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Report on evaluation of the translation process
in the United Nations system

Note by the Secretary-General

1. The Secretary-General has the honour to transmit herewith the report on the evaluation of the translation process in the United Nations system (JIU/REP/80/7).
2. As indicated by the Joint Inspection Unit, the report will be of particular concern to the Fifth Committee and to the Committee for Programme and Co-ordination.

* A/35/50.

EVALUATION OF THE TRANSLATION PROCESS
IN THE UNITED NATIONS SYSTEM

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SUMMARY

Translation is essential to UN system international information and communication responsibilities, but no comprehensive study of the system's translation process has ever been made. JIU undertook this evaluation to examine the effectiveness, productivity, and operating problems of the translation services. Chapter I provides background data, the rationale for the study, and the methods used.

Translation costs represent about 7 per cent of the regular budgets of the UN system organizations, and involve some \$US 70 million, 1600 full-time staff posts, and 400,000 single-spaced pages of translated material every year. Chapter II discusses two major problems of translation workload. The steady growth in the quantity of documents puts heavy pressure on translation and other services. In addition, document control units and workload forecasting efforts have had little influence in improving the quality and timeliness of documents submitted for translation.

Chapter III reviews the permanent staff, temporary assistance, contractual translation, modern equipment, and management skills components needed to turn a heavy and uneven translation workload into timely and high-quality translated documents. Translation work requires special linguistic skills and the ability to balance speed with quality. There is considerable concern with limited career prospects for translators. Contractual translation offers opportunities for cost savings. Most organizations are interested in reducing revision of texts, which could both lower costs and improve career prospects through a new system of self-revision. Translation service management and analysis have not made much progress, and problems exist with physical facilities, précis-writing, referencing, and terminology systems.

The Inspectors note in Chapter IV that while the translation services appear to be doing a generally satisfactory job in facilitating communication, there have been almost no careful examinations of translation service objectives, few systematic reviews of translation operations, and little study or feedback on the results of translation work.

As a contribution to such efforts, the Inspectors believe that there are considerable opportunities to realize cost savings and improve the translation process. The recommendations made in Chapter V concern:

- (a) strengthening document quality control, workload planning, and referencing;
- (b) encouraging language training centres and incentives for additional languages;
- (c) greater use of contractual translation;
- (d) system-wide efforts needed to develop productivity analysis, computer-assisted management information systems, and a common computerized terminology and research unit;
- (e) reconsideration of the précis-writing function, and assurance of adequate physical facilities for translators;
- (f) a shift toward self-revision of translations;
- (g) more careful periodic assessment by organizations of the operations, effectiveness, and results of their administrative and support processes such as translation.

I. INTRODUCTION

1. International communication is the indispensable means through which the UN system identifies and deliberates issues of international economic, social, and political co-operation. The charters and constitutions of almost all the organizations in the system highlight the importance of a steady flow of information and communication from, among, and to Member States. The system's effectiveness is closely related to its ability to obtain, process, use and transmit information.
2. At present, UN system organizations use from two to seven languages to meet their information and communication responsibilities. Specific languages and their use vary from organization to organization, and the traditional distinctions between "official" and "working" languages have become blurred. But in general English, French, Russian, and Spanish are most used, with Arabic and Chinese used increasingly in recent years and German also now used on a limited basis. It is important that the use of all languages follow precisely the decisions of intergovernmental bodies.
3. Within secretariats, most of the day-to-day business is conducted and the great majority of documents are drafted in English, with French a distant second for drafting and other languages used for only small proportions of the internal documentation.
4. To achieve the necessary communication, each organization maintains language services for interpretation and translation. Of these two functions, translation requires by far the larger resources. While translation is often considered an "invisible" and "mechanical" part of the UN system, however, it plays a crucial role in the work of the organizations and has become, therefore, subject to increasing attention in recent years:
 - (a) Intergovernmental bodies and Member States have expressed growing concern with the expanding volume of documentation and the heavy demands placed on translation services.
 - (b) Recent reports of the Administrative Committee on Co-ordination (ACC) have emphasized the need for better management, some degree of standardization, and exchange of experience on language and documentation facilities.
 - (c) A series of ACC inter-agency meetings on language arrangements, documents, and publications, held regularly since 1974, has devoted much of its attention to translation problems.
 - (d) Translation costs have expanded considerably and represent a significant use of UN system resources (estimated at present at more than US \$70 million per year) and requiring approximately 1,600 full-time staff posts.
5. Apparently, however, no comprehensive study of UN system translation services has ever been made. In view of the above concerns, and as a more specific follow-up to its 1977 report on additional languages in the UN system 1/, the Joint Inspection Unit undertook an evaluation of UN system translation

1/ JIU, "Report on the implications of additional languages in the United Nations System", JIU/REF/77/5 of July 1977.

processes. The objective was to examine the effectiveness, productivity, and operating problems of the UN system translation services, to consider their objectives and the results obtained, and when necessary to propose changes in policies and methods. In addition, since evaluations in the UN system have mostly been made of projects and programmes rather than administrative processes or "continuous functions" such as personnel, budgeting, or procurement, the JIU wished to make this study a first attempt at a system-wide evaluation of an administrative process. The very generalized objectives of the translation services and the lack of impact and feedback data on translation results did not permit a systematic and objective analysis of translation relevance, effectiveness and impact on a system-wide basis. The available data suggest to the Inspectors that the translation services are doing a satisfactory job in providing an essential service, but that considerable opportunities do exist to improve translation operations and for the organizations to carefully assess the performance of their translation services on a continuing basis. These matters are summarized in Chapter IV and in the conclusions and recommendations of Chapter V.

6. The evaluation work involved several phases. Each participating organization of JIU ^{2/} was requested to submit information on its translation services, any evaluations or other reviews made of these activities, and other relevant documents. A detailed questionnaire was also sent to the organizations for data on translation service costs, staffing, career prospects, productivity, work categories and methods, and management problems. All organizations replied to these requests (as indicated in the Annex tables) except for the Economic Commission for Africa and several regional offices of WHO and ICAO. Subsequently, visits were made to the organization headquarters and several other international organizations to discuss translation activities and concerns with conference service and language section heads and staff members. The material gathered was then analysed and a draft report prepared and circulated to the organizations for comment.

7. The Inspectors are most appreciative of the excellent co-operation and support provided by the organizations' conference and language units, and of the high quality and thoughtfulness of the observations offered by their staffs.

^{2/} UN and its affiliated organizations, FAO, IAEA, ICAO, ILO, IMCO, ITU, UNESCO, UPU, WHO and WMO. All findings and statistics in this Report refer to these organizations.

II. TRANSLATION WORKLOAD

8. Translation accounts for approximately 7 per cent of the total regular budgets of the organizations of the UN system. This naturally reflects the heavy, sometimes irregular and almost always urgent workload. A major opportunity for rationalization lies in the direction of reducing and evening out the workload, and JIU has begun a separate study on the control and reduction of documentation. However, there are other significant ways in which the workload can be managed more effectively and quality improved. This Chapter discusses issues of quality control, workload forecasts, and quota systems.

A. Translation workloads and costs

9. The data ^{3/} submitted by the organizations (Table 2) indicate that the total translation workload in the UN system in 1978 amounted to about 280 million words, or more than 400,000 single-spaced pages. The United Nations (New York and Geneva centres) is by far the dominant organization, producing approximately 47 per cent of the total workload. The larger specialized agencies (FAO, ILO, UNESCO, and WHO) produce another 28 per cent, and the smaller agencies the remaining 25 per cent.

10. The workload can also be broken down by language, type of document, and type of translation. The language most often translated into is French, followed by Spanish, Russian, English, Chinese, Arabic and German in that order (Table 3). The type of document most often translated is for intergovernmental and other meetings, followed by publications, internal secretariat documents, miscellaneous documents, and public information material (Table 4). Approaches, methods and scope of work vary from one organization to another but on a system-wide basis direct translation work is largely performed by regular full-time staff (80 per cent in cost terms), with 15 per cent handled by temporary assistance and the remaining 5 per cent by contractual translation (Table 6).

11. This volume of work entails considerable cost. In 1978, the total was at least \$61 million (Table 1). Addition of services provided by typing pools and overhead items such as office space, equipment, supplies and utilities brings the total cost to some \$70 million. United Nations expenditures are again by far the largest, with the other organizations following in broadly the same proportions as for workload. The major cost component is the salaries and common staff costs of approximately 1,600 full-time staff posts (Tables 5 and 6).

12. Most expenditure on translation is financed by the organizations' regular budgets. The percentage share in 1978 was considerably greater for the smaller UN system organizations than for the larger ones (UN - 7 per cent, FAO - 4, IAEA - 6, ICAO - 11, ILO - 4, IMCO - 24, ITU - 5, UNESCO - 8, UPU - 14,

^{3/} Although the inter-agency working group of ACC has been working on uniform costing systems and workload standards for some time, there are still a variety of different criteria and definitions used by the organizations to compute cost, staffing, and workload factors. The JIU sought to obtain its data in a standard format based on the inter-agency group criteria, but the Annex figures can represent only the best possible approximation of system-wide workloads, costs, and productivity.

WHO - 3, and WMO - 10 per cent). The exceptions to regular budget financing are German language services usually paid for by the German speaking countries, occasional special funding by Member States for particular conferences, projects, or trust fund activities, and the UPU system in which all language service costs, other than those of the official language (French), are shared among the countries that use them.

13. There has also been a rapid overall rise in translation unit costs, as in other basic services required by the UN system. In Geneva, in particular, the agencies' costs have been especially influenced by the fall of the US dollar. For example, daily rates for temporary assistance have more than quadrupled in terms of US dollars during the last decade:

Geneva local daily rate	January 1968	SWF 125.69	= \$US 29.09 at SWF 4.32/\$
for temporary assistance	March 1971	SWF 148.61	= \$US 34.30 at SWF 4.32/\$
(category II translators):	October 1978	SWF 195.45	= \$US 126.10 at SWF 1.55/\$

B. Growth of documentation

14. A major factor forcing up translation costs and workloads is the seemingly inexorable growth of the volume of documents produced by the system. The translation services are particularly affected by the volume and quality of the documents they receive. The problems of increasing quantity and decreasing quality of documentation were strongly identified to the JIU as the major operating problems confronting the translation services.

15. Some organizations' historical statistics show a steady annual growth in documents submitted for translation. Some have noted an ever-increasing backlog, and growing pressure on translation services to produce more and more translations in a shorter time. Still others have recently acted to reduce the volume of documents, but are concerned that despite some initial success the pressure is building up again.

16. Essentially, of course, the expanding documentation represents the ever-increasing activity of the UN system: more issues, more conferences, more meetings, more speeches, and more reports. A direct result is more documents, and more translation, as the system struggles to fulfil its communication and information functions.

17. Commenting on this situation in his 1979 Annual Report, the Secretary-General of the United Nations stated that existing UN services could no longer carry the steadily increasing documentation load. He observed that, "This threatened breakdown of a service which Member States more or less take for granted is symptomatic of the strain ..." imposed on the system by the upward spiral of meetings and related activities ^{4/}. He pledged the UN Secretariat and specialized agencies' efforts to cope with the "institutional inflation", and also urged Member States to control the continuing proliferation of UN system activities, institutions, documents, and workloads.

18. Reflecting similar concern, organizations such as FAO, ILO, the UN, ICAO, and IMCO have recently taken a variety of actions to stem document growth. The JIU, which has already reported several times on documentation problems in the past decade, has begun during 1980 a separate study of these and similar recent efforts to control the proliferation of documentation in the UN system.

^{4/} Report of the Secretary-General on the work of the organization, Doc. A/34/1, 11 September 1979, p.17.

C. Document control problems in the translation process

19. The quantity of UN system documentation, while it affects the translation process, involves issues largely beyond the control of the translation services or the secretariats. The quality of documents submitted for translation is also a serious problem, and in this area action can be taken within the secretariats albeit not by the translation services themselves.

