and control, and degradation because of saturated defenses.

The extension of quantitative analysis to treat multiple unit encounters requires additional inputs, including estimates of the employment and tactics of each side's forces and of the degradation of weapon systems performance caused by multiple threats. The uncertainty in both inputs and outputs of this analysis generally exceeds that which is found in lower level analyses. Sensitivity analysis can be used to set limits on the uncertainty, but the uncertainty remains a fundamental problem that cannot be eliminated.

Multiple system analysis can be applied to the same types of problems for which one-on-one analysis is used. Weapon systems can be compared in multiple-threat encounters and alternative employments of systems can be investigated. In addition, situations beyond the scope of one-on-one analysis, such as anti-air warfare (AAW) command and control systems for surface combatants, can be examined.

Battle analysis is the extension of multiple system analysis to examine multiple attackers of several types against multiple defenses that include different type forces. Some models use expected value probability calculations,¹² but most use Monte Carlo (stochastic) simulations programmed for large capacity digital computers. Battle analysis comes close to modeling realistic engagements involving mixes of forces on each side; it examines the

contributions of different types of weapon systems; and it can be used to examine trade-offs between additional old systems and the design of new systems to complement existing capabilities. In general, detailed modeling of physical characteristics is replaced by relationships between various lower level indices or measures of effectiveness (MOE). The complexities are reflected more by the modeling process than by these effectiveness indices. Other techniques, such as Lanchester's attrition models,¹³ supplement the detailed battle models. In some applications the costs of forces are considered in order to determine the least cost force that would achieve a specified outcome (or effectiveness) in a given encounter.

The uncertainty existing in the inputs is significant and must be considered in interpreting the results of battle analyses. For example, in ASW study the least-cost alternative could change from an airborne system to a submarine system when poor environmental conditions are assumed instead of good environmental conditions. Contingency and sensitivity analyses can be used to identify the assumptions or inputs that have the most significant effects on the study's results, but it is the judgment of relative importance of different sets of conditions that is critical to applying the study results to a particular problem or decision.

Campaign analysis is the application of analytic techniques to examine the quantitative outcome of a large-scale military campaign consisting of a series of battles or engagements extending over a considerable period of time. This level of analysis has been used for most net assessments of relative capability and, the most notable of these applications has been to assess the effectiveness of U.S. and Allied general-purpose naval forces to defend essential sea lines of communications during a conventional war. Land campaign analyses have generally centered on the NATO Central Front.

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Models used in campaign analysis require the calculation of the outcome of the campaign on an engagement-by-engagement basis and then an aggregation of the results. Engagements are examined following a specified sequence or schedule. For each engagement the opposing forces are determined, the outcome is derived from supporting analyses, force levels are adjusted to reflect losses, and units are redeployed for the next engagement. Figure 1 outlines the process, typically accompanied by a cost model in force level studies.

Some extensions to campaign analysis address the question of what force mix and level would be the best compromise for two or more tasks. Two force optimization methodologies that have been developed will be described briefly for illustrative purposes.¹⁴

The first was developed by the Institute for Defense Analyses in its 1970 Navy Force Structure Study. Two opposing forces, Blue and Red, were

considered. A campaign model calculated the outcome based on:

- a definition of tasks Blue wished to accomplish,
- a set of tactics to be employed by Red to prevent Blue from accomplishing his tasks, and
- an estimate of the capabilities of each element of the forces of Blue and Red.

The model was then used to determine a table of outcomes when Blue forces were varied systematically while Red forces, the tactics of both sides, and Blue objectives were held constant. Peacetime costs were calculated for each force mix examined and the least-cost force mix to achieve a given level of campaign outcome was determined.

In the Navy's 1968-1969 ASW Force Level Study (unpublished), a campaign model was used to generate a set of results as a function of the force levels of one combatant by solving a zero-sum, two-person game in which the objective

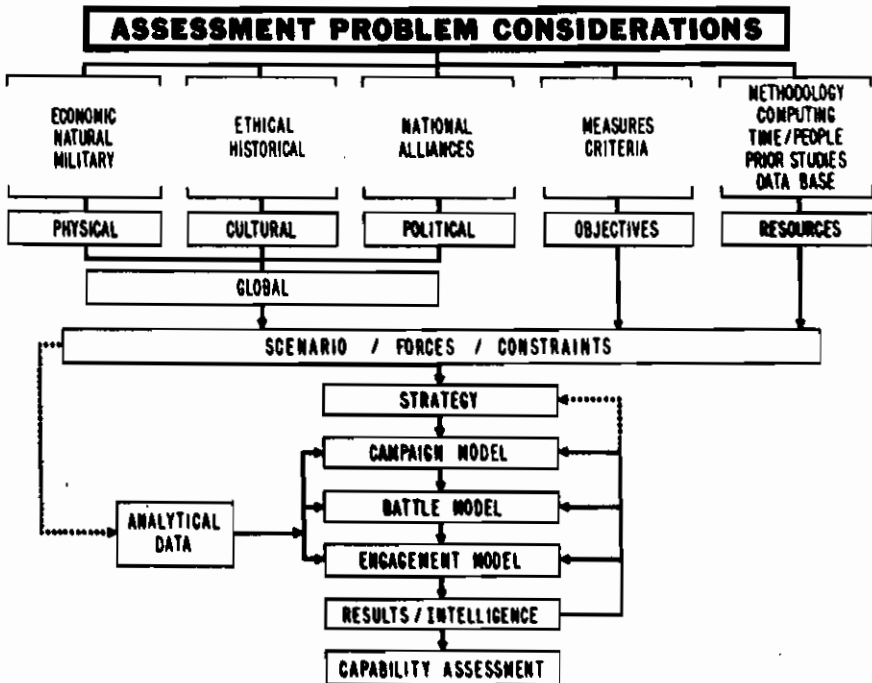


Fig. 1—Campaign Analysis

of one side was to maximize the peacetime cost of ships sunk, while the objective of the other side was to minimize these same costs.

