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Problems in the guidance of a particular kind of intelligence collection.

REQUIREMENTS AND THE AMERICAN SCIENTIST

~~Frank X. LaMountain~~

My job is the collection of intelligence information from American scientists. To do it, I depend heavily upon written requirements from the production offices of the community because I am not scientifically trained. But while requirements are central to my effort, paradoxically they often impede it because of deficiencies apparent to my sources which are not apparent to me. Since requirements will continue vital to my work, I should like to have them take a better part in it.

A requirement is something needed, and in practice scientific requirements *are* predominantly a statement of intelligence need. For the analyst this is a reasonable approach—to state his need. But for the collector this impersonal kind of statement seems often to ignore the complex human source who must supply the need. This insensitivity of analyst to source in the language of requirements is a communications failure for which the collector cannot wholly compensate and which, while not fatal to the collection mission, attenuates the product.

Wherever possible, I try to adjust requirements to the particular source. I think all collectors of scientific intelligence do. But this effort can have only limited success. The collector's job is collection; it leaves little time for scrutiny of requirements. Moreover, the technicalities and often the sheer numbers of requirements preclude lay editing. If an improvement in requirements is to come, then, I think it must come at the point of origin.

In serving thousands of scientific requirements, I have experienced things about technical question-asking which I would like to see applied in requirements composition. I shall detail these shortly. But here let me state their sum: that the great need is a new scientific requirements concept sen-

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Scientific Requirements

sitized to the reasonable in the concrete collection setting, sensitized, that is, to the scientist source.

The Scientific Attitude

The scientist makes a difficult source partly because of his special language but mostly, I think, because of a special job discipline which ramifies into all his judgments. This discipline is characterized by a demand for consistency and simplicity in the organization of objective truth. As the collector confronts it, the psychology of the scientist in pure form is something like this:

Nature, his subject, is external being, systematic and subtle in structure. To investigate it his method must be objective, logical and persistent. Confront him with a social or political problem and he will unconsciously view it in terms of this habitual scientific methodology. When the methodology fails, he will register frustration with the social process.

For the scientist "politics," which includes government, is too much a contrivance for securing advantage through resource. In his casual observation it is a bog of disarray and ready makeshift, qualities which are foreign to nature and foreign to the scientist's professional cast of mind. It is true that his reaction to politics is reinforced by the broad popular disparagement of the art. But his indictment would stand anyway: politics is a logical riot. Like other social institutions, it will not stand still and be counted.

This is not an attitude which will bear the light of intelligent scrutiny, but it seldom gets that. The scientist lives the world of his work, even socially, to a very great degree. Those involved social things which are outside his interest and which he lacks the motivation to assess properly he can, by a device all of us use, simply disparage. So while viscerally he may appreciate the order which government brings, politics is an occupation he seldom remarks in any but a pejorative way, and the intelligence function, that unquestioning conservator of the prevailing regime, can be its most repugnant aspect.

The intelligence collector, then, walks into this mental parlor deficient in both language and prestige, and he must immediately begin to work upward to a useful result. How far

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he has to go or whether he can make the climb at all depend in good part upon to what degree this simplistic mentality has been modified in a given source by other experiential factors. It has rarely been absent from my interviews. Occasionally it is there in force. Nearly always, even with the friendly, long-time source, it is present in some degree, alert for the trivial, the foolish, the dramatized, the sinister—in a word, the unsuitable—in the intelligence approach.

The Role of Requirements

It is to this animus of his source more than to the peculiarities of scientific language that the collector must address his efforts in the interview. How successful these will be depends upon the quality of his strategy, of which the intelligence requirements are the fixed and inescapable element. They should be addressed, therefore, like his own efforts, first to giving the source a better view of American intelligence, and then to information objectives.

When they are broached the requirements show the scientist three things—that they were prepared by a person of some technical background, that they are scientifically sound or not, and that they are reasonable in terms of his experience or not. His first reaction is not an answer but an impression: American intelligence is competent or it is not. In a time order the requirements first draw a picture of American intelligence and secondarily express its needs. Unless the scientist finds the picture better than his expectation, he is emotionally barred from turning usefully to the needs. It is my experience that he is so barred too often, that on the average the American scientist is not impressed with intelligence requirements. I take this reading from his typically unenthusiastic manner, his brief attention to the questions, and, commonly, his criticism of some technical or rhetorical point. All this in an atmosphere correctly pleasant, mind you, but registering disapproval like a cannon.

There are, of course, other things than requirements to queer an interview, most of them in the collector's own manner, but it remains that requirements are the central thing, the core of the interview. If the collection of information from American scientists is to continue in the present way,

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Scientific Requirements

then let requirements ask the necessary, but for the sake of the American intelligence image and the information product let them ask it suitably.

To this end I offer a few suggestions to analysts on technique in scientific requirements writing. Each of the following proposals reflects a significant and not unusual complaint from scientist sources. Rare complaints and those which seem badly motivated have been ignored.

Ask the Essential

Before writing a requirement determine with care, whenever possible, whether the needed information is available from other sources than the private scientist—from the literature, existing intelligence data, research files or current activities of other government agencies, etc. Ponder seriously whether the need might be met by an arrangement of available data and careful thought.