20. The translation services had a number of criticisms of the quality of incoming documents. Poor quality documents may affect the quality of the translation and invariably complicate the basic translation task, take up staff time in seeking clarifications, and reduce translation productivity. While some units were praised in some organizations for their quality control, it was felt that poor quality documents are far too common in the system. And although many criticisms of document weaknesses were directed at secretariats, it was also pointed out that documents submitted by national experts and consultants or by Member States are often the most difficult to translate because the drafting is so poor.

21. The document quality weaknesses most often mentioned by the organizations' conference and translation service staffs were the following:

(a) poor drafting - sometimes the result of people drafting in a language other than their own, sometimes the result of over-hasty writing without proper proof-reading or substantive editing;

(b) careless drafting - pretentious language, extensive repetitions, jargon and unexplained acronyms rather than clear, simple language;

(c) poor preparation of documents - texts badly typed or photocopied, filled with handwritten changes, and followed by "new" or "final" versions with no clear indication of parts previously translated;

(d) poor referencing - documents with no clear indication of source material or quotations, and particularly no precise notation of material which has already been translated;

(e) late documents - material sent in after scheduled submission dates necessitating rush treatment, and often much longer and in greater volume than planned;

(f) excessive length - with as many as 700 pages, often rambling and repetitious, with many annexes and much inclusion of material available elsewhere.

22. Most of the organizations have some form of documents control unit, but most also admit the ineffective functioning of these units. In theory, the units should keep track of all documents being processed, ensure that they meet organization standards and policies, see that they are produced as efficiently and effectively as possible, and help determine priorities.

23. In fact, however, many of the units have little practical influence. Although texts often arrive for processing in unsatisfactory form, very few are rejected, with any complaints usually overridden or ignored by originating units. The control units can sometimes identify documents that are late, illegible or too long, but cannot control other quality problems. And because workload planning is often haphazard and criteria for priorities are unclear, actual document processing schedules must be negotiated on a continuing, hectic, and ad hoc basis.

24. A few organizations feel that their document control units are functioning effectively. In these cases the success appears to be due to high-level support for decisions, the use of interdepartmental committees to assess document needs and policies on a continuing basis, clear and well-communicated quality and priority criteria and deadlines, and good direct liaison of the unit both with originating units and with translation services.

25. Several organizations have been revising their policies on documentation quality control, and the organizations' conference and language staffs suggested a number of specific actions, which the Inspectors endorse, to improve document quality and thus facilitate translation. These include:

(a) maintain firm discipline in scheduling, preparing, submitting and controlling the quality of documents;

(b) make greater use of professional pre-editing, either within originating units or in documents or language divisions, to improve substance, grammar, form, and style;

(c) train staff members to write more simply, clearly, and concisely;

(d) plan meetings and publication requirements for a more even flow throughout the year, so as to minimize peaks and valleys;

(e) control the quality of documents submitted from outside the secretariats;

(f) schedule document processing to allow reasonable time for translations, and respect established submission deadlines;

(g) indicate all sources used, with specific references and copies of relevant documents;

(h) supply material already translated, and previously translated drafts with annotation of subsequent changes made;

(i) designate as responsible officers those who actually drafted the document;

(j) arrange briefing sessions and direct exposure to the work of the substantive units to enable translators to become familiar with originating units' work (and vice versa);

(k) consider when departmental purposes will be met by abstracts, partial translations, informal or no translation of documents, rather than full translation (as with incoming correspondence or lengthy background documents submitted to secretariats);

(l) consider whether the document in question is necessary at all.

26. In order for such actions to be more than empty gestures, considerable reinforcement of the authority of document control sections is required to improve the quality (and reduce the volume) of documentation, while at the same time facilitating greatly translation operations and productivity. In particular, it seems important that the organizations should establish, disseminate and maintain clear quality standards for documents. Any additional costs in the long run would be more than compensated by greater effectiveness and in the short run could be entirely covered by the much greater savings suggested elsewhere in this Report.

D. Workload forecasts and quota systems

27. Two other aspects of document control were of concern to the translation services. Most larger organizations and several smaller ones use some form of workload forecasts. Usually, such forecasts are required from originating units on an annual, semi-annual, or quarterly basis, and some are then revised or up-dated monthly. Reasonably accurate forecasts are very important for effective decision-making to smooth out translation work flows over the year and to facilitate the recruitment of temporary translation staff.
28. In practice, almost all organizations felt that their planning is inadequate. Actual document submissions bear little relationship to the schedules indicated and nothing is done about it. In most cases, major disruptions occur because originating units fall behind their scheduled submission dates and document deadlines, because the amount of documentation (especially for meetings) is often more than projected, and because the number and timing of meetings shifts and expands without full consideration of the translation and other conference servicing capabilities.
29. In these circumstances, the translation services have to struggle to keep production moving, to recruit adequate temporary staff, to meet deadlines, and to negotiate priorities among competing claims. Thus, long-term planning is often unrealistic, monthly forecasts serve only as rough indicators, and the many disruptions and "unforeseen circumstances" of the work forecasting process force the translation services to rely on short-term, ad hoc decisions and a continuous shuffling of resources, workloads, and priorities.
30. About half the organizations - primarily the larger ones - are also quite interested in the possibilities of quota systems or have even introduced them. In a work forecasting system originating units identify their intended pattern and volume of document submission over time. In a quota system the units get an annual allocation of funds or services to meet their document needs or, in some instances, departments have authority to handle document service needs through limited independent contracting with outsiders.
31. Quota system efforts and results have thus far been modest. FAO charges units for their document needs and monitors performance. UNESCO allocates conference service capacity among units through negotiation, and ILO attempts to match document volume and cost to resources available through sectoral documents and publications plans. The UN is considering quota systems as part of an effort to improve the efficiency of its conference activities. UN system organizations have also been working to develop a uniform costing system (as discussed further in III.D.). Another international organization, the Organization for American States, has developed a "pioneering" system to allocate all indirect cost and administrative expenses of the organization to user units, in order to evaluate the true cost of delivery of the organization's various services.
32. In addition to improving workload forecasts, submissions, and the management of translation services, a quota system should also provide incentives to originating units to eliminate unnecessary documents, shorten others, and improve quality and referencing. It should also impose penalties when these requirements are not observed. The following features of a quota and control system which would meet these objectives should be considered by organizations.
- (a) During budget preparation, units should indicate well in advance the estimated workload and propose resources for the translation of their documents in the same way as they propose resources for other objects of expenditure such as staff, consultants or travel. This would require an estimate of the number of thousand-word units which would have to be translated into each language.

(b) These proposals should be reviewed as part of the budget preparation process and with any changes approved by the executive head.

(c) The total of the resources proposed for translation should constitute the budget of the translation service. The major part of this budget should be committed for permanent staff, with the remainder reserved for contractual translation and temporary assistance.

(d) Before the budget period begins each unit should be allotted a number of thousand-word units for translation into each of the languages in the same way as it is allotted funds for staff or contracts or travel. This is the unit's quota.

(e) If a unit determines that its allotment of thousand-word units is insufficient it would have the following possibilities:

- (i) It could propose that the shortfall be financed by economies in its budget for such items as travel, contracts, or staff.
- (ii) If the shortfall is caused by circumstances beyond the control of the unit such as the decision of a legislative body for an additional document, the unit should attempt to meet the shortfall from its other resources, in particular by eliminating or shortening other documents. Only if the executive head is convinced that this is not feasible should he permit using other resources to finance the shortfall.

(f) If a unit can reduce its requirements below its quota, and give notification of this reduction sufficiently early (in accordance with the budgetary procedures in different organizations) it should be able to claim a return to its budget of at least part of the saving, provided that it can justify the need for these funds. Funds so returned would come from that part of the translation budget earmarked for contractual translation and temporary assistance.

(g) The document control units and translation services should be authorized and encouraged to return for correction to the originating units documents inadequately referenced, insufficiently legible or with logical or stylistic defects. If return of such documents is not possible for reasons of scheduling, the originating units could be penalized by having their quotas reduced in proportion to the extra time required in the translation services.

(h) The quota and control system could apply only to translation and typing and need not necessarily cover the other phases of document production such as printing and distribution. Translation represents by far the greatest part of the cost and the other phases are largely consequential on translation and present fewer problems. Thus control would concentrate on what is most important and would be more feasible.

33. Quota systems and work forecasting systems require a balancing of firm limits with operating flexibility, a workable monitoring and enforcement system at reasonable cost, and integration with the organization's overall documents quality and quantity control efforts. If they are well-designed and firmly implemented, they can help to achieve more rational usage of translation and other document services, involve operating units in careful assessment and planning of their document needs, and spread recognition of the considerable page-by-page costs of translation services.

III. TRANSLATION SERVICES

34. The translation process requires an effective combination of permanent staff, temporary assistance, contractual translation, modern equipment, and management skills to turn a heavy workload into timely and high-quality translated documents. Organizations have many common concerns and problems. It appears in particular that the effectiveness of the translation process can be improved through better career prospects, more self-revision of documents, careful productivity analysis, increased use of contractual translation, computer-assisted management planning, and a common computerized terminology and research unit.

A. Nature of translation work

35. Translation is not simply the mechanical replacement of words from one language with the words of another, but a challenging intellectual effort. A good translator needs a solid general education and a good knowledge of his subject field or fields, highly-developed linguistic skills in two or more languages, and training and expertise in the art of translation itself. The translator is a special kind of linguist, who must render ideas from one language into another with understanding and accuracy of meaning, context and style.

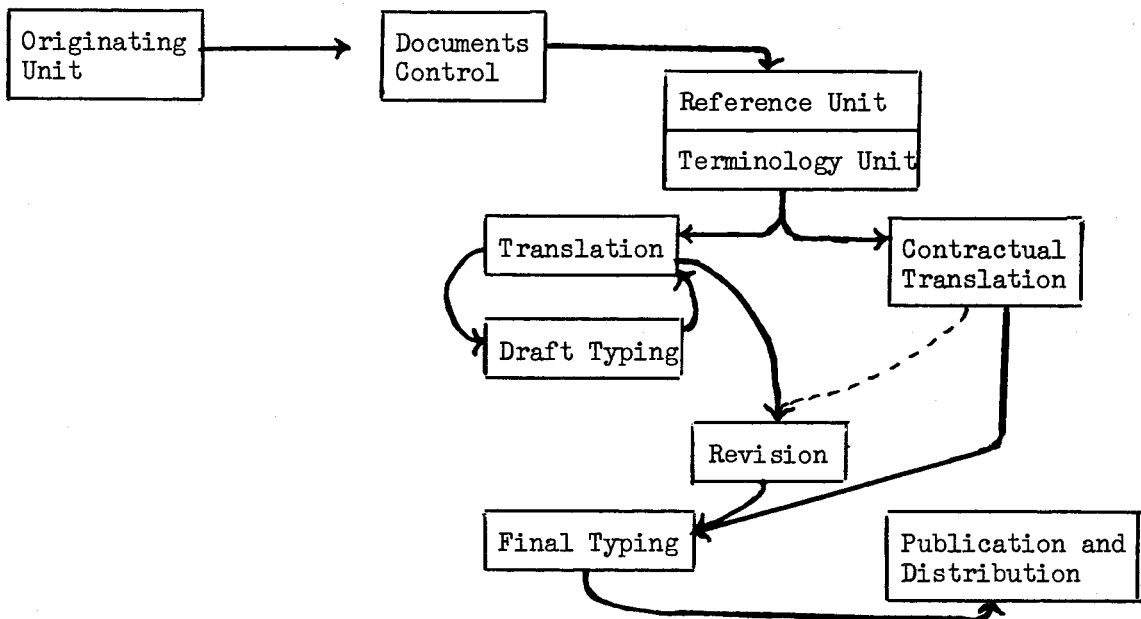
"Then began I to turn into English the book that is named in Latin Pastoralis ... one while word-for-word, another while meaning-for-meaning." (King Alfred of England, A.D. 849-901)

36. The "job satisfaction" of translation comes from the translator's knowledge that he has aptly achieved this transfer of ideas into the target language. This satisfaction can, however, be reduced or even nullified by such adverse factors as poor working conditions, lack of recognition and poor career prospects. The Inspectors were made aware that these adverse factors are in fact causing concern amongst translators and they consider it important to reduce or eliminate them. The question of working conditions is touched on in paragraph 87 with special reference to the crowding of translators in some organizations, and unreasonable deadlines due to the late submission of documents in paragraphs 28-29. The question of recognition is touched on in paragraph 52: the Inspectors consider that translators have, for example, an equal right with interpreters, documents officers and others who service intergovernmental bodies to have their contribution recognized at the end of each session. The major question of career prospects has given the Inspectors much concern: they believe that their proposals for re-organizing translation work with a resulting marked improvement in career prospects, as detailed in paragraphs 97-100, will, if adopted, go a long way towards redressing the situation of language staff as regards grading patterns and promotion possibilities. These recommendations, though scattered through the Report, are connected and illustrate the Inspectors' concern with the need to provide greater recognition, motivation, and rewards for language staff.