Optimization techniques have been used extensively in the analysis of strategic nuclear warfare in which interactions tend to be tractable to the use of static measures, but have had only limited acceptance in the evaluation of general-purpose force effectiveness in which multiple measures and missions greatly complicate the analysis.

A global analysis involves trade-offs among national objectives. Assessments are generally made in terms of national economic, political, and social factors.¹⁵ Some conceptual approaches at this level are based on game theory, but there are vast quantification difficulties for relevant strategy and payoff measures. Complexities are thus represented in the measures, while modeling is relatively straightforward.

Mission Effectiveness Analysis. Prior to 1960 analytic support for defense program decisions consisted of one-on-one engagements, many-on-many engagements and, in some instances, battle analysis. Typically, analysis was used to help decide the characteristics of new weapons, ships, and aircraft.

The appointment of Mr. McNamara as Secretary of Defense in 1960 resulted in increased application of quantitative analysis to the defense decision process. He directed the services to study the effectiveness of their forces in accomplishing specific missions. The results of these studies were then used as the basis for service proposals of force levels and new procurement. Large-scale Navy studies of the capabilities or effectiveness of general-purpose naval forces have included the CYCLOPS series (1963-66), War at Sea series (1966-69), Major Fleet Escort Force Level study (1967), ASW Force Level study (1970), Naval Requirements and Capabilities—General Purpose Forces study (1971).

SEAMIX series (1972-74), and SEA WAR 85 (1979).

Typically, a campaign scenario is based upon available forces and assumed strategies, and analyzed using outputs from lower level analyses of specific engagements or battles. In general, expected value calculations are used to derive an estimate of the average outcome of the campaign being analyzed (forces lost, etc.). Usually no estimate of the statistical uncertainty, (or dispersion) of the predicted results is obtained. To account for the presence of uncertainty, cases are analyzed for a range of input values or with specific assumptions relaxed in order to determine the sensitivity of the results to those inputs and assumptions that significantly affect the output. "Marginal analysis," involving making relatively small additions or reductions to the forces or weapon systems of one side, can be used to support decisions on allocations of resources, or in identifying the likely effects of trends away from expected results.

Mission effectiveness analysis can be divided into three fundamental components: supporting analyses; scenario assumptions and other inputs; and an aggregating methodology. Figure 2 shows a schematic diagram of the relationship of these three components.¹⁶

A number of combat models and simulations have been developed for analysis of specific warfare areas. Such models draw heavily on the quantitative principles of game theory (goal-oriented conflict behavior), Lanchester's equations (mass, technology, and firepower effects on battle), search and detection theory, network analysis, and dynamic programming (sequential decision models) etc.

The controlling factor in all areas of analysis is the *quality of the inputs*. The analyses examine complicated engagements whose results are functions of many variables, among which complex relationships often exist. Many of these

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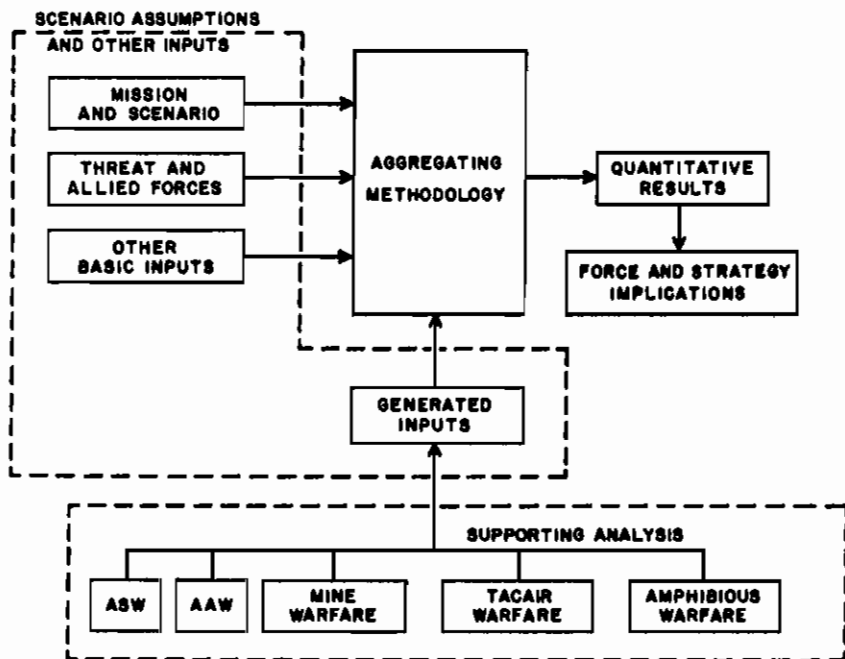


Fig. 2—Schematic Diagram of Navy Mission Effectiveness Analysis

variables are difficult to quantify and estimate precisely. For example, such factors as false submarine contacts, countermeasures, and command and control are difficult to incorporate in the calculations used to determine the MOE. Other factors, such as enemy force levels and weapon characteristics, may not be precisely known. And some factors, such as enemy objectives, strategy, and tactics, must be assumed in a somewhat arbitrary manner. Finally, most MOE are only indirectly related to the objective being pursued by a party to a conflict.

