

Term(inological) Problems

Björn H Jernudd
Hong Kong Baptist College

1. Sources of term problems

Term management is governed by two opposite forces. On the one hand, participants in a discourse community seek explicit and stable agreement on term and definition to capture and communicate concepts; on the other hand, participants strive to change concepts by seeking new knowledge and developing new practices in an evolving world, therefore running into discourse performance trouble with the already agreed terms and definitions. An additional complication arises because discourse communities are not independent of each other. There is conceptual flow and therefore term flow between them. Knowledge and term systems meet across discourse communities and languages, and public discourse intersects with all.¹⁾

Term[inological] problems arise at least when individuals note deviations from expectation (the norm) of the well-formedness of a term (its derivation, inflection, spelling and pronunciation), of the relation between term and concept ("reality"), of the adequacy of definition, and for reasons of contact between discourse communities and across languages, by pressure of use of English for international purposes. It may not be easy to recover the problem from available data. Ideally one should be able to recover the particulars of a discourse situation in which

- (a) some person(s)
- (b) noted some feature of discourse
- (c) and evaluated it.

Who are these people? What did they note in what situation? How and why? From what position of value and interest did they evaluate the noted language feature?

2.1 The terminological literature and sources of term problems

The literature on term[inology] processing reveals much about the principles of adjusting in general but does not discuss the sources and circumstances of problems. Sager's conception of the scope of terminology is offered on the first page of his *A Practical Course in Terminology Processing* (1990):

"We see terminology as a number of practices that have evolved around the creation of terms, their collection and explication and finally their presentation in various printed and electronic media."

If we refer to individuals' noting of language features in actual discourse as stage A of a simple management process, evaluation would be stage B, adjustment if the outcome of the evaluation was that an inadequacy required attention would be stage C, and discursively issuing the adjustment (by, e.g. replacing a term by another, respelling in a particular way, and so on)

would be stage D. What we recognize in the above quote is reference to stages C (adjustment: "creation") and D (implementation: "presentation") only, in the systematic term management process. This is typical and diagnoses an insufficiency in term theory and term management.

There are no direct references to term problems as motivations for terminological work. Yet, Sager reports on questions that users address to term banks. I find these questions interesting because they give evidence of discourse problems:

Entry part	Question	Answer
gender	What is the gender of 'imprimante'?	-feminine
spelling	What is the spelling of the French word whose English equivalent is 'Woodruff key'?	-clavette Woodruff
equivalent	What is the French for 'laser printer'?	-imprimante laser
definition	What is a 'laser printer'?	-a printer which...
synonym	Can I use 'bit' as a synonym for 'binary digit'?	-binary digit- Abbrev.: bit
subject label	Is 'bit' restricted to a subject field?	-Computation
example	Is there an example sentence containing 'bit'?	"

Curiously Sager appears to dismiss them as unworthy of modern term banks (167): "perfectly valid, but they are only addressed to and elicit direct responses from the various parts of the conventional dictionary entry." Sager wants the following searches and queries instead (168):

"Query	Search of field
-Compile a glossary of all terms with usage note of 'ICI'.	usage restriction or scope note
-What do you call a machine that performs X?	definition or conceptual links
-What parts make up a Y?	subordinate partitive terms
-Find all terms entered by 'JCS' since 1985	name of the terminologist over a period of time
-Compile a glossary of terms related to 'GPSG'.	subject field or a subdivision
-Print all terms with a source of CCL."	subset of origin of data

These additional questions are relevant to term management, and term banks are being constructed so as to give this kind of information. Obviously these term banks come to represent some persons' and not others' usages and ideas of application of systematic adjustment principles in an *a priori* fashion to sets of terms. People undoubtedly make use of

terminological facilities also in these ways. Question is, who does and why? What interests would motivate people to want to see all terms with a particular source, and so on? However that may be, a problem-based theory of term management would require of a term agency that it could answer such actual questions as people do have that have arisen out of difficulties in discourse. These questions arise at stages A and B of the simple discourse management process (as Sager recognizes in the term agency's "advisory function" ²). A term agency's suggestions for adjustment require knowledge of what usages have actually been noted in discourse and evaluated as inadequate in the particular discourse community contexts.