37. Translation in the UN system is particularly complex. An organization using seven languages must maintain 42 different translation capabilities, plus the ability to translate occasionally from other languages. Translators must translate such diverse documents as treaties, summary records, publications, resolutions, telegrams, and reports. They must work in the same extremely wide range of subjects as do the organizations of the United Nations system, while remaining aware of rapidly-changing terminologies and shifts in the "state of the art". Most of the work is for international meetings, and UN system translators are therefore called upon to work on sensitive political and legal issues, under tight deadlines. Thus they must constantly balance speed with

quality, become specialized in subject fields while undertaking shifting assignments to maintain language service flexibility, and handle workloads comprising many diverse texts, topics, and schedules.

38. The translation services vary widely. The largest has hundreds of translators, the smallest only a half-dozen. Many services are a part of conference divisions, others are in publications, support services or administrative divisions. Some are highly centralized, others have regional units or several headquarters units. Some are highly organized and managed, while others are relatively informal. In general, however, they perform much the same basic processing sequence, as indicated in the chart below and discussed in the following sections.



B. Recruitment, training, and career prospects

39. Translators are generally recruited through a process of vacancy announcements, preliminary screening, formal competitive examinations, and interviews. Typically, the organizations are seeking linguists with a university degree, some knowledge of the international system and its organizations, desirably a specialized field or technical or scientific background, and of course the ability to translate from one and usually more UN languages into their mother tongue. In 1978, the organizations recruited about 75 per cent of their new translators from outside the UN system, 10 per cent from the other organizations, and 15 per cent from their own secretariats (10 per cent Professional and 5 per cent General Service).

40. The major recruitment problem is that skilled professional translators are scarce. In addition, prospective translators are not always eager to work in cities where UN agencies are based, or they prefer the flexibility of freelance work to the limited career prospects of the UN system. The growth in multilingual conferences outside the UN system has also helped to make the supply of good linguists very tight. And the slow recruitment processes of the UN system have more than once led good candidates to take positions elsewhere.

41. In any case, because of the high standards which most of the organizations rightly demand, recruiting is difficult and costly. Examples cited by the organizations showed that as few as 15 candidates out of 500, or 57 out of

1,216 succeeded in passing recent competitive language examinations. Most of the organizations continue to recruit worldwide through competitive examinations, but some feel that the costs do not justify the results. They recruit increasingly through press advertisements, direct knowledge of candidates, or from other UN organizations.

42. Some interest has been expressed over the years in developing a common UN system examination and a common recruitment system, but because each organization has its own personnel system and its own specialized translation policies and needs, not much has been done in this area. However, the Inspectors believe that there is a prima facie case for much greater common recruitment efforts and suggest that ACC consider the modalities.

43. The tight supply of translators for recruitment is paired with concern that universities worldwide are not producing people as linguistically skilled as in the past. A limited proportion of translators recruited are graduates of specialized interpretation and translation institutes or specialized university programmes. In recent years, however, there has been new attention to developing other sources. A UN-supported programme for training interpreters and translators in Moscow, Peking and Addis Ababa provides good quality candidates for the UN and other system organizations.

44. In its 1977 additional languages report, JIU recommended that interested governments set up training centres for language staff on a regional or local basis. Most UN organizations endorsed this idea, and some new training programmes have been developed, including programmes in which the training is provided or partially financed by UN system organizations. In view of the tight supply of translators worldwide and the serious recruitment difficulties which the organizations face, the encouragement and support of UN system-assisted training programmes in certain languages can help to increase the future supply of qualified translators for the UN system. The Inspectors believe that any such opportunities should be pursued.

45. The shortage of qualified translators (and interpreters) poses serious problems not only to the organizations of the United Nations system but also to individual governments, and to national and international organizations. Should governments or groups of governments wish to strengthen or establish institutes for the training of linguists, the organizations of the United Nations system should be prepared to assist. Assistance could take the form of technical co-operation projects, national or regional, supplemented by work experience for successful trainees at the offices of any of the United Nations organizations.

46. New translators also need strong internal training programmes to refine their translation skills, but because of heavy workloads and tight budgets, the organizations' efforts in this area are rather limited. A 1974 inter-agency meeting suggested that every language section should have one staff member training new translators, and the organizations would like to provide such training. In practice, however, they have to resort to on-the-job training of a much more modest and informal sort, with the training burden usually falling on section chiefs or revisers who have other substantial duties. Opportunities for translators to develop or maintain their knowledge of substantive subjects are also usually limited by heavy workloads.

47. A number of officials suggested financial incentives and training programmes to allow translators to learn additional languages. In some organizations, professional and general service staff receive additional pay for additional language skills - but language staff do not. The Inspectors believe the development and use of additional language skills of translators should be encouraged.

48. The one major on-the-job training programme in the system is that at UN Headquarters in New York, which provides a fairly extensive training programme for its own new staff and for the regional economic commissions and other bodies of the UN as well. The bodies find this training programme and general exposure useful, but it imposes a burden on UN Headquarters, since 25-50 per cent of its translation staff at any one time are being trained, many of them for other organizations.

49. The limited career prospects of translators in the UN system were also of concern to almost all organizations and also of course to translation staffs themselves, with some officials citing improved career prospects as the single best way to improve overall translation service performance. Most translators begin at P.2, but remain at P.3 for long periods of time, with P.4 the top career level for almost all translation staff. In 1978 (as indicated in Table 5), 7 per cent of all translation service professional staff were at the P.2 level, 56 per cent at P.3, 29 per cent at P.4, and only 8 per cent at P.5 or above.

50. This post-level structure compares unfavourably with the post-level ratios for other professional staff, as first pointed out by the JIU nine years ago ^{5/}. Translators feel that this structure discriminates against them, particularly because competition for translator posts is intense and recruitment standards high. Language service officials are concerned that this pattern hampers recruitment of high-quality translators since it does not offer adequate career development opportunities.

51. At present, 65 per cent of UN system translators have less than 10 years' experience, another 24 per cent from 10-20 years, and only 11 per cent 20 years or more. Movement out of the services is very limited: in 1978 only 34 (3.5 per cent) translators and revisers transferred out or separated. Promotions were limited as well: staff members with 20-30 years' service have had an average of two promotions during their careers, those with 10-20 years about $1\frac{1}{2}$ promotions, and those with less than 10 years' service, on average, have had $2/3$ of a promotion.

52. Other incentives for translation staff are also limited. Some proposals have been made for exchange of language staff and diversification of job assignments, but work pressures have restricted any such efforts. Translators often have little operational contact with other staff members and programmes. Because they feel that they are viewed (when they are noticed) as non-creative appendages performing a costly but mechanical report processing function, they can come to view their work as a high-pressure but rather thankless and tedious task. The translators were particularly concerned that the complexity and challenge of their work is not appreciated by the rest of the organization, and that they get almost no recognition from committees, delegates, or secretariat departments for the quality of their work.

53. To deal with these promotion and incentive problems, the 1974 inter-agency meeting on language arrangements concluded that language staff job descriptions should be more comprehensive, that gradations should be based more on merit and skill than on traditional supervisory responsibilities, and that a more favourable ratio of P.5 to P.3 posts should be established comparable to that for other professional staff. However, little change has occurred. Proposals have also been made to establish a separate language category with its own grade structure and career paths. There is support for this idea in some quarters but translation staff also fears losing its general "professional" staff status and freedom to move to other parts of the secretariats (although such movement has actually been quite limited).

54. The Inspectors do not believe that any general upgrading of translator posts without accompanying and substantial additional professional responsibilities would help to solve existing problems, nor that a separate category for translators would be justified if its effect were to increase salaries without a corresponding increase in responsibilities.

55. The Inspectors do, however, recognize that the career prospects of translators are limited and that it is a responsibility of the organizations to provide reasonable prospects whenever possible for all staff who perform well. They are therefore proposing a basic change in translator functions, whereby highly-qualified translators are promoted to "senior translator" posts at P.4 in which they revise their own work. This change would permit a more acceptable career progression for translators associated with the increased responsibilities which self-revision entails. It would also allow for substantial savings, since self-revision would allow for gradual attrition in the present large volume of revision work and number of reviser posts. These matters are discussed further in section III.F.

C. Temporary assistance and contractual translation

56. The data provided by the organizations concerning translation costs for 1978 (Table 6) show that 80 per cent of direct translation staff costs are spent for established staff (about \$US 43,161,000); 15 per cent for temporary assistance (\$US 8,702,000), and 5 per cent for contract translation (or \$US 2,356,000). "Temporary assistance" refers to temporary staff engaged for stated periods of time to work in an organization's offices. Such staff is paid on a time basis by the day, week or month. "Contractual translation" refers to people performing individual translation tasks at home and paid an all-inclusive fee based on work done, not on time employed.

57. As a rule, translation services resort to temporary assistance for the following reasons:

- (a) to augment the capacity of the established staff during major conferences when the workload exceeds the capacity of the regular staff and documents must be issued on time;

- (b) to fill vacancies temporarily;

- (c) to replace staff on mission or leave;

- (d) to translate documents requiring specialized knowledge in particular fields, and

- (e) to compensate for faulty planning and scheduling, late submissions, and documents longer than expected.

58. In many cases, retired staff members of the translation service form a major source of temporary assistance. In all locations, salary costs for locally-recruited temporary assistance are lower (by about 24 per cent in Geneva) than the costs of regular staff. Although salary scales are the same, temporary assistance is generally cheaper because it does not include many items of common staff costs, such as pensions, home leave, etc.

59. Contractual translation is also a necessary adjunct to full-time staff for the same reasons as temporary assistance, and for translations for languages which the regular staff cannot handle. As a rule, translation services contract out material which is not subject to a close deadline, which can be translated away from reference units and consultations with staff members and which is not confidential or politically sensitive.

60. In a few organizations including United Nations Headquarters in New York, contractual translation work is self-typed and revised about 90 per cent of the time by the outside translators themselves. Translations done by relatively unknown or inexperienced outside translators - some 10 per cent of the contractual workload - are revised or at least checked. Unlike temporary assistance staff contract translators work away from the offices of the organizations. As a rule, they are supplied with any necessary reference material.

61. Many translation services have tried to establish working relations with translation agencies in various cities, but the results have been of disappointing quality, and most agencies' charges are unacceptable. Organizations, therefore, prefer to employ individual translators in whom they can have full confidence. Some resort to agencies for translations into and from "rare" languages and unobtainable in any other way. However, there are two exceptions: regular arrangements made by official bureaux in the USSR and the People's Republic of China have proved to be satisfactory in quality, timing and rates of payment.