The objectives of a particular analysis will determine the appropriate role of threat analysis. For instance, it probably would not be necessary to perform a detailed analysis of the entire Soviet submarine force when examining the choice between alternative ASW helicopters. Such an analysis would be appropriate in determining the best ASW force mix, however.

In these days when heated debate over 5-year shipbuilding plans injects uncertainty in the ability to estimate the size and capability of our own future fleet, one is bound to question estimates of the threat. In this regard, campaign analyses have a twofold problem. If the threat estimates vary significantly from reality it is possible to optimize against the wrong threat (one is reminded of the history of anti-air warfare systems). On the other hand, detailed, realistic and accurate threat models entail a cost that may be out of proportion to the analytical objectives.

All of the preceding factors introduce uncertainty into the results derived by any analysis and reduce confidence in the absolute value of the results. However, this reduced confidence does not necessarily affect the use of the analysis as many of the questions asked depend upon relative results (i.e., how does the magnitude of the MOE change as different elements are varied).

Because increases in the MOE correspond to improvements in performance (independent of the magnitude of the MOE), these analyses can help evaluate which of several alternative systems, application of forces, allocation of resources, tactics, etc., produces the most effective results.

Still, there is the problem of quality or relevance of the data inputs. Operational test data may be scarce and contain major uncertainties. There is also a great deal of subjectivity in combining the contributions of several types of systems. Uneasiness about the utility of aggregate indices leads to development of more detailed campaign models for which more detailed data must be found. Lacking adequate test data, historical empirical data (attended by problems involving cause and effect) or study outputs (bearing an incestuous connotation) may be sought. The situation argues strongly for greater emphasis on the operationally determined data.

The *aggregating methodology* is the process used to combine the results of individual engagements or battles in order to determine the outcome of a campaign. An aggregating methodology is essentially a bookkeeping system that goes through the scenario events or engagements sequentially. For each event, supporting analysis is used to determine the outcome of the event. The methodology then requires the adjustment of the forces on both sides, making of any necessary changes in the schedule of future events, recording all data of interest, and moving on to the next event. When all events have been examined, a summary of the results of the campaign is produced.

There are two basic types of aggregating methodologies. The first consists of combining manual calculations with computer support so that tactics and force deployments can be adjusted during the campaign. The second consists of an entirely computerized model.

Through a series of iterations, the

analyst attempts to determine the best tactics for each side. Most comparisons of the results of studies that used the manual calculation methodology with results of computer simulations, using exactly the same inputs and scenario assumptions, indicate that there is little difference in the final results. A significant exception to this general finding is in interactive computer gaming, a technique whereby human decisionmakers actively interact with the computer-based output.¹⁷ Using such techniques, a wide range of alternatives can be accommodated for investigation. A particular "play," however, may involve only a limited set of alternatives being considered by the decisionmaker player.

Almost all mission effectiveness analysis has been campaign-level analysis of conflict. For analyses involving only the threat of conflict, the methodologies do not generally apply. The major difficulties have been selection of appropriate quantitative MOE and interpretation of the results.

Assessing the Assessments. Theorists from many disciplines have contributed the rigor and logic necessary to the detailed investigation of combat. Analysts have painstakingly investigated past events and current systems for the quantitative and qualitative links between policy and outcome. Military and civilian strategists and tacticians have applied the light of their experience and judgment to construction of exercises, identification of cause and effect, and the structure of likely scenarios. Yet, in study after study, not only is there widespread disagreement on the merits of the analysis, but considerable concern that we may not be using the proper scales to measure the balance between national military capabilities.

Estimates of future performance are notoriously optimistic. This state of affairs generally derives from two conditions. First, predictive models necessarily assume logical and complete links

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between what is known and what is surmised, and take an axiomatic approach to order the "significant" variables. Such logic rarely is observable in practice, either because it is lacking or is masked by other considerations. The second condition is related to this masking of reality in that factors that are incompletely perceived or understood may be excluded from consideration. Such factors generally relate to degraded performance. Meanwhile, the search for a unifying theory of combat proceeds, however elusively.

Few combat models can be validated in the sense of repeatable scientific experiments. The roots of this limitation lie in the almost limitless combinations of the events that make up a combat interaction, as well as the limitations on measuring the variables with sufficient accuracy. Thus, the "random" nature of combat. Consider, too, that while current events never exactly duplicate past events, the nature of the differences cannot always be determined. This certainly calls into question the relevance of judgment based on military experience as well as the logic of analytical models.

Models stand midway between general theory and practice. They are means to extract specific hypotheses from general considerations. Any attribution of model properties to the "original" can only yield an imperfect analogy. Indeed, the central purpose of combat modeling is to develop hypotheses about those capabilities and strengths that decisively influence battle outcomes and to trace the cause-and-effect relationships.