Rondeau in his *Introduction à la terminologie* (1981) recognizes usage as a source of problems not for the interactants but for "terminology." In Rondeau's book, terminology is regarded as subservient to a non-linguistic interest (Jermudd & Neustupný 1987) of francization and creates problems for people rather than helps them (pages 113-4):

"L'usage constitue pour la normalisation terminologique un problème difficile. La normalisation terminologique a parfois pour but *d'aller contre* l'usage, c'est-à-dire de modifier des habitudes acquises, comme c'est le cas pour la francisation de la langue du travail au Québec; dans d'autres cas, elle a pour objectif *de guider* l'usage vers telle forme linguistique de préférence à telle ou telle autre" (1981:97, footnote).

"L'implantation d'un terme normalisé ne présente pas de problème si [...] ce terme correspond à un vide, c'est-à-dire s'il fournit une dénomination pour une notion qui n'est pas encore nommée. Les problèmes surgissent quand le terme normalisé est destiné à supplanter un terme déjà ancré dans l'usage. La résistance de l'utilisateur s'explique alors, en bonne partie, par sa crainte de voir le terme qu'on lui propose, moins connu de ses interlocuteurs immédiats, obscurcir la communication, plutôt que de la faciliter; ce qui est fort possible."

Together, Rondeau and Sager edited a volume of proceedings of the 1984 International Conference on Terminology by the International Association of Terminology (1986). Most papers promote points of view and advocate particular adjustments that arise out of other interests than communicational ones. This quote is an example:

"On prend conscience de l'infiltration culturelle engendrée par cette nouveauté qui a servi à faire connaître le chanteur Michael Jackson et son *break dancing* (une danse de rue, à l'origine) quand on voit des enfants pauvres des bidonvilles de Rio et S. Paolo former des groupes pour danser sur ce rythme; ils en oublient la *samba* et leurs racines culturelles (70)."

This is not term management but condemnation of American influence.

Only two papers in this volume make explicit reference to term problems in discourse. Both authors protest against principles-based work by significant other term processing organizations. One paper deals with Mexico in particular, Spanish-speaking countries in general (Luis Fernando Lara), the other with work at the Ruhrgas AG in Essen in particular, German and the European languages context in general (Stellbrink). Lara says:

"Cultivated automobile terminology is never learned by the workers; on the contrary, they develop a practical terminology, borrowing terms from ordinary life experience and from some curious images of what foreign words are like./ Such practical terminologies, perhaps because they are related to common daily life experience, extend over large areas —for instance, Mexico City — and constitute some kind of standard terminology, but they always have some differences and there is trouble each time a new tool, a new material or a new car part enters the market./ The effect of such developments is the existence of some kind of "pidginized" practical terminology and of diglossia between the cultivated and the practical terminologies. Both phenomena produce difficulties in communication between engineers and workers, constant failures in car production or car repairs, and of course, add significant cost to production (1986:96)."

Lara expresses the interests of the middle class and defend their language against the dirty ones. The argument is coached in reference to difficulties and failures. The two sets of automobile repair terminologies should be found anywhere in the world. Yet, Lara has a solution that represents a radical departure from fundamental assumptions in Sager (1990), Rondeau (1981) and most of the other TERMIA papers (Rondeau & Sager 1986):

"Such [autonomous specialized institutions] ought to be the technical support for terminologies developing in each area of science and technology. I say technical support because terminology is a creation of specialists in each field and not of linguists or terminologists. These last organize, advise specialists, solve linguistic problems, research the present state of certain areas, create data banks, but they do not originate terminologies (98)."

The modern manager becomes happy but the issue remains of course what he is to do with the "uneducated." Be that as it may, the managers in this case note and evaluate as inadequate particular usages (reported as vocabulary usages here) which they then refer as problems to specialized terminological institutions, for advice and suggestions and managers and agencies cooperate towards implementation of agreeable adjustment of language. Obviously, to be effective, a terminological agency must understand about problems in discourse by particular discourse communities and base its adjustment principles on that understanding; and it must include attention also to the language of the dirty and uneducated automobile workers! However, Lara wants term agencies to "standardize" by favoring usage by the technical elite over usages by the workers. He reveals a non-linguistic interest in regard to adjustment; but at least he recognizes that the problems arise out of differentials in discourse.