62. At UN Headquarters, New York, contractual translation accounted for 16 per cent of the total workload of the languages division in 1978. Its share of workload for other organizations was as follows: FAO 36 per cent, UNESCO - 27.6, WMO - 13.9, UNOG - 12.4 (mostly on behalf of UN organizations other than UNOG proper), UPU - 11.2, UNIDO - 10.6, ILO - 9.6, UNEP - 7, WHO - 6.2, and less than 5 per cent in other agencies. (For details see Table 2.)

63. UNOG, which contracts out some work of its own and also work sent from UN Headquarters in New York and other bodies, is considered by the Geneva-based specialized agencies to be the pace-setter for rates payable to contract translators. The payment criteria which UNOG applies are: (i) experience and qualifications; (ii) whether the translation has to be spot checked or not; (iii) difficulty of the text; (iv) whether the work is done by a translator or a fully-fledged reviser.

64. The rates paid for contractual work per 1,000 words of original text translated and "self-revised" vary considerably. In approximate dollar equivalent in late 1979, they were as follows:

Difficulty of texts	UN New York	UNOG and Geneva-based agencies	FAO (Rome)	ICAO ^{6/} (Montreal)	IMCO (London)	UNESCO (Paris)
Ordinary texts	35	52	52	59	44	50
Technical texts	45	67	65	76	-	62
Very difficult technical texts	55	82	70	102	-	75

^{6/} ICAO does not use contractual translation; the table shows the commercial rates paid in Canada.

65. If judged on the rate per 1,000 words paid to the translator, contractual translation costs basically much less than translation work performed by staff members or temporary assistance. While internal translation costs are on average of the order of \$US 199 per 1,000 words, contractual costs average around \$US 48 at most. The ensuing revision, if it is made, can amount to another \$US 25. Thus, contractual translation costs much less than work done internally (see Tables 7 and 8).

66. Strong interest in the greater use of contractual translation in future is found in some organizations because of their heavy translation workload. ILO has increased funds for temporary assistance and contractual translation in 1980-81 to offset the reduced resources allocated for regular staff. UNOG language division could envisage farming out on behalf of other bodies contractual translation equivalent to 10 per cent of the total workload processed in the division, plus 5 per cent of its own work. The arguments in favour of using contract translators are based on the savings that can be achieved and the flexibility that they provide. The cost differential is explained by the fact that contract translation involves minimal overheads. To the extent that competent contract translators were available, they would offer a convenient means of expanding capacity and flexibility at reasonable cost. In order to ensure that qualified and experienced contract translators may be available when needed, the organizations might have to consider the desirability of concluding some form of "retainer" contract with selected translators for contractual translation. Such a contract would have the effect of guaranteeing them a certain minimum volume of translation at specified periods (normally the peak periods of workload) and at a certain minimum fee (the actual fee being higher if the work assigned was of greater technical difficulty than originally forecast).

67. However, supporters of greater use of contractual translation are outnumbered by those opposed to it. The arguments against using contractors are that:

(a) they are rarely familiar enough with the operations and practices of organizations to produce terminologically reliable translations;

(b) few have the necessary substantive knowledge of the disciplines involved;

(c) the vast majority are not trained in translation and produce work of erratic quality;

(d) most of them only "moonlight" as translators and consequently tend to sacrifice quality for speed;

(e) most pay little attention to presentation or proof-reading, so that typing errors are frequent and their translations are seldom truly final. Moreover, the higher the contract volume, the more it is necessary to use less-than-competent contractors. As a result, resort to contract translators is cost-effective only when competent freelancers are available.

68. Several studies have been made. Most concluded that contract work is definitely cheaper than work performed by regular staff, but a few concluded that, because poor work has to be revised or re-done, it is more expensive in certain cases, and that the availability of translators of acceptable quality and reliability is limited in certain locations. Generally speaking, however, there is agreement that contractual translation is less expensive and its quality in those cases when it is resorted to is broadly satisfactory.

69. The Inspectors recognize that the supply of qualified contract translators varies in different cities and for the different languages, and that their availability fluctuates over time. They believe, however, that increased use of contractual translation could bring considerable cost savings when reliable contracts are available. There should be an effort to use more contractual translators instead of temporary assistance staff. For each shift of 1 per cent in this direction the system-wide savings would be in the order of some \$US 65,000 per year. There might be a further saving in the cost of typing drafts and of revision and more office space could be available for permanent staff. Organizations such as FAO and UNESCO, which already make extensive use of contractual translation, naturally would have less scope for increasing its use.

D. Management and analysis

70. All the organizations maintain some form of management information system to document, control and analyse their translation work, usually within a larger conference services or publications division system. In most of the larger organizations and several smaller ones, these efforts are fairly extensive, involving the measurement of document inputs, cost of operations, production, work standards, productivity, and workload forecasting or quota systems. In other organizations, the management systems are much more informal and rudimentary. Three management areas are of particular interest.

71. First, since 1974 the inter-agency working group on language arrangements has been exploring the possibilities of a uniform costing system for meetings and documents, in order to calculate the full costs of services delivered. Such a cost system could enhance control of performance and costs, improve the content of programme budget requests and analyses, help compare alternative ways of preparing and delivering documents and conference services, and assist in determining appropriate charges for services provided.

72. Extensive inter-agency study and discussion during 1976-78 indicated that a uniform costing system could help in finding the best use for technological innovations and in allowing the organizations to consider exchanging conference services. The inter-agency study, to be completed in 1980, could provide general guidelines for the UN system, but it has been decided that each organization must then take action on its own to determine the degree of cost elaboration it requires and to further develop its own costing system.

73. A second management and analysis concern is the measurement of productivity and the development of workload standards (again for interpretation, typing, and reproduction and printing functions as well). Such standards could help inter-governmental bodies who must make budgetary decisions on the workloads and capacities of operating units and on additional resources needed to absorb new activities. They could also be a useful management tool to measure the productivity and performance of the units. Such standards, however, can only be applied to jobs of a repetitive character where output is defined in work units each of which takes approximately the same time.

74. In translation work, productivity can vary considerably. It depends on a combination of (a) difficulty and length of text; (b) complexity of subject matter; (c) total volume of translation work done (high though not excessive volume generally means lower unit costs); (d) scheduling of submissions (erratic workloads hamper productivity); (e) the quality of manuscripts, including adequate references; (f) the adequacy of physical facilities; (g) relative efficiency of work methods used; (h) whether other services are also provided (editing, revision, typing); (i) the languages involved; (j) the extent to which quality standards are maintained versus pressures for speed; and above all (k) the skills of the individual translator.

75. Because of these many variables, workload standards for translation are at present applied only in terms of general averages rather than detailed individual comparisons. Many of the organizations maintain general translation production standards, analyse unit and overall productivity on a periodic basis, and review individual performance on an informal basis, recognizing that this last step has sensitivity and morale implications for the staff and needs to be judiciously applied.

76. The inter-agency committee has worked towards measurement of translation productivity on a thousand-words basis, but not much comparison has been made. The JIU also gathered information on output and comparative costs on this thousand-words basis, and the data is summarized in Tables 7-9. This data does provide a broad overview of 1978 translation productivity patterns within the UN system organizations.

77. Table 9 indicates considerable differences between the various organizations and language sections in terms of translation productivity. Further careful analysis and comparison of these productivity levels and factors through a forum such as the inter-agency meetings on language arrangements could focus more closely on particularly successful techniques and innovations, and thus lead to improved translation productivity and cost-effectiveness.

78. Third, a number of the organizations felt that more sophisticated management planning and analysis is needed in translation services. At present, almost all the material which the organizations use is gathered, sorted, and tabulated manually. Particularly in the more elaborate systems, this tedious task ties up clerical and programming resources, leads to errors, produces information slowly, and severely restricts the amount of data and analysis that can be developed.

79. There appears to be considerable potential in the larger organizations for the development of computer-assisted management information systems to handle the data requirements of translation and related processes. When integrated with the computer capabilities which most of the organizations already possess, this might actually cut the direct costs of data-gathering and report preparation. It could also increase management effectiveness by making a wide range of new statistical data easily available, allowing more timely and accurate reports, eliminating duplication, and allowing more accurate analysis and comparison of budgetary and technological alternatives for management and intergovernmental body decision. Specifically, such systems could also contribute to more meaningful workload forecasts, quota systems, production control systems, and budget submissions.

80. The UN has considered developing such a system for its conference services, and some other agencies have also been considering improved computer-assisted information systems for their translation and language services. It would be useful if the various organizations in the UN system were to pool their experience in this area.

E. Work methods

81. The translation services follow similar patterns in allocating staff resources and selecting basic work methods. On a system-wide basis, 166 (10.4 per cent) of the total translation staff posts in 1978/1979 were devoted to managerial or administrative functions; 652 (40.8 per cent) to translation; 305 (19.1 per cent) to revision; 300 (18.8 per cent) to typing; and 175 (10.9 per cent) to reference, terminology and documents control units (see Table 5).

82. The most used work method by far among the 652 translators is dictation. 83 per cent use dictating machines for draft translations, and another 3.5 per cent dictate to stenographers. 8 per cent prepare hand-written copy for typing, and the remaining 5 per cent type their own translation drafts. The organizations encourage use of dictating machines as the most efficient approach. Most hand-written work at present is done in the Arabic and Chinese services.

83. In three other areas there is considerable divergence in the handling of translation work. First, in most organizations, interpreters do not do translation, because they are reluctant to do so and because the organizations believe in keeping the two specialities separate. In some small organizations and other international organizations, however, the two functions are combined wherever possible.

84. Almost all the organizations diverge to their regret in practice from their desire for translation specialization. The quality and productivity of translation work can be considerably enhanced by concentrating on particular subject fields, and the organizations try to develop such specialization whenever possible, but the need to handle overall workloads generally means that translators must work in a variety of fields, often at the same time.

85. In a few organizations, and especially the UN, the duties of translators in some languages are combined with those of précis-writers (i.e. drafting summary records of the deliberations of various bodies) (see Table 4). Most of the organizations believe that précis-writing is not an appropriate translation function, should be done by others (such as an official records unit), or is merely a luxury. The Inspectors attach importance to this majority opinion. Even though it is arguable that translators are highly-qualified for précis-writing, they are by definition even more highly-qualified for translation, which should have priority.

86. In view of the heavy translation workloads of the organizations and the recruitment and training difficulties which hamper the development and effective utilization of skilled translators, these criticisms of précis-writing seem justified. Précis-writing assignments can be particularly disruptive because they occur during conference sessions when translation workloads are high and translation scheduling and quality pressures may be severe. Although précis-writing assignments may give translators more varied duties, much concern has also been expressed about the crowded work schedules and overnight deadline pressures which précis-writing assignments themselves entail. There are thus good reasons to conclude, as most organizations already have, that précis-writing is not a proper translation service responsibility and that it actually hampers translation effectiveness. The organizations should consider alternative arrangements, for example the temporary use of permanent staff, including general service, for such précis-writing as is still deemed necessary.

87. Finally, some organizations were seriously concerned - and with reason - about the physical facilities provided for their translators. A translator needs reasonable quiet in order to concentrate on his translation, dictation and drafting. In several organizations, however, translators are crowded several to an office or are located in noisy and congested areas. The organizations should ensure that some system of separate rooms or cubicles is provided to give translators the necessary quiet and privacy. Good light is another obvious requirement that is not universally provided. In addition, the efficiency of translation services depends on housing the translation staff close enough to one another and to their supporting services - reference, terminology, typing pools - to avoid the waste of time inseparable from undue dispersion of office space.

F. Revision

88. Revision, or verification and correction of texts produced by translators, is practised throughout the system. The statistical data (Table 2) show that the total volume of revision (245,128,000 words) in 1978 was about 88 per cent of the total volume of translation (280,085,000 words).