Military objectives are not related directly to most quantifiable measures of effectiveness. The achievement of objectives is generally a multidimensional problem in relating outputs to inputs of the combat process. The uncertainty involved in combining mea-

sures results in an inability to predict definitively the "winner" of a particular battle or campaign. Indeed, most analyses carry the caveat that the results provide useful insights but should not be used to predict "how much is enough" or "who will win." Unfortunately, this provides no insight into the relations between what the model does and does not consider.

Department of the Navy force assessments rest heavily on the methodology described in this paper and it must always be borne in mind that they are derived from:

- Objectives for which reliable and comprehensive measures are difficult to define,

- Patterns of force commitments which rely on sound military judgment,¹⁸

- Aggregated inputs and the use of adjustments made to reflect unquantified relationships,

- The analysis of low-level engagements from physical or statistical models based on data containing many types of uncertainty.

While sensitivity analysis is the usual means to deal with such difficulties, most campaign analyses produce extreme results when attempts are made to define the upper and lower bounds of uncertain inputs.

Fortunately, with all the limitations described, capability analysis still makes significant contributions to force structure decisions and resource allocation planning. Problems are subjected to logical and structured representations that sort out the alternatives, risks, and interrelationships among key elements. Debate can be focused on critical issues and both analyst and operator can determine, examine, and refine the choices of scenarios, strategies, tactical development and evaluation, data collection requirements, and the design of drills, exercises and rehearsals.

NOTES

1. For example, specific assumptions must be made regarding targeting, weapon mix, ammunition consumption, fire control, etc. These assumptions then remain constant throughout the engagement, though the factors affecting them may not.
2. See, for example, work done in 1974 by John R. Bode for Braddock, Dunn and McDonald Corporation, as reported in the Gaming and Simulation Working Group papers of the 35th MORS, and Henry Young, *Hierarchical Analysis of Naval Operations*, Center for Advanced Research, U.S. Naval War College, 1 January 1975.
3. Robert L. Fischer, *Defending the Central Front: The Balance of Forces* (London: ISSS, Adelphi Paper No. 127, Autumn 1976).
4. Stansfield Turner, "The Naval Balance: Not Just a Numbers Game," *Foreign Affairs*, January 1977, pp. 339-354.
5. Both manpower and weapons are further defined by quality factors (e.g., distribution of weapons among units, as well as the "tooth-to-tail" composition of a combat force, affects the results of engagements).
6. Such ratios lead to statements, for example, that based on missiles carried, the Soviet SLBM forces are 1/3 more powerful than the U.S. SLBM force.
7. Congressional Budget Office, *Assessing the NATO/Warsaw Pact Military Balance*, Budget Issue Paper, December 1977.
8. J.A. Stockfish, *Models, Data, and War: A Critique of the Study of Conventional Forces* (Santa Monica: RAND Corporation Report R-1526-PR: March 1975), pp. 31-33. Stockfish argues that lethal area depends partly on projectile burst height, angle of fall, and target vulnerability. These are functions of tactics. He gives an example of human incapacitation factors subjectively derived from animal testing.
9. The advantage of Arab manpower or firepower prior to each Arab-Israeli conflict since the 1960s was about 4:1. Most analysts agree that such quality factors as discipline, leadership, and training can compensate for relative deficiencies in other areas. Most military men hold similar views.
10. Generally accepted examples of attacker/defender ratios for several combat modes are:

Breakthrough	(5:1)
Offensive	(3:1)
Prepared defense	(1.7:1)
Hasty defense	(1.4:1)
11. See E.L. Woisard, ed., *Mission Effectiveness Analysis of General Purpose Naval Forces (U)*, (Washington: U.S. Office of Chief of Naval Operations, c1974), SECRET, and John R. Bode, "Indices of Effectiveness in General Purpose Force Analysis" (BDM Corporation Technical Report W-74-070: October 1974).
12. See, particularly, Annex 1 to Appendix F of the *Sea Based Air Platform Cost/Benefit Study (U)*, (Center for Naval Analyses CNS 1110: January 1978). SECRET
13. An excellent tutorial on the current state of development and application of these models can be found in James G. Taylor, "A Tutorial on Lanchester-Type Models of Warfare," from the *Proceedings of the 35th MORS*, December 1975 (Conference held July 1975).
14. Woisard, p. 7.
15. See Roy S. Cline, *World Power Assessment 1977* (Boulder, Colo.: Westview Press, 1977). Cline uses various ranking, scaling, and weighting schemes to rate "world power" for many nations. Additive and multiplicative linear expressions for five major determinants of power, each composed of several attributes, are derived. Politicomilitary games played within the Joint Chiefs of Staff organization offer other illustrations of global analysis.
16. See Woisard, p. 451, and note the parallel with posture statements of the Chiefs of Naval Operations in the late 1970s. Similar to Figure 1, but with a task emphasis.
17. The Naval War College has employed various forms of interactive gaming over the years; manual games gave way to the machine-assisted NEWS, and the current digital computer-supported WARS. Plans are presently well along for a major update to the system that will permit remote play of several games at once. An interactive ASW resource allocation campaign game was developed by the Applied Physics Lab of Johns Hopkins University and the Navy Strategic Analysis Support Group (now part of Op-604 in the Office of the CNO) in the early 1970s. Results were input to global strategic exchange models.
18. The process of combat presumably derives from sound military judgment which commits forces only when success is indicated. That engagements can then occur between rational commanders illustrates the ultimate illogic of war.