At writing, ask something scientifically big. Despite his depreciation of politics, the source expects in the intelligence approach something reflecting a national interest in research at the forefront. He is disturbed that the matter of questions is so often technically humdrum—Soviet techniques in crystal growth for semiconductors, mental health concepts in Moscow clinics, items of research at the 10 BeV machine in Dubna. This kind of question must continue, of course, but the scientist's mind is at the forefront and he expects some inquiry at that point. I suggest he be asked, without regard to what the Soviets are doing, where the forefront in his specialty lies, where the specialty is tending, and what its future configuration is likely to be. I predict he will be pleased and disarmed. But more important, his answer will be an expert view of the future in his field, giving the analyst a stronger base from which to evaluate current foreign effort and a gauge—a framework of the scientifically possible—with which to measure the importance of Soviet research directions.

Ask questions of substance only. The collector is practiced at asking general questions appropriate to the collection setting. Requirements questions should be essential to an essential intelligence objective and should convey a sure technical perception. Cover-all questions, such as "What is the

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state of the art in controlled thermonuclear fusion in the USSR?", "Did the Soviet delegates at any time appear evasive in responding to questions?", and "What are key facilities in the Soviet space program and their positions in the organizational structure?" are passed over by most sources because they have not the time to ponder where to take hold of them.

In general, keep requirements succinct in wording and few in number. Sources react badly to wordy or numerous requirements unless they are uniformly superior. In my experience, regardless of the importance of a target event to intelligence, sources are seldom able to cope effectively with more than ten or so substantial questions. (The exception is where they have been asked to review at leisure survey-type requirements aimed at no particular event and covering needs in an entire scientific field.) The problem of condensing a brief list of questions on a target event from the questions of several intelligence agencies remains. I can only suggest that all agencies hew to economy in questions as a matter of principle.

Ensure that questions asked once are not repeated in essence in the same set of requirements. Ensure also that multiple sets of requirements targeted against the same event do not duplicate questions. The collector may not have the competence to recognize the duplication, but the source will recognize it with annoyance.

Ask the Appropriate

When writing requirements for a particular source or category of sources (such as conference attendees), ask for things that they can reasonably provide from a knowledge of their specialties or can reasonably acquire at the target event. They cannot query Soviet conference delegates about weapons research or near-weapons research and will not do so. If the weapon is something avant-garde—ball lightning, laser death ray, anti-matter—this applies doubly. I would suggest that the analyst ask for evidence of Soviet standard research which he knows will have application to weapons. Normally this is the most a source can get. Certainly it is the most he will usually venture.

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Scientific Requirements

When a target event is not of enough importance to intelligence objectives to warrant substantial requirements, do not ask routine coverage of it or suggest pre-existing, quite possibly ill-fitting requirements. Many conferences and Bloc visits to the United States are so covered now at the risk of communicating to sources an impression of trite or uncertain intelligence concerns.

Do not ask the ordinary scientific traveler to observe things outside his field of interest. A microbiologist on an exchange in Moscow should not be asked to report on the efficiency of the Moscow sewage system, the placement of ventilators in the Metropole, or the quantity of fumes emanating from automobile exhaust pipes. His rejoinder will be, "Don't we have a military attaché in Moscow?"

Ask with Tact

Try to avoid a tone of dogmatic judgment in requirements writing. For example, do not precede a question with a gratuitous (as distinct from a necessary) prefatory statement regarding something which exists or could exist in science or in Soviet science. It invites the source to disagree and may shorten his patience and his answer. Example: "Q. There have been no significant Soviet papers in metal physics since 1957. To what do you attribute this silence? A. This is not true. There *have* been significant papers, etc." The question might better have been phrased, "Have there been significant Soviet papers in metal physics in the last several years? If so, would you try to recall them or at least their authors?" It may be that the analyst is right and the source wrong about the significance of Soviet papers in metal physics, but it is important not to irritate the source with analyst opinions which do not directly contribute to the meaning of a question.

Make the requirements a communication to the source, attending carefully to:

Courteous expression. When requirements are more than several, or are of a complex character, it is natural to hand them to the source to read, and they should be phrased accordingly. Questions can be plain; "please" and "we would appreciate" need not encumber them. But commands such as "Specify" and "Explain in de-

tail" should be avoided. This consideration is valid, it seems to me, even in composing requirements for general use and only incidentally for domestic collection: since a human being somewhere is always the source or the channel for the information sought, courtesy in addressing him would not be wasted.

Attractive format and good syntax. Clear, uncrowded print, cleanly blocked, is a rarity in requirements. Blue ditto at its best suggests a casual effort, at its worst is illegible. Typing, black mimeograph, or offset would be preferable. A bad impression on sources who are usually university graduates, often university professors, is also created by the untidy sentence structure that often slips into requirements.

In sum, I ask analysts for substantial need, awareness of source, and economy of words in intelligence requirements intended for the American scientist. Improved in these directions, requirements should project a better intelligence image and elicit a better information product.