89. "Revision only" is a term denoting the revision of material that has already been translated and revised and that is reissued perhaps in a new context, with certain changes, mostly editorial in nature. This "revision only" accounted for 9 per cent of the total revision in 1978. The organizations in which "revision only" is considerable include, in particular, UN Headquarters in New York and UNOG.

90. There were 305 revisers in all in 1978/1979 of whom about 10 per cent were at grade P.5 and the remainder at P.4. Since there were 652 translators, the ratio of revisers to translators system-wide is about one reviser to two translators. However, this ratio varies somewhat between organizations, as can be seen from Table 5, and also because of vacancies in established posts. The reviser's task is to ensure that a translation is accurate, consistent with related texts, homogeneous in terminology, and written in correct style.

91. Revisers are also called upon to do a good deal of initial translation, particularly on draft resolutions or reports that are awaited in a conference room, or final reports that need only some finishing touches or corrections. A translation made by a single reviser is checked by another reviser only if the nature of the document warrants the extra care. The intensity of revision varies with the importance and nature of documents and with the translator's reliability and knowledge of the subject matter, the general principle being that some types of documents can be subject to more rapid and less thorough revision than others.

92. Several organizations permit translations prepared by their most qualified translators to be issued without revision. There is no revision in WMO or UNEP, where all texts translated by staff members are "self-revised". ILO's budget estimates for 1980-81 assume that only 67 per cent of the reports for meetings and miscellaneous translations will be revised. English, French and Spanish revision is presently being eliminated at WHO Headquarters.

93. The JIU found that almost all agencies, except for a few who are still anxious to get more revisers, were open to the idea of making a distinction, for revision purposes, between documents requiring decisions from governing bodies and others - those submitted for information only. The latter may be self-revised or issued without revision. The organizations may wish to consider such self-revision as a basic mode of operations for two main reasons: it would provide considerably better career prospects for translators and it would result in substantial economies.

94. There is a risk involved, which the organizations mentioned above, at least, are obviously prepared to take. The quality of translation might decline with the elimination of revision. To minimize this risk, the Inspectors propose two measures: (a) certain documents would continue to be revised (perhaps 20 to 40 per cent of the total depending upon the organization); (b) usually only translations produced by senior translators (at P.4 grade) or by revisers would be self-revised. Also, if necessary, the chief of a language section could introduce a procedure for "cross-revision", i.e. the cursory checking of "self-revised" documents by a colleague.

95. Documents which would continue to be revised (estimated at 20 to 40 per cent of the total after a period of years) might include the following:

- (a) documents which a legislative body specifically decides require revision because of their importance;
- (b) politically sensitive documents;
- (c) legal texts;
- (d) documents of a regulatory nature;
- (e) draft resolutions resulting from complex negotiations;
- (f) documents translated by other than senior translators.

96. The Inspectors believe that the following types of documents could be self-revised:

- (a) administrative and programme documents, including budgets and medium-term plans (with the exception of the introduction by the executive head);
- (b) information documents, annexes, status reports;
- (c) documents for consideration primarily by subsidiary organs;
- (d) reports of subsidiary organs;
- (e) summary records.

When, because of its length and urgency, a document has to be divided among several senior translators, one of them should be made responsible for the concordance of the final text.

97. However, the above are only illustrations of what might be done. In practice, a decision would be made in each individual case by the chief of the translation service concerned. This decision could be guided by any indications given by legislative bodies. The elimination, for many documents, of revision by a fully-fledged reviser would have to be a gradual process extending over not more than four biennial budgets. This is necessary both to test and adapt the system and to permit time for the selection and training of the translators who will revise their own work. The steps suggested for this process, which would have to be adapted to the staffing patterns and practices of each organization, are as follows:

- (a) Gain experience in identifying types of documents which might not require full revision and, in the light of that experience, lay down criteria for that purpose.

- (b) Choose gradually from among serving translators at P.3 level those capable of working as senior translators without revision and promote them to P.4.

- (c) At the same time gradually reduce the number of reviser posts so that the ratio of translators to revisers changes in proportion to the amount of self-revision.

- (d) Any revisers who become "surplus" as a result of this process would be assigned to work as senior translators (self-revision). This measure would make it possible not to terminate the appointment of any serving reviser before his normal retirement.

(e) All remaining revisers should be gradually classified at P.5.

98. This system would have two major advantages. It would:

(a) result in economies;

(b) provide a more realistic and equitable grading pattern for language staff thus enhancing career prospects.

99. If, as assumed above, after a period of six to eight years, 60 to 80 per cent of documents can be self-revised, the staffing pattern of language staff would have radically changed under this proposal. Below is shown the present staffing pattern for language staff as well as a tentative estimate of the pattern that might emerge (with the same volume of work as at present) when the proposed system is fully in force.

(a) Present staffing pattern of language services - system-wide

<u>Translators</u>			<u>Revisers</u>		<u>Total</u>
<u>P.2</u>	<u>P.3</u>	<u>P.4</u>	<u>P.4</u>	<u>P.5</u>	
64	572	16	277	28	957

(b) Possible future staffing pattern of language services when proposed self-revision system is fully in effect - system-wide

<u>Translators</u>			<u>Revisers</u>		<u>Total</u>
<u>P.2</u>	<u>P.3</u>	<u>P.4</u>	<u>P.4</u>	<u>P.5</u>	
64	262	326	-	160	812

The pattern in table (b) assumes that at any one time, after the six to eight years' transitional period, about half of the serving translators will be qualified to work without revision. If in fact less or more than half of the translators are so qualified, the figures in the table would change accordingly. The figures present the anticipated average picture system-wide. The proportions would no doubt vary from organization to organization. Naturally, if in the future the workload increases or decreases, the number of translators would change accordingly.

100. Comparison between the two tables above - the staffing pattern at present and the pattern that might prevail once the self-revision system is fully in effect - shows:

(a) that if half of the translators are qualified to work without revision there would be 442 upgradings of posts of translators and revisers. In the view of the Inspectors, these upgradings are fully justified, not by abstract theories of classification, but by the solid fact that the translators who are upgraded will have significantly increased responsibilities and will have to possess higher qualifications because their work will not be revised; the revisers who are upgraded will also have increased responsibilities and need higher qualifications because they will be working only on the 20 to 40 per cent of the most complex and difficult documents;

(b) that assuming the workload remains constant, 145 P.4 reviser posts would be abolished.

101. The Inspectors considered what savings in cost might result from this proposal for self-revision. Some organizations maintain that self-revision would reduce translation productivity by perhaps about 25 per cent. This has not been demonstrated and the Inspectors are not convinced that doing an accurate job should be that much more time-consuming. Nevertheless, to take account of a possible decrease in output of translators who perform self-revision, the Inspectors have made a very conservative estimate of savings which might result. This estimate is \$US 4,000,000 per year system-wide.

102. The Inspectors suggest that a substantial move in the direction of self-revision as outlined above would be both cost effective and go a long way in responding to the legitimate complaints of language staff concerning their lack of career prospects.

G. Reference units

103. Many of the organizations maintain some form of reference units in their translation services; some are highly structured, others less so. The function of such units is to provide reference documents needed to ensure uniform and accurate translations, and especially to identify quotes, titles, previously translated texts, other relevant source documents, and available source material for general terminology use. The units gather, analyse, and file for retrieval important documents and publications. They review and annotate documents before translation, answer queries from translators, and either maintain technical libraries or work closely with the organizations' libraries.

104. About half the organizations felt that their reference units should be strengthened or that formal units should be established. With heavy workloads, tight budgets, and more and more complicated technical material to be translated, they felt that good reference units can provide specialized handling and streamline operations by minimizing the need for ad hoc referencing by individual translators.

105. The primary responsibility for careful referencing, however, should be on the submitting departments. The search for references disrupts translation considerably, particularly since a single poorly-referenced document has the multiplier effect of slowing the work of up to six translators, each working in a different language. However, strengthening the units within the translation services is not an adequate answer because referencing responsibility belongs more properly to the originating units. For instance, UN Headquarters in New York already has more than 20 clerks assigned to reference work, yet they are only able to cover an estimated 45 per cent of the work. The need is to insist that submitting departments which are most familiar with the documents can, usually with little additional work, carefully control document quality, including necessary referencing (as discussed in Section II.C). If such work is performed in advance, then translation staff can concentrate on their basic task. The net result of having originating units reference documents properly would be elimination of the need to increase reference units and, with time, might permit a reduction in their cost.

H. Terminology units

106. Translation in the United Nations organizations is dependent upon terminological research, usually carried out by separate terminology sections. The aims of these sections are to increase the productivity of the translation staff by reducing translators' and revisers' research time, and to improve the accuracy and consistency of the vocabulary used in translation by centralizing research and the supply of information on terminology.

107. The main types of work performed by the terminologists are:

- (a) compiling and issuing multilingual vocabularies;
- (b) helping translators and revisers to clarify and accurately translate specific terms encountered in translations;
- (c) providing terms for multilingual card indexes of terminology; and
- (d) scanning specialized publications in order to keep up with developments and vocabulary in the fields of activity of the organization's bodies serviced by the translators.

108. Terminologists, who are recruited in general from the language staff, are expected to have a sound academic training in linguistics or one of the allied language sciences, proficiency in the official languages, and demonstrated competence in language research. Knowledge of computer sciences and their applicability to terminology and other language matters is desirable. A terminologist might devote one-half of his working time to research, one-quarter to organizing the results of research into appropriate data formats, and one-quarter to the sharing of this data with translators, interpreters, and other users.

109. In such organizations as ESCAP, ECWA, IMCO, WMO, UPU, there are no terminology units. Individual language sections and even individual translators operate their own card indexes. The approximate proportion of each translator's working time in these organizations is estimated to be about 10 per cent.

110. A very large number of terms, particularly administrative, geographic, economic, social, names of organizations, and even many technical terms are used by most organizations. Yet there is very little co-operation in preparing or exchanging terminology lists. Moreover, such lists as are compiled are not kept up to date or reprinted. The same work seems to be done simultaneously in many organizations. Not only is this wasteful but it also introduces confusing variations in the translations of terms.

111. In 1978/1979 there were 27 professional and 82 general service staff engaged in reference work and terminology research, accounting for 6.8 per cent of the total staff in the translation services. Terminological and reference work costs some \$US 2.5 million a year, with no breakdown between the two available, or about 4 per cent of the total translation cost per year. Each organization, through terminologists, translators, or revisers builds up and maintains a stock of terms translated into various languages.

112. Individual organizations have tried to produce multilingual terminology lists with the help of a computer from time to time, but their efforts have been limited. For example, early in 1978, the Secretary-General of the ITU decided to have work begun on a trilingual lexicon of telecommunications terms used in ITU documents. With the co-operation of the organization's Computer Department, the translation service was able to store in the data base some of its terminological files and part of the terminology employed by the main bodies of the organization. The vocabulary was issued at the end of 1978. It has provided a useful tool for experts and translators, as well as an aid to interpreters. UNESCO and UNOG have also experimented for several years with the production of multilingual terminology lists with the help of a computer.

113. The United Nations foresees possibilities for access to a computerized terminological data system, providing on-line storage and retrieval of all terms deemed to be of importance to the work of the Organization. Such a system

would be intended to increase the productivity of the translation services by freeing the translators from manual term searches, would further rationalize and standardize the use of technical and specialized terms in the official languages of the Organization, and would contribute to the co-ordination of language usage between the United Nations and other international organizations. A common entry form for a system-wide terminology data base is being elaborated in New York as a pilot project.