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**SOLZHENITSYN IN HARVARD YARD:
AN OLD BELIEVER SPOKE FROM THE NEW WORLD**

by

W.F. Long, Jr.

When Aleksandr I. Solzhenitsyn appeared as the commencement speaker in Cambridge, Massachusetts, in June 1978, his audience was not the umbrella-sheltered Americans in Harvard Yard. His words were aimed at those in the Kremlin. He was using a podium in the New World to express in a friendly public atmosphere the same ideas that had been received in hostile silence when he wrote them privately in his "Letters to the Soviet Leaders" on 5 September 1973.

Whatever Americans may have anticipated in Solzhenitsyn's appearance, most recorded reactions to his views of the West ignore the intentions of the speaker. They are unquestionably colored by the bias of the Western listener. Those who listened to or read the speech are troubled by the cast it gives to some basic Western institutions and convictions. *Time* magazine asked several members of the "ruling groups and the intellectual elite," who were accused of being particularly noticeable in exhibiting a decline in civil courage, the question, "Is Solzhenitsyn right?" The answers, perforce compressed or distilled to save space, tended toward the respondent's own persuasions and translated parts of his speech into the total message. They heard with Western ears and saw with Western eyes. It is recorded that in 1867 Dostoevsky was exasperated with the expatriate Turgenev's antagonism to Russophiles and Slavophiles and advised Turgenev that if he was trying to write about Russia he should use a telescope "because Russia is a great distance from here (Baden-Baden). This was Russian malice and

an insult to a Russian. Without malice, it may be good advice to Westerners. In most dealings with the Soviet Union or Russians, Americans reach for the mirror instead of a telescope. We look for a reflection of ourselves, rather than choosing the power of observation to magnify our knowledge of Russia and the Russians.

Solzhenitsyn is not an expatriate. He did not choose the West. He is not another distinguished refugee from a totalitarian government abjectly grateful to embrace American "freedom" and to enjoy the "good life." His 1978 speech to Americans and his 1973 letter to Soviet leaders demonstrate that he may not be able to understand the freedom of Western life and, to the extent that he does, he does not like it. He does not like Marxism, either, considering it a superficial Western economic theory. What he likes—loves—is Russia, real Russia—Russia uncorrupted by the West and what the West conceives as "progress."

Solzhenitsyn is an "Old Believer," a 17th-century Raskolnik, resisting the incursions of unsettling, unorthodox, un-Russian ideas with the same courage and single-mindedness demonstrated historically in the physical exertions of Russian people against military invasions by foreign armies. "Old Believers" were the Russian orthodox Christians who resisted the corrections of the perversions that had crept into Russian orthodoxy even down to correcting the spelling of Jesus' name to Iisus, which had been improperly translated from the Greek as Isus. One monastery (Solovetski) carried on an organized re-

sistance for 8 years and had to be overcome by an army assault. Through persecution "Old Believers" became stronger morally and, in the larger context, Raskolnik communities became centers for popular discontent.

In speaking over American heads Solzhenitsyn was speaking to the leaders of Russia in continuation and expansion of his 1973 letter—and at the same time maintaining the integrity of his character in exile in Vermont, just as he had in prison in the "Gulag Archipelago." There are two fundamental themes in his 1973 letter: "... the chief dangers facing our country in the next ten to thirty years... are: war with China, and our destruction, together with Western civilization, in the crush and stench of a befouled earth."

Harvard Yard was not the place to review his fears of Russian ideological war with China; it provided an ideal platform to embellish his estimate of "the West on its knees"—to round out the thought brushed over in 1973 when he wrote:

The catastrophic weakening of the Western world and the whole of Western civilization is by no means due solely to the success of an irresistible, persistent Soviet foreign policy. It is, rather, the result of an historical, psychological and moral crisis affecting the entire culture and world outlook which were conceived at the time of the Renaissance and attained the peak of their expression with the eighteenth century Enlightenment. *An analysis of that crisis is beyond the scope of this letter.* (emphasis added)

The construction of the speech in general looks at the weakening of the Western World and leads from an allegation of a decline in civil courage through a description of paralyzing legalism to a culminating attack on the free press that would have done credit to Admiral Shishkov (who proposed a statute of

ensorship to Tsar Nicholas I designed to render printing "harmless"). Nowhere in this speech does Solzhenitsyn reflect his traditional Russianness more profoundly than in his attitude toward the press. As the West understands freedom, it is based upon uninhibited discourse; and, if there is to be true freedom, there must be no restrictions on speech—or writing. This concept is completely foreign to Russian practice—and possibly to Russian imagination—because of the great differences in the religious, social and political experience of the Russians.

The persistent thrust of Western history has been illuminated in the struggle of the individual against all authoritarian restraints. Further, the genius of the West has been displayed in preserving order at the lower levels of authority. In Russia, whenever the autocrat could not impose order, anarchy prevailed and Russia would be riven internally and, in a weakened condition, assailed from without. It is hard for an American to understand the Russian people begging and pleading with the cruel ruler Ivan IV to return to Moscow from his mysterious, self-imposed exile. In so doing they gladly agreed to his terms that no objections were to be made to any executions or humiliations he exacted, and they rejoiced in his return to what can only be regarded as a monstrous indulgence of unmitigated personal power. Yet the Russians knew the alternatives and chose authority. Upon Ivan's death, conditions growing out of the crisis in central authority were so desperate that, even in that country that has suffered so much, the period is known as the "Time of Troubles."