The other author, Stellbrink, rejects term agency intervention in adjustment:

"The "creation" of terminology by translators or terminologists and above all by term banks to fill in blanks which would otherwise exist [...] has been the most fundamental mistake made in terminological work in recent years (212)."

He advocates consistent use of professionals' terminology which I presume would be based, in a central European community, on a Latin and Greek base of derivation. Such terms reflect a middle class interest. Communicative problems are likely to arise among other user groups (e.g., workers) which sets up a new process of change.

Translators and other subject specialists initiate and stimulate terms and terminological agencies collect and check new entries "for consistency with the terminology already held (213)." Term agencies make their collections and comments freely and easily available. Thus, translation costs can be significantly decreased and "misunderstandings caused by the use of different terms to designate the same concept" can be eliminated to save "valuable and costly Ruhrgas time (210)."

2.2 Indirect sources on problems from discourse: newspapers

Newspapers are a source of data on term and other language problems. Newspaper articles reveal how people evaluate words and their users, they reveal aspects of metalanguage (e.g., "to coin", "Latinate", "neologism"), offer evidence of peoples' theories about vocabulary, and reveal both linguistic and non-linguistic interest.

In a study of newspaper data on language problems, (Jernudd *et al*, ms) problems with names were especially salient, including place names. Place names of course mean to resolve problems of orientation. An example is the major debate that flared up around giving a name to a new international airport in Melbourne, Australia. It was apparently initiated by three letters to the editors of the Australian *The Age* (8 Jan, 6 and 19 Feb). The newspapers carried letters, news items and feature articles for a period of over two months. The competing names were "Tullamarine," "Menzies," "Melbourne International," "Melbourne" airport; and "jetport."

The City Council in Melbourne unanimously placed itself behind using "international" in the name (*The Herald* 24 Feb); but the Department of Civil Aviation wants the simple "Melbourne airport" to remain — as their representative was quoted to say in an article (*The Australian* 19 Feb) that refers to the airport as "the new Melbourne Airport at Tullamarine." And a *The Herald* columnist had endorsed Tullamarine on the 19th! "Menzies" would commemorate Sir Robert Menzies just as Sydney Airport is named after Kingsford-Smith, a pioneering aviator. "Tullamarine" (locality name) is "poetic, charming" and much else. And Victorian Premier Bolte came up with "jetport." A couple of well-researched articles in *The Herald* (25 Feb) and *The Australian* (also 25 Feb) finally explained: the International Civil Aviation Organization's 199 member nations have agreed to standards of naming of airports. All airports are to be named after the cities that they serve; only the word airport should be used in addition to the city name in these official names. Even Sydney's Kingsford-Smith airport is officially named just Sydney Airport. In common usage, however, when project broke ground it was referred to as the Tullamarine Project and also "loosely" and "for common reference" as the Tullamarine airport. When the first aircraft landed in 1966, the name Melbourne Airport began to be used, too. *The Herald's* aviation writer refers to an event, otherwise unspecified, "three years go" when the airport officially became Melbourne Airport. He also pinpoints a most likely cause for the continued use of Tullamarine to name the airport, especially in press references and by taxi drivers: there is another domestic airport for Melbourne named Essendon Airport. To distinguish the two, the names Tullamarine and Essendon serve the purpose very well because they are both place-names in Melbourne so they stand one against the other along the same dimension of meaning, which Melbourne Airport does not. As long as the Essendon airport remains in operation and the taxi-passenger asks to be taken "to the airport," Tullamarine will serve as a name in common usage, according to the authors, to make sure the passenger doesn't mean Essendon. This is particularly so as the memory will long remain that passengers destined for Melbourne from overseas entered the country through Sydney until the new airport came

into service and were then forwarded to Essendon. Someone going "to Melbourne" arrived at Essendon; but now the name Melbourne Airport refers to Tullamarine. The need for, or the convenience of, perhaps, a semantically motivated distinction between the names of the two airports could also conceivably be met by a distinction in usage between the "international" and the "domestic" airports, but the recency of de facto overseas arrivals at the latter, the ruling that "international" is not in accord with ICAO standards, and the fact that also domestic flights use Tullamarine all work against that solution.