114. Due to the lack of computer time and facilities at its disposal, the United Nations has had to defer the implementation of this pilot project to the end of 1980 and some of the organizations have started their own schemes. For example, ICAO has negotiated with the Government of Canada for data bank facilities. In exchange for ICAO's co-operation and input in the field of aviation terminology, Canadian authorities have agreed to place in ICAO's premises, in Montreal, a terminal connected to their terminology bank in Ottawa. Some organizations are also in the process of consultations and preparatory work for similar purposes. However, the Inspectors found that most organizations would be interested in the United Nations system terminological bank as well. The Inspectors hope, therefore, that in the long run it will be possible to link it with whatever the organizations might arrange for the time being.

115. During the course of its study, the JIU found that the translation services in most organizations believed that there was need to standardize terminology, to computerize terminology work and to integrate the terminology activities of the individual translation services. This would eliminate possible duplication between the organizations, reduce the amount of research, provide greater certainty and reliability and increase the terminological output.

116. There would be advantages in setting up a central unit servicing all organizations and producing multilingual terminology lists with the assistance of a computer. The Inspectors consider that it would be feasible and cost effective. A central unit could have the following responsibilities on behalf of all UN organizations:

(a) Preparation and updating of the multilingual terminology lists of common concern to all organizations, and distribution usually by means of computer tapes of specialized lists prepared by participating organizations.

(b) Assessment of the use of electronic aids for translation including computers, high-speed transmission of texts, etc., and informing organizations of the results.

(c) Research and development in innovative techniques for translation.

(d) Assisting organizations in introducing new techniques.

117. Inputs in the form of translated terms could come from all of the participating organizations and for certain categories of terms (geographical names, administrative terms, etc.) from the central unit. The unit would produce multilingual terminology lists regularly updated for use by all organizations, for it is important that each organization should have access to other organizations' terminology lists. The unit should be financed by contributions from the participating organizations in the form of posts and funds which are liberated by the transfer of the above functions to a central unit. Figures for the cost of terminology work are not available. However, there is little doubt that by pooling only part of these costs it would be possible to finance a small central unit. The systems now being developed by some organizations in this field could be a point of departure.

I. Changing translation technology

118. Because translation services are part of a complex organizational process, their managers need to be particularly sensitive to rapidly-changing technology and the possibilities and problems that such technology can bring, through a central terminology and research unit as discussed above. The potentials of new, computer-based approaches to management planning and terminology have already been discussed (Chapter III, D and H). Other possibilities also exist to improve translation as part of organizational conference or publications services, such as proposals for computerized conference scheduling, or the automated text treatment systems developed and used in ITU.

119. One area of current activity is that of word-processing and text-editing typewriter systems, which are in increasingly wide use and have been introduced and tested in several UN system and other international organizations. In some cases, such equipment forms the systems base to which further changes will be added to develop more sophisticated and integrated conference and publications systems. Some organizations have had considerable success in using word-processing equipment, while others are still assessing technological capabilities and staff reactions.

120. A second new technology area is that of facsimile transmission of documents for translation and typing, which has been used in the UN system for the past few years. Several organizations have experimented with facsimile transmission for conferences at distant locations. Results indicate a reduction in the need for travel of language staff to conferences held away from organization headquarters. At present, however, facsimile use still has some technical constraints, primarily the need for reliable telephone connexions.

121. A third new area, of most direct interest to translation services, is the possibility of "machine translation". This involves a computerized system in which text in one language is typed in (or, in newer models, read in by an optical scanner) to a computer, a rough translation is displayed and corrected on a video screen, and the final translation is then printed out. Sufficient computer storage capacity and speed already exist: the real problem is to develop systems which can successfully perform linguistic analysis of a text and transfer it into the target language. Research on such systems is underway in a dozen countries and in many languages, and while most systems are experimental, a number are now partially operational and are being extensively tested. These systems entail building up extensive computer-stored dictionaries including grammatical and semantic data on the languages concerned. Most systems currently in operation require a separate computerized dictionary for each language pair and each subject field, and their experimental application has been restricted to highly specific technical fields.

122. UN system officials are following the development of a number of these systems. Some are optimistic for the long-run, but the current attitude is to wait and see how long a "break-in" period is needed to make machine translation truly practical. It already seems clear that any system of the future will involve machine translation as an aid to (not a replacement for) human translation, with the machine providing very rapid rough translations and the human acting as the reviser.

123. In all such areas, then, the need is for UN system managers to keep in touch with technological developments and determine how they can best be used. This involves careful consideration and balancing of the technical, human, and managerial aspects of these emerging technologies. The central terminology unit suggested in section H. above should provide guidance and leadership.

IV. TRANSLATION OBJECTIVES AND EFFECTIVENESS

124. Translation is an essential support activity. As with other such activities of the UN system, its objectives and results have largely been taken for granted. Very broadly speaking, the organizations have assumed that the purpose of translation services is to translate, as accurately and quickly as possible, the organizations' documents into their working languages. However, this assumed purpose, the scale of translation operations, and the quality of translation results have seldom been carefully questioned or examined.

125. The many documents submitted to JIU on the operations of the organizations' translation services make very little mention of purposes and objectives. As one organization notes, the fundamental purpose of language services in the UN system has rarely been clearly stated, analysed, or defined, with the result that translation services are often ignored or viewed merely as a necessary but costly feature of the organizations' budgets. Similarly, the few recent reviews of translation service operations have been useful, but have generally been crisis-point studies rather than systematic and periodic assessments of ways to improve translation activities. The organizations also have little data at present on the results, effectiveness, and impact of their translation services. The comments which they receive on translation work have been very few, usually informal, and primarily concerned with minor translation points in specific documents.

126. The Inspectors believe, on the basis of their study, that the translation services are doing a satisfactory job within their present assumed terms of reference, and that the general objective of facilitating communication through accurate translation is being met. The impression of the Inspectors is that although translation errors do occur, their proportion in relation to the large total volume of translation is small and within acceptable limits. However, no systematic data or studies exist to substantiate this impression. There is considerable concern with translations which are not completed in a timely fashion but this appears to be primarily due to late submission by originating units.

127. The Inspectors believe that there is a strong need to more carefully consider the effectiveness of translation services on a continuing basis. The cost-effectiveness of translation leaves much to be desired, which is not surprising in view of the heavy workloads and crisis atmosphere in which many translation services operate. Each organization should periodically analyse in the light of its own requirements its overall translation process, identify areas where delays and problems occur, consider innovative ways to improve operations and services, and act accordingly. The recommendations contained in this Report are intended to assist in this process.

128. It would also be useful if the organizations would periodically gather information from Member States, governing bodies, secretariats, and other users of translated documents, by questionnaire or otherwise, on the extent to which translations economically meet their needs in terms of quantity, quality and timeliness. In addition, the organizations should carefully consider the long-range dangers of possible breakdown of documentation services overall as a result of growing documentation pressures. The JIU is undertaking during 1980 a study which will address recent efforts to control and reduce documentation in the UN system.

V. CONCLUSIONS AND RECOMMENDATIONS

129. Translation is an essential activity in the UN system to process and disseminate information in order to facilitate international communication, knowledge, and co-operation. The Inspectors believe that the translation services, by and large, are doing their job well and are fulfilling a difficult task. However, there appear to be considerable opportunities to realize cost savings, improve translation management, productivity and effectiveness, and more fully consider translation process results.

130. Document quality control and management (paragraphs 19-33): The translation services have many problems with the quality of documents submitted for translation - poor and careless drafting, illegible texts, poor referencing, tardy submissions, and excessive length. Although it is recognized that these failings hamper prompt and high-quality translation and diminish the effectiveness of overall organizational communication with others, document control units in many organizations are not strong enough to enforce quality standards. The value of the workload forecasting is reduced by the inability of operating departments to adhere to projected time schedules and document volume, but several organizations have had some success with quota systems to set document submission limits and make departments aware of the considerable cost of their documentation and translation demands.

RECOMMENDATION 1

A. The UN system organizations should reinforce the authority of their document control units so that these units can effectively control the quality of documents submitted for translation. Action should be taken to ensure that substantive departments are aware of the need to maintain high standards for documents. Document control units as well as translators should be reinforced in their authority to return documents to substantive departments when quality standards are not met.

B. Organizations should re-examine their planning and decision-making procedures to make certain that they are designed to make effective use of the scarce and costly translation resources. Consideration should be given to more effective use of workload forecasts and quota systems.

131. Support for language training centres (paragraphs 39-45): Some actions have recently been undertaken by the organizations, particularly the UN, to support or finance language staff training centres. In view of the tight supply of translators worldwide and the serious recruitment difficulties which the organizations face, such support could be very important to increase the supply of future translators for certain languages.

RECOMMENDATION 2

The organizations should seek out further opportunities to support or finance language staff training centres on a regional or local basis to train translators with a view to their recruitment into the UN system.

132. Incentives for additional languages (paragraph 47): At present, professional and general service staff in some organizations have financial incentives to encourage them to learn additional languages, but language staff do not.

RECOMMENDATION 3

Financial incentives which the organizations offer to staff to learn additional languages should be made equally available to translation staff.

133. Greater use of contract translation (paragraphs 56-69): Most UN system translation is done by permanent staff working as a trained core group, with some temporary assistance and contractual translation used to meet workload fluctuation and overloads. Temporary assistance is cheaper than regular staff, but contractual translation is much cheaper still (although rates in different UN cities vary considerably) because contract translation involves minimal overheads and the work is self-typed in draft and often self-revised. Although there is concern that translation quality could suffer from increased use of contractual translation, some organizations are increasing their contractual work as an economy measure. Savings could be achieved by increasing the proportion of contract translation work, preferably by hiring retired staff and other persons as contract translators, thus maintaining quality.

RECOMMENDATION 4

The organizations should carefully compare their costs incurred for regular staff, temporary assistance, and contractual translation, define the proportion of translation work which could be performed by contract without sacrificing basic quality, and shift some translation work towards the more economical contracting method accordingly. In addition, through a mechanism such as the ACC interagency group, the organizations' contract translation officers should analyse and exchange information on worldwide freelance and contractual translation markets, to determine where and how most favourable rates can be obtained, and to consider how the pool of good contract translators can be expanded.

134. Productivity analysis (paragraphs 70-77): The information provided by the organizations, presented in Tables 7, 8 and 9, provides a basis for careful analysis of the factors which determine productivity in the individual organizations. In conjunction with the efforts of the interagency working group on language arrangements to develop a uniform costing system to calculate the full costs of services delivered, the figures offer an excellent opportunity to compare techniques and methods which enhance productivity, and facilitate their use by other organizations.

RECOMMENDATION 5

The organizations, through the interagency meetings on language arrangements, documentation, and publications, and with the assistance of the unit proposed under Recommendation 11, should undertake a study of comparative productivity figures, using the data in this Report as a starting point. Such a study should focus on (a) an analysis and explanation of the factors underlying productivity differences among the organizations; (b) identification, on a continuing basis, of particularly successful techniques and innovations for improved productivity, and (c) transmittal and use of such techniques to improve translation productivity and cost-effectiveness.

135. Computer-supported management information systems (paragraphs 78-80): The UN system organizations currently have manual-clerical information systems, either modest or very cumbersome, with which to manage translation processes. These

do not provide the readily available, timely, and detailed information which a computer-assisted management system could produce. A few organizations have recently explored the possibilities of developing such systems, which could be quite cost-effective in eliminating manual processing costs and duplication, streaming job scheduling and workload and flow planning, providing needed cost and productivity data for management decision-making, and supporting management analysis to enhance overall translation process efficiency and effectiveness in ways not now possible.

RECOMMENDATION 6

The organizations, in the framework of the ACC interagency group and the Inter-Organization Board for Information Systems (IOB), should designate a lead agency which, with the assistance of the unit proposed under recommendation 11, would assess the benefits and costs of using a computer to improve translation management systems and, if found feasible, devise a system which could be applied, after adaptation, by other agencies.

136. Reconsideration of précis-writing (paragraphs 85-86): Précis-writing by translators is a significant activity in several organizations, but is considered an inappropriate translation function by many others. The translation services are already overburdened by heavy workloads, especially during conference periods when précis-writing occurs.