A free, uncontrolled press is the marshalling yard of all enemies of absolute authority, and control of the press has been practiced by all autocrats in Russia. After centuries of arbitrary and whimsical censorship of the most intimidating sort, the one great press reform

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in Russia lasted for less than 40 years. This act of 1865 simply replaced preliminary censorship (the presentation of proposed writings to the censor in advance) with punitive censorship, which was not in the hands of the judiciary but was retained by administrative authority. Even this amount of freedom was soon eroded by the restrictions of 1868 (certain papers could be sold only to regular subscribers), 1871 (magazines again subjected to preliminary censorship) and 1873 (the Minister of the Interior could forbid discussion of subjects designated as "matters of state" for 3 months). The position of the Russian revolutionaries of 1917 and that of succeeding Soviet governments with respect to control of the press is well known. The point is that control of the press is traditional in Russia. Although Solzhenitsyn has suffered a fate similar to that of the patriotic Slavophiles of the 19th century who had to publish their writings outside Russia and were punished for speaking out, this has not generated in Solzhenitsyn a fervor for freedom of the press. He takes a peculiarly Russian view.

Long before the so-called Press Reform of 1865, Russian autocrats had occasionally considered opinions of distinguished writers submitted in the form of private communications—just like Solzhenitsyn's "Letter to the Soviet Leaders." While the free press acts as the spur and conscience of rulers of the West, "writers" have attempted this role in Russia. It can be expected that the Russian tradition is less strident, more intellectual and (in arrogating to itself clear vision and moral rectitude) authoritarian. When Solzhenitsyn criticizes the Western press, he is, perhaps subconsciously but certainly invidiously, comparing the nobility, consistency and qualities of expression of his integrated views with the messy vacillation and transient poundings of the American press. Solzhenitsyn is authoritarian in his dissidence and this leads to the most

curious—and illuminating—juxtaposition of ideas in his speech. He rebukes the West for a lack of civil courage and later accuses American political leaders of being shortsighted and the American intelligentsia of losing its nerve—and the Vietnam war. He has it all wrong. It was exactly a great expression of civil courage that forced the whole nation (including those in authority responsible for it) to justify the Vietnam twilight war; and it was a free press, moving from acceptance of the official estimates to reporting that was not politically controlled (as military reporting is), that led to a change in policy. However, in the context of warning the Soviet leaders in 1973 of the need to reject Marxism and substitute for it patriotism in anticipation of an impending war with China, Solzhenitsyn had already rendered his judgment.

Beware when the first cannons fire on the Sino-Soviet border lest you find yourselves in a double precarious position because the national consciousness in our country has become stunted and blurred—witness how mighty America lost to tiny North Vietnam, how easily the nerves of American society and American youth gave way, precisely because the United States has a weak and undeveloped national consciousness.

The final curiosity with regard to Solzhenitsyn's view of the Vietnam war is in laying at the door of the U.S. anti-(Vietnam) war movement the betraying of Vietnam and Cambodia into genocide and suffering; but this and his inveighing against Western legalism and naivete regarding Communist world strategy can best be understood by contrasting what he advises Americans regarding foreign involvement and what he wrote in 1973 to the Soviet leaders:

Give them their ideology. Let the Chinese leaders glory in it for a while. And, for that matter, let

them shoulder the whole sackful of unfulfillable international obligations, let them grunt and heave and instruct humanity, and foot the bills for their absurd economics (a million a day just to Cuba) and let them support terrorists and guerrillas in the Southern Hemisphere, if they like.

If Americans take his advice, they will, as champions of morality, fight the worldwide evils of communism; and, if Soviet leaders take his advice, they will let China prevail on the international ideological scene and China will be the instrument of worldwide Communist involvement.

Many Americans have likened Solzhenitsyn to an Old Testament prophet. If this is so, he is not for us a Jeremiah exhorting sinners to turn back to God, but rather a Jonah whose desire is less to save an alien Ninevah than to be established as right in his own prophecies—and where it counts, at home in Russia. And it is in Russian history that we must find our bearings on this remarkable man, not in just his courageous deeds—and certainly not in just his words in Harvard Yard.

I wish all people well, and the closer they are to us and the more dependent upon us, the more fervent is my wish. But it is the fate of the Russian and Ukrainian peoples that preoccupies me above all, for, as the proverb says: It's where you're born that you can be most useful. And there is a deeper reason, too: the incomparable sufferings of our people.

I am writing this letter on the supposition that you too are swayed by this primary concern, that you are not alien to your origins, to your fathers, grandfathers and great grandfathers, and that you are conscious of your nationality . . .