RECOMMENDATION 7

The organizations using translators as précis-writers should reassess the value and costs of this activity, the need for summary records, the possibility of assigning permanent staff from outside the language service temporarily to précis-writing, and the effects on translation workloads and outputs when translation resources are diverted to this function, and take appropriate corrective action.

137. Adequacy of physical facilities (paragraph 87): In several organizations, translation work is hampered because the translators lack sufficient quiet, privacy, and light to perform their work effectively.

RECOMMENDATION 8

The organizations should assess the physical facilities provided to their translators and take whatever action is possible to ensure that the translators have individual rooms, however small, with sufficient quiet and light for their work.

138. Revision (paragraphs 49 to 55 and 88 to 102): The traditional translation process calls for the review of translated texts by revisers. However, some organizations have recently delegated responsibility to senior translators for producing final translations which are not revised - self-revision. Almost all organizations are receptive to the idea of gradually increasing the number of documents that are self-revised. The Inspectors feel that this trend should be encouraged. If in the future self-revision becomes an accepted practice for many documents there would be significant economies and the grading pattern for language staff could be altered, thus enhancing career prospects. The Inspectors, therefore, propose measures under which self-revision would be increased over a period of six to eight years with consequent major improvement in the grading pattern for language staff and substantial overall economies. These measures

include safeguards to protect the quality of self-revised translations and suggestions that certain categories of documents would continue to be revised.

RECOMMENDATION 9

Each organization should take steps suited to its own policies and structure to increase gradually the number of documents that are self-revised and adjust the number and grade of language staff accordingly, as proposed in paragraphs 92 to 102.

139. Reference units (paragraphs 103 to 105): The size and extent of activity of reference units varies among organizations. Many organizations felt that the units should be strengthened. However, strengthening the units within the translation services is not an adequate answer because referencing responsibility belongs more properly to the originating units. If this were firmly enforced, central referencing units would still be necessary but increases in their cost could be avoided and a gradual cost reduction should be possible.

RECOMMENDATION 10

Submitting departments should be directed to include necessary references when documents are submitted for translation. When this is not done, document control units or translation services should be authorized to return the documents to the submitting departments for proper referencing.

140. Common computerized terminology and research unit (paragraphs 106 - 123): Good multilingual terminology vocabularies allow translators to translate complex texts much more rapidly and accurately. At present, almost every organization has its own central terminology unit, or units for each language section, and almost all organizations are using manual card indexes. Some have experimented with computer-assisted systems. The organizations agree that terminology within and between UN organizations needs to be better co-ordinated and that a common, computerized terminology bank could greatly improve terminology work and reduce the duplication that now exists. The interagency working group has considered the possibilities of such a unit for several years, but the pilot project which was to be carried out in 1979 by UN Headquarters has been delayed, and several organizations are now moving ahead with their own computerized terminology systems. The Inspectors believe that a common unit could have considerable value in increasing productivity, reducing costs, and eliminating duplication, and in providing research and advice on rapidly-changing translation technology.

RECOMMENDATION 11

The interagency group should give a high priority to developing and establishing a central, computer-assisted multilingual terminology unit, financed by the organizations from funds made available through reduction of their own individual terminology unit costs. In addition to preparing and/or distributing multilingual terminology lists the unit should develop and encourage the use of innovative techniques and computerized aids for improving translation work, as indicated in paragraph 116.

141. Assessment of administrative and translation process results (paragraphs 124-128): Currently, there are almost no firm data on the results and impact of translation activities. Translation is very important to fulfil the organizations' communication and information functions, involves high costs, has considerable potential for more sophisticated operational approaches, and is under pressure from mounting workloads. Thus, translation is an example of a basic

support process of the organizations which deserves more attention on a periodic (rather than crisis) basis from top-level secretariat management and executive and governing bodies, in order to assess the efficiency and effectiveness of the process and whether its results are meeting organizational expectations.

RECOMMENDATION 12

The organizations should consider the need for in-depth reviews or evaluations on a periodic basis of major administrative or support services such as translation. Such studies should not simply assess input costs incurred or workload problems, but should consider possibilities to increase effectiveness through new management approaches and also the specific nature and usefulness of the outputs and results of the processes.

ANNEX

TABLE 1. TRANSLATION COSTS BY ORGANIZATION AND LANGUAGE - 1978
(in thousands of \$US) a/

Organizations	Arabic	Chinese	English	French	Russian	Spanish	German	Common costs ^{b/}	TOTAL	% of total
UN/NY	1548	3308	989	2933	2580	2379	183	721	14641	24.2
UNOG	662	652	1655	3260	2482	1964	8	1255	11938	19.7
UNIDO	5	119	347	529	325	491	-	375	2191	3.6
UNEP	-	94	49	104	93	100	-	57	497	0.8
Reg. Comms. ^{c/}	-	-	227 ^{g/}	463 ^{h/}	-	126 ^{i/}	-	NA	816	1.3
FAO	495	549	150	1193	-	952	-	380	3719	6.1
IAEA	-	-	590	652	530	645	-	290	2707	4.5
ICAO ^{d/}	49	-	83	517	434	445	-	305	1833	3.0
ILO ^{e/}	-	-	304	613	215	692	244	419	2487	4.1
IMCO	-	-	81	573	103	309	-	197	1263	2.1
ITU	-	-	473	887	-	1128	-	236	2724	4.5
UNESCO	1263	751	1490	2278	1165	1497	-	951	9395	15.5
UPU	266	-	465	80	17	68	-	65	961	1.6
WHO ^{f/}	220	199	398	1199	556	683	103	909	4267	7.0
WMO	-	-	71	361	220	288	-	272	1212	2.0
TOTAL	4508	5672	7372	15642	8720	11767	538	6432	60651	100.0
% of TOTAL	7.4	9.4	12.1	25.8	14.4	19.4	0.9	10.6	100	

In this and other tables, NA = figures not available; - = none. The rates of exchange and differences in standard staff costs affect comparisons of cost between organizations.

Notes: ^{a/} Excludes apportioned costs and costs of office space and utilities.

^{b/} Includes costs for management, supervision, and planning within translation services, and central terminology and reference units.

^{c/} Includes ESCAP, ECWA and ECLA. Statistical data for ECE are included under UNOG. ECA provided no data, and ECWA provided only partial data.

^{d/} In this and other tables, includes Headquarters only.

^{e/} In this and other tables, except as noted, includes the Editorial and Translation Branch and Relations and Meetings Department. There are other units which are responsible for translating their own material. However, no statistical data are available regarding translations made by these units.

^{f/} In this and other tables, except as noted, includes the WHO Headquarters, Regional Office for Europe and Western Pacific Regional Office.

^{g/} English, ECLA only.

^{h/} French, ESCAP only, including interpretation into French.

^{i/} Spanish, ECLA only.

TABLE 2. TRANSLATION WORKLOAD - 1978
(in thousand words)

Organizations	Translation			Revision		
	Internal	Contractual	Total	Full revision	Revision only ^{a/}	Total
UN/NY	67 528	12 954	80 482	73 667	12 278	85 945
UNOG	44 063	6 234	50 297	44 063	8 971	53 034
UNIDO	8 264	980	9 244	8 264	-	8 264
UNEP	2 501	187	2 688	-	-	-
Reg.Comms.	8 975	351	9 326	6 086	393 ^{b/}	6 479
FAO	16 501	9 273	25 774	17 000 ^{c/}	-	17 000 ^{c/}
IAEA	8 413	116	8 529	8 413	-	8 413
ICAO	9 498	-	9 498	8 871	-	8 871
ILO	7 433	791	8 224	3 340	-	3 340
IMCO	7 390	334	7 724	5 000 ^{c/}	-	5 000 ^{c/}
ITU	11 890	225	12 115	11 983	94	12 077
UNESCO	22 450	8 550	31 000	31 000	-	31 000
UPU ^{d/}	2 037	258	2 295	2 037	258	2 295
WHO	13 706	902	14 608	3 410	-	3 410
WMO	7 128	1 153	8 281	-	-	-
TOTAL	237 777	42 308	280 085	223 134	21 994	245 128
% of TOTAL	85	15	100	91	9	100

Notes: ^{a/} Correction to material previously translated and revised. Thousand words of text is counted as five hundred words for revision only in the United Nations.

^{b/} ECLA only.

^{c/} Data on revision was not available from FAO and IMCO. Figures are estimates made by JIU and based on replies to the JIU questionnaire.

^{d/} Concerns translation into French and English only.

TABLE 3. TRANSLATION WORKLOAD BY LANGUAGE
TOTALS FOR ALL ORGANIZATIONS - 1978
(in thousand words)

Language	Thousand words	% of total
Arabic	18 846	6.7
Chinese	24 586	8.8
English	34 035	12.1
French	93 742	33.5
Russian	39 800	14.2
Spanish	67 735	24.2
German	1 341	0.5
TOTAL	280 085	100.0

TABLE 5. STAFFING OF TRANSLATION SERVICES - 1978-1979

Category of staff		UN/NYA	UNOC ^b	UNIDO	UNEP	Reg. Comms.	FAO	IAEA	ICAO	ILO	IMCO	ITU	UNESCO	UPU	WHO	WMO	TOTAL
1. <u>Managerial and Administrative</u>	D2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	D1	6	1	-	$\frac{1}{2}$	-	1	1	1	1	-	1	1	-	-	-	13 $\frac{1}{2}$
	P5	1	5	1	-	1 ^c	4	4	4	3	2	3	6	-	8	-	42
	P4	1	-	-	-	-	-	-	1	-	1	-	-	1 ^p	-	1	5
	P3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	P2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
	Sub Total	9	8	1	$\frac{1}{2}$	1	5	5	6	4	3	4	7	1	8	1	63 $\frac{1}{2}$
	GS	22	15	10	$\frac{1}{2}$	2 ^c	7	7	4	5 ^k	3	2	7	-	17	1	102 $\frac{1}{2}$
2. <u>Revisers</u>	P5	19	6	1	-	-	2	-	-	-	-	-	-	-	-	-	28
	P4	98	47	10	-	6	19	8	13	15 ^l	4	7	31	3 $\frac{1}{2}$	15	-	276 $\frac{1}{2}$
	Sub Total	117	53	11	-	6	21	8	13	15	4	7	31	3 $\frac{1}{2}$	15	-	304 $\frac{1}{2}$
3. <u>Translators</u>	P4	-	-	-	5	-	-	3	3 ⁱ	1	-	-	-	1 $\frac{1}{2}$	2	-	15 $\frac{1}{2}$
	P3	210	90	23	5	22	39	21	22 ^j	25	15	17 ^q	56	5	21	1 ^r	572
	P2	37	7	2	-	-	1	-	6	-	-	-	-	2	1	8	64
	Sub Total	247	97	25	10	22	40	24	31	26	15	17	56	8 $\frac{1}{2}$	24	9	651 $\frac{1}{2}$
Ratio of Revisers to Translators, 1 to :		2.1	1.8	2.2	-	4.5 ^d	1.9	2.4 ^h	2.4	1.5 ^m	3.7	1.4	1.8	2.4	1.6	-	$\frac{1}{3}$
4. <u>Typists for translators</u>	GS	21	60	25	16	16 ^e	33	26	16	14 ⁿ	18	5	21	8	16 ^q	5	300
5. <u>Reference and terminology</u>	P5	1	1	-	-	-	-	-	1	-	-	-	-	-	1	-	4
	P4	2	-	-	-	-	-	-	1	-	-	-	1	-	-	-	4
	P3	4	5	-	-	-	-	1	1	1	-	1	-	-	-	-	13
	P2	2	-	1	-	-	1	-	1	-	-	-	1	-	-	-	6
	Sub Total	9	6	1	-	-	1	1	4	1	-	1	2	-	1	-	27
	GS	26	19	4	1	3 ^e	10	-	5	1	3	1	7	1	1	-	82
6. <u>Documents Control</u> ^{t/}																	
	Prof.	3	2	1	-	-	-	-	1	-	1	-	3	-	1	-	12
	GS	15	6	4	1	1 ^f	3 ^g	6 ^u	3	-	9	-	4	-	2	-	54
Total Prof. and above		385	166	39	10 $\frac{1}{2}$	29	67	38	55	46	23	29	99	13	49	10	1058 $\frac{1}{2}$
Total GS		84	100	43	18 $\frac{1}{2}$	22	53	39	28	20	33	8	39	9	36	6	538 $\frac{1}{2}$
GRAND TOTAL		469	266	82	29	51	120	77	83	66	56	37	138	22	85	16	1597
Percentage of Grand Total		29	17	5	2	3	8	5	5	4	4	2	9	1	5	1	100

Notes: See next page.

TABLE 4. WORKLOAD BROKEN DOWN BY NATURE OF WORK - 1978^{a/}
(as percentage of total workload for each organization)

Organizations	Documents for inter-gov. and other meetings %	Internal secretariat documents %	Public information material %	Publications %	Miscellaneous %
UN/NY	94	6	-	-	-
UNOG	91	1	1	5	2
UNIDO	46	18	-	16	20
UNEP	100	-	-	-	-
Reg. Comms. ^{d/}	40	5	1	40	14
FAO	NA	NA	NA	NA	NA
IAEA	39	29	7	25	-
ICAO	69	2	5	19	5
ILO ^{b/}	54	-	-	36	10
IMCO	94	-	4	2	-
ITU	65	5	10	-	20
UNESCO	61	18	-	21	-
UPU	NA	NA	NA	NA	NA
WHO ^{c/}	74	-	11	14	1
WMO	76	12	1	8	3
Weighted (by workload) Average %	78.4	6.8	2.0	9.5	3.3

Notes: ^{a/} Excludes time spent by translators in preparing original summary records which for those organizations in which this is a significant function took the following % of time in 1978: UN/NY 37% (English section only ; considerably less in French and Spanish sections); UNOG: 8.5%; UNIDO: 10%; UNESCO: 16%; ITU: 16%; IMCO: 4%; IAEA: 2.5%; WMO: 2%.

^{b/} For this table only, includes the Editorial and Translation Branch.

^{c/} For this table only, includes the WHO Headquarters.

^{d/} ECLA only.

(Notes to Table 5)

Notes:

- a/ Includes the German language section (extra budgetary funds).
- b/ Excludes official records editing.
- c/ ESCAP only.
- d/ 1:2.6 for ESCAP; 1:8 for ECWA; 1:3 for ECLA.
- e/ For ESCAP and ECLA only.
- f/ For ECLA only.
- g/ Not staff members of the translation service; notional figures based on time devoted to translation matters by members of the Programming and Processing Control Section.
- h/ Ratio takes account of the fact that the Chiefs of Sections spend more than half of their time doing revision work.
- i/ The figure includes the equivalent of 3 posts for interpreter/translators according to the proration of time devoted to the translation activity.
- j/ The figure includes the equivalent of 4 posts for interpreter/translators according to the proration of time devoted to the translation activity.
- k/ Includes 1 part-time secretary.
- l/ Includes 2 part-time revisers.
- m/ Relations and Meetings Department only.
- n/ Since no comparable figures were available for both the Editorial and Translation Branch and Relations and Meetings Department the number of typists for translators is a notional one based on the ratio of one typist work-year for each 2.33 translator work-years in the Editorial and Translation Branch in 1978.
- o/ Includes 7 reviser/translators, revising their own work.
- p/ One permanent official serves as a full-time liaison officer with the translation services.
- q/ Notional figure computed on the basis of the average ratio of 2 typists to 3 translators as exact figures concerning the number of typists engaged at any one time in work directly linked to translation were not available.
- r/ Since there are 4 interpreter/translators who spend each approximately 25% of their time on translation activities, this figure includes 1 post for 4 people.
- s/ The overall ratio of revisers to translators is 1:2.1.
- t/ In some organizations documents control is not located within the translation service.
- u/ Shared partially with UNIDO; work primarily with the Publishing Division.

TABLE 6. TRANSLATION COST BY TYPE - 1978
(in thousands of \$US)

Organizations	Regular staff	Temporary assistance	Contractual translation	Common costs <u>a/</u>	Total	Percentage of total
UN/NY	12 848	713	359	721	14 641	24.2
UNOG	7 463	2 820	400	1 255	11 938	19.7
UNIDO	1 627	127	62	375	2 191	3.6
UNEP	378	55	7	57	497	0.8
Reg. Comms.	767 <u>b/</u>	26 <u>c/</u>	23 <u>b/</u>	NA	816	1.3
FAO	2 977	32	330	380	3 719	6.1
IAEA	2 109	301	7	290	2 707	4.5
ICAO	1 487	41	-	305	1 833	3.0
ILO	2 026	10	32	419	2 487	4.1
IMCO	747	297	22	197	1 263	2.1
ITU	1 705	762	21	236	2 724	4.5
UNESCO	5 350	2 519	575	951	9 395	15.5
UPU	811	61	24	65	961	1.6
WHO	2 424	785	149	909	4 267	7.0
WMO	442	153	345	272	1 212	2.0
Total	43 161	8 702	2 356	6 432	60 651	100.0
Percentage of total <u>d/</u>	71.2	14.3	3.9	10.6	100.0	

Notes: a/ Includes costs for management, supervision, and planning within translation services, and central terminology and reference units.

b/ For ESCAP and ECLA only.

c/ For ECLA only.

d/ When common costs are spread proportionately among the three types of direct translation work, their approximate shares of total cost are: regular full-time staff - 80 percent; temporary assistance - 15 percent; and contractual translation - 5 percent.

TABLE 7. INTERNAL TRANSLATION COST BY LANGUAGE - 1978^{a/}

(per thousand words translated, in \$US)

Organizations	Arabic	Chinese	English	French	Russian	Spanish	German	Weighted Average cost per thousand words ^{h/}
UN/NY	230	320	196	160	174	160	380 ^{e/}	200
UNOG	200	270	230	180	190	180	-	194
UNIDO	-	140	230	180	250	180	-	196
UNEP	-	220	340	130	170	150	-	172
Reg. Comms.	NA	-	100 ^{e/}	100 ^{f/}	-	120 ^{e/}	-	104 ^{i/}
FAO	160	220	150	180	-	180	-	181
IAEA	-	-	250	320	290	310	-	291
ICAO	310	-	130	150	170	160	-	160
ILO ^{b/}	-	-	140	197	198	142	187	166
ILO ^{c/}	-	-	360	171	86	244	428	224
IMCO	-	-	160	100	NA	220	-	127
ITU	-	-	250	180	-	210	-	204
UNESCO	290	510	230	250	260	190	-	262
UPU ^{d/}	NA	-	280	190	NA	NA	-	264
WHO	330	620	430	180	300	260	320	259
WMO	-	-	100	90	70	90	-	85
Average cost per thousand words	253	329	224	172	196	186	329	i/

Notes: a/ Excludes common costs.

b/ Editorial and Translation Branch.

c/ Relations and Meetings Department.

d/ Translations into English and French only.

e/ ECLA only.

f/ ESCAP only.

g/ The German Section works under special conditions (own terminology, outside location, in-house distribution of certain documents, etc.) which largely explain the higher cost.

h/ Weighted by 1978 internal translation workloads of the respective language sections of each organization.

i/ ECLA and ESCAP only.

j/ The above weighted averages, when weighted in turn by the overall internal translation workloads of each organization, yield an average cost of \$US 199 per thousand words of internal translation for the UN system organizations in 1978.

TABLE 8. CONTRACTUAL TRANSLATION COST BY LANGUAGE - 1978
(per thousand words translated, in \$US)

Organizations	Arabic	Chinese	English	French	Russian	Spanish	German	Weighted average cost per thousand words <u>c/</u>
UN/NY	NA	20	50	40	40	50	NA	33
UNOG	60	60	60	60	60	60	60	60
UNIDO	-	NA	NA	10	10	NA	-	10
UNEP	-	-	-	40	-	40	-	40
Reg. Comms.	-	-	50 <u>a/</u>	50 <u>b/</u>	-	40 <u>a/</u>	-	44
FAO	40	-	40	40	-	40	-	40
IAEA	-	-	-	-	75	85	-	78
ICAO	-	-	-	-	-	-	-	-
ILO	-	-	40	40	40	40	40	40
IMCO	-	-	60	50	-	170	-	69
ITU	-	-	-	90	-	90	-	90
UNESCO	130	-	70	70	60	60	-	68
UPU	-	-	60	70	-	60	-	64
WHO	80	-	140	90	40	80	-	55
WMO	-	-	60	60	60	60	-	60
Average cost per thousand words in \$US	78	40	63	55	48	67	50	<u>d/</u>

Notes: a/ ECLA only.

b/ ESCAP only.

c/ Weighted by the 1978 contractual translation workloads in the respective languages of each organization.

d/ The above weighted averages, when weighted in turn by the overall contractual translation workloads of each organization, yield an average cost of \$US 48 per thousand words of contractual translation for the UN system organizations in 1978.

**TABLE 9. AVERAGE OUTPUT PER WORKING DAY
PER TRANSLATOR AND PER REVISER - 1978
(in number of words)**

Organizations		Arabic	Chinese	English	French	Russian	Spanish	German
UN/NY	Translation	1380	843	2331	1517	1766	1864	1096
	Revision	3747	2441	3113	4419	4769	5121	2965
UNOG	Translation	1500	1105	1729	1886	1382	1941	-
	Revision	4358	4006	3329	4148	5456	4364	-
UNIDO	Translation	-	1663	1564	1558	1130	1460	-
	Revision	-	1663	3128	3116	2260	2920	-
UNEP	Translation	-	950	330	1654	1266	1482	-
	Revision	-	-	-	-	-	-	-
Reg. Comms.	Translation	900 ^{a/}	-	2288 ^{b/}	2500 ^{c/}	-	2186 ^{b/}	-
	Revision	1650 ^{a/}	-	4288 ^{b/}	6900 ^{c/}	-	3563 ^{b/}	-
FAO	Translation ^{d/}	1800	1238	2077	1601	-	1996	-
	Revision	-	-	-	-	-	-	-
IAEA	Translation	-	-	1516	1415	1379	1534	-
	Revision	-	-	3044	3114	3205	3042	-
ICAO	Translation	-	-	2050	1870	1800	1920	-
	Revision	-	-	4600	4120	3950	4230	-
ILO	Translation	-	-	1568	1194	1162	1885	1255
	Revision ^{e/}	-	-	3955	2847	NA	3557	NA
IMCO	Translation	-	-	1700	1900	NA	1200	-
	Revision	-	-	NA	NA	NA	NA	-
ITU	Translation	-	-	2360	2082	-	2220	-
	Revision	-	-	3202	5067	-	3565	-
UNESCO	Translation	1405	900	1645	1276	1497	1696	-
	Revision	4050	1820	4385	3788	4388	4727	-
UPU	Translation	NA	-	1500	1300	NA	NA	-
	Revision	NA	-	4000	2350	NA	NA	-
WHO	Translation	-	-	NA	NA	NA	NA	-
	Revision	-	-	NA	NA	NA	NA	-
WMO	Translation	-	-	2037	2482	1931	2283	-
	Revision	-	-	-	-	-	-	-
Average	Translation	1397	1117	1764	1731	1479	1821	1176
	Revision	3451	2483	3704	3987	4005	3899	2965

Notes: ^{a/} ECWA only.

^{b/} ECLA only.

^{c/} ESCAP only.

^{d/} Combined translation/revision figures: output of finished product per man/day (including translators and revisers).

^{e/} Revision output is for the Miscellaneous Documents Section only.