Solzhenitsyn then continues to invoke for the Soviet leaders all the traditional roots of Russian patriotism—Russian earth, Russian Orthodox Christianity, reverence for purely Russian history and heroes. He is rooted in the heartland of Russia and riveted to the conservative mentality of the "Old Believer" and Slavophiles who lost the struggle to save Russia from the Westernizers in the 17th century. Nikon, who reformed the Russian Orthodox Church in 1654; Peter I, who opened Russia to the West; Karl Marx, the author of the alien ideology endangering modern Russia—all are enemies and for the same reason. Nikon as Patriarch forced the Russian church into line with its Greek origins, creating a schism in the church, bloodshed in the land, and a resentment that lives on today. Peter I forced a reluctant Russia's face to the West and it is significant that Solzhenitsyn, in writing to his Soviet masters, uses the name Petersburg—not Leningrad nor even the Russianized name Petrograd adopted at the outbreak of World War I. This is deliberate. Petersburg is a Teutonic name—alien. The struggle between the corrupting West, epitomized in St. Petersburg, and Holy Mother Moscow is replete in Russian literature. It is often difficult for Westerners to grasp—sometimes subtle as in Tolstoy's *Anna Karenina* and allusive as in Pushkin's *Bronze Horseman*. In Solzhenitsyn's case, it is also clear where he always stands. In his 1973 letter his heroes are the Slavophiles and "Old Believers" and the villains are all Westerners—and the Harvard Yard expression of Solzhenitsyn's low opinion of the West and the institutions of democracy are consistent. He does not admire the election process: "Argue in all sincerity that we are not adherents of that turbulent 'democracy run riot' in which once every four years the politician, and indeed the entire country, nearly kill themselves over an electoral campaign trying to gratify the masses . . ." Nor

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was democratic legalism spared in 1973 any more than in 1978: "... in which a judge, flouting his obligatory independence in order to pander to the passions of society, acquits a man who, during an exhausting war, steals and publishes Defense Department documents."

Solzhenitsyn's alternative to Western democracy is presented in this view:

Should we record as our democratic tradition the Land assemblies of Muscovite Russia, Novgorod, the early Cossacks, the village commune? Or should we console ourselves with the thought that for a thousand years Russia lived with an authoritarian order—and at the beginning of the twentieth century both the physical and spiritual health of her people were still intact?

However, authority must have a strong moral foundation. It is his conception of the moral force that is central:

Yes, of course, freedom is moral. But only if it keeps within certain bounds, beyond which it degenerates into complacency and licentiousness. And order is not immoral if it means a calm and stable system. But order, too, has its limits, beyond which it degenerates into arbitrariness and tyranny.

It is good for Americans to hear and to learn from a Russian whose character, courage and skill challenged oppres-

sion in the Soviet Union and won him world acclaim. It is time that we tried to understand and respect Russians for their great accomplishments under gigantic challenges of climate, location and history. However, much of what Solzhenitsyn says has been said by other Russians whose lives and minds were admirable. Constantine Petrovich Pobedonostsev, a distinguished jurist and Procurator of the Holy Synod under Tsar Alexander III, was characterized as a man with a powerful intellect and unimpeachable honor. He, too, attacked freedom of the press (because it was sometimes misused), trial by jury and parliamentary elections. He did so lucidly and brilliantly. So, much as we admire Solzhenitsyn's character and accomplishments, we cannot accept his judgments about our freedom nor his ideas as fresh, clear insights—and certainly not accept his views or their interpretations as a strategy for achieving democracy's best interests or brightest future.

He is a Russian, a distinguished Russian, but a man first cloistered by fate and now by choice. Out of his imprisonment and exile he periodically emerges and speaks. Our hearts are his because his character has withstood oppression and his spirit is still strong; our minds must be our own, because in the extramural world of the West it requires a different, and perhaps even tougher, mentality to withstand the pressures of freedom as well as the assaults against it.



SOLZHENITSYN AND THE QUEST FOR THE HOLY GRAIL

by

William R.D. Jones

Now that the clamor and emotion over Solzhenitsyn's 1978 Harvard speech have subsided, it seems time for a calm, objective comment. It takes a certain temerity—perhaps even arrogance—to take issue with a man who is truly a giant of his time and who has endured so much. Solzhenitsyn probably knows the real meaning of human suffering and comprehends the limits of the human spirit as much as anyone alive. I dare to take issue, however, because the underlying thread weaving his argument is a direct reflection of the pathos and tragedy that has plagued Russia over the past two millenia, and provides us with much insight into the intellectual heritage of the man himself.

Unlike some who have commented critically on his speech, I find neither ingratitude nor petulance in Solzhenitsyn's indictment of contemporary Western civilization. While his indictment is somewhat harsher than objective facts warrant, there is certainly enough truth in it to give us abundant food for contemplation and action. I am not even dismayed by his failing to find in the West a satisfactory model for sociopolitical emulation. Disturbing, however, is the fact that a man so steeped in the essence of human experience as Solzhenitsyn, like the Russian intelligentsia before him, is still looking for such a model. Those editorials that portray him as a zealot blindly pursuing a holy cause miss this point. Solzhenitsyn is passionately searching for—but still unable to find—the holy cause to espouse and pursue.

Russia's isolation over the centuries engendered in her intelligentsia two illusions: first, that the Russian experience was somehow basically

different from that of other societies, and second, that there must somewhere be a formula to be applied to cure Russia's social ills. While the former led to the self-imposed intellectual seclusion so eloquently described in the companion piece to this comment, the latter frequently manifested itself in an intensive—and often violent and extreme—search for social "models," either from abroad or from within Russia itself. The result invariably was nothing less than pathetic, counterproductive acts of violence, more often than not strangling reform and badly needed social development in their very infancy.

The trend toward utopian absolutism was in no way lessened by the historical development of the Russian Orthodox Church. The inseparable linkage between church and state and the consequent role of the czar as infallible head of both institutions led to wide clerical tolerance of government abuse. The concept of original sin, while certainly never abjured by the church, nevertheless went largely ignored, and a certain aura of mystical sanctity attached to the institution of czardom and to the person of the czar. The concept that all men possess in common certain basic human weaknesses thus became somewhat lost, and the absolute insistence on secular as well as religious infallibility by czar after czar left no room in the course of Russian social development for either compromise or gradualism. Would-be reformers thus felt themselves forced to employ radical and violent tolls in their efforts toward reform.

The common tendency of historians writing on the Soviet era to term the advent of Lenin's communism an accidental or aberrant occurrence is, I

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believe, unfortunate and misleading. Of all places of the world at the time of Lenin's *coup d'état*, Russia was particularly ripe for just the kind of a model advanced by Karl Marx. It contained all the ingredients historically dear to the hearts of Russian reformers: utopianism, radicalism, violent revolution, and environmentally induced change in man's basic nature. Man, himself, was not "bad"; only *certain* men were "bad," and these could presumably be made "good" with "appropriate" alterations to the socioeconomic structure.

Belief in the possibility of an externally imposed purification of man's soul has universally permeated contemporary ultraliberal and radical sociopolitical thought. There is thus an intellectual linkage between the Karl Marxes and Lewis Mumfords, and the Aleksandr Solzhenitsyns of this world. Indeed, this writer has yet to encounter a single Russian émigré—whether from the pre- or post-Soviet era—fully capable of comprehending the essence of the Western experience and our concomitant reliance on proximate, gradual, incremental change in bringing about political, social and economic reform. A basic syllogism is completely lost on these unfortunates; namely, because *man* is imperfect, and because society by definition is composed solely of humans, society must remain forever imperfect. Absolute solutions simply do not fit the human experience.

The fact that Solzhenitsyn is by profession a writer is both ironic and predictable: predictable in that Russian literature has, of necessity, long served as the principal and sometimes only vehicle for social change as well as a pure art form, and ironic that his quest for the "true model" has been discredited so effectively by two fellow writers. It is probably no accident that one of these, Pasternak, was ethnically a non-Russian, while Tolstoy's long and culturally full life enabled him ultimately to reject the traditional Russian

view that such a quest was either desirable or achievable.

In *War and Peace*, Tolstoy lays great stress on his conviction that two components comprise all man's actions and activities: necessity, or externally imposed circumstances, and free will: "Wealth and poverty, health and disease, culture and ignorance, labour and leisure, repletion and hunger, virtue and vice, are all only terms for greater degrees of [individual] freedom."¹ Such a view of man's complexity effectively precludes the application of simplistic models. Pasternak's *Doctor Zhivago* similarly carries a social message in both its title and its plot: that the only meaning of "life" is to be found in the very process of living.² Both novels are agonized cries against the imposition of any social model and against the inevitable and unfeeling interference of such models with free choice and individual human happiness. To both authors the "meaning" of life is to be found in man's knowledge of his own mortality, and in his exercise of individual free choice in accommodating to this knowledge as best he can. Put another way, the purpose of life is to exercise free choice in enjoying life in its most fundamental aspect, i.e., in the full, through senses, constrained only by the practical limits of our physical environment and by the moral or ethical limits of our social relationships.

The riddle of life is nowhere more eloquently expressed than in Pierre's musings in *War and Peace* after the war and his return to Moscow:

And it was just at this time that he attained that peace and content with himself, for which he had always striven in vain before. For long years of his life he had been seeking in various directions for that peace, that harmony within himself, which had struck him so much in the soldiers at Borodino. He had sought for it in philanthropy, in freemasonry, in

the dissipations of society, in wine, in heroic feats of self-sacrifice, in his romantic love for Natasha; he had sought it by the path of thought; and all his researches and all his efforts had failed him. And now without any thought of his own, he had gained that peace and that harmony with himself simply through the horror of death, through hardships, through what he had seen at Karataev.³

And in *Doctor Zhivago*: "Now what is history? It is the centuries of systematic explorations of the riddle of death, with a view to overcoming death."⁴ The message that both Tolstoy and Pasternak tried to convey

to their Russian readers was eloquent in its simplicity despite the complex nature of man: the essence of life is to live, to enjoy, to love and to be loved through the individual exercise of free choice. And the infinite possibilities of free choice open to a single individual at any one time makes the application of social formulas antithetical to its very exercise.

It is with the deepest respect for the character and monumental achievements of Aleksandr Solzhenitsyn that I wish him good health and a long life, with the fervent hope that further exposure to the Western experience will cause him to abandon his search for the Holy Grail of human development. It just doesn't exist!

NOTES

1. Count Lev Tolstoy, *War and Peace* (New York: The Modern Library, 1931), p. 1124.
2. *Zhiv* is the stem of the Russian verb, "to live."
3. Tolstoy, p. 942.
4. Boris Pasternak, *Doctor Zhivago* (New York: Pantheon Books, 1958), p. 10.

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