For airports, an internationally agreed rule of aviation administration determined the official name, Melbourne Airport, at the scale of international airports, which left in place usage at the local scale of within-Melbourne traffic to distinguish the old (Essendon) from the new (Tullamarine) airport. When the city council voiced preference for "international" in the name, they no doubt acted on pride. Unlike passengers and taxi-drivers, they were concerned not with a discourse problem but with the image of the name; the former however showed concern with orientation which motivates distinctions to be made in discourse, and if these distinctions are not made, problems arise, not of "language" but of destination.

A non-linguistic interest of pride directly motivated the adjustment to include "international" in the name which was actually done in the Council's naming. The actual communication problem of which airport/place is meant in discourse situations such as directing a taxi exemplifies the linguistic interest in evaluating a request to be taken to some destination as inadequate; the inadequacy prompts adjustment both at the (presumably repeated) discourse situation and by giving overt, systematic attention to a suitable, agreed adjustment: which name distinguishes between the two possible destinations?

The simplest adjustment at the moment of discourse (e.g., in the taxi) is simply to ask "which one?" In the overt management debate, the equivalent sequence of consideration could be described as follows: the expression "Melbourne [int'l] airport" is evaluated as inadequate and the adjustment to "Tullamarine," meaning NOT Essendon, was suggested which in turn could be implemented as an agreed new name.

Confusion supposedly motivated another place name problem. Two articles and two letters (*The Herald*, 13 Nov and 2 Dec, and 20 and 27 Nov, resp.) agree on the misjudgement shown by the Victorian Place Names Committee in suggesting the renaming (apparently with official consequences for reference to post office, school etc names) of a township rather than the mountain with the identical name, Mt. Eccles. The alleged reason for wanting to differentiate names is said to be "confusion." "At a meeting in the [public] hall (built in 1905), local residents decided to ask Woorayl Shire Council to make every attempt to retain the name. The locals here are not certain how their Mt. Eccles got its name. Some say it was named by a Mr Kain in 1879. He owned the land... Others say surveyors named it in recognition of hospitality they received from a family named Eccles..." One of the letters reveal that a "Surveyor-General's map of Victoria of 1855 erroneously marked [the mountain] Mount Eccles" instead of the properly given name, namely, "Major Mitchell named [it] after Lieutenant Eeles, with whom he had served... it bore the name Mount Eeles until" the error occurred. This information apparently settled the matter. The letter writer also suggests that Mitchell should be belatedly honored by having "the name he bestowed" restored, in the same manner as the Committee "change[d] the name Cape Everard back to its original Point Hicks, as given by Captain Cook." Does Mt Eccles refer to the mountain or the township? The clipping unfortunately did not offer transactional data to illustrate how an addressing problem would

arise. However, people in the township of Mt Eccles protested the Victorian Place Names Committee's initial decision to rename the town (which would have led to more addressing trouble for many people) and in joint discussions it was agreed to rename the mountain instead based in historical facts about the original surveyors' naming. The discourse problem of orientation developed into deliberations on the historical origins of names as the principle for adjustment which reflects the complex realities of any systematic language management process.

Undesirable connotations were noted as problems, e.g., of 'second' in the railway term 'second class'— adjustment simply replaced it with 'economy'; and by collocation with 'handicapped', an entire discourse strategy of specification of handicap — simple removal of such discourse was suggested as the adjustment strategy. These inadequacies are motivated by peoples' ideological awareness of an entire set of practices, discourse features included, that oppresses the handicapped by setting them apart from "normal" people. Discourse trouble certainly did not motivate these inadequacies, other than in the derived sense of ideologically informed noting of speaking and writing. The obvious parallel which had not yet come to the fore in Australia in 1970 is the gender issue which also was projected onto discourse by application of rigorous and systematic noting, evaluation, adjusting and implementation strategies.

Systematic adjustment of sets of terms were called for to resolve some very major communication problems as a consequence of Australia going metric, Australia producing its own wines but so far lacking an industry standard of labelling that suits international sales, to counter utter confusion of labelling of sizes of clothing, and to allow comparability of academic awards. In these cases, uniform nomenclatures (terminologies) were seen as the solution; e.g., the Standards Association of Australia is seeking adjustment already to the problem of clothes labelling.

2.3 Indirect sources of problems from discourse: the newsletter *TNC-AKTUELLT*

There is data on who asks what questions of term agencies, in registers of incoming calls, in samples of questions reproduced in agency newsletters, and so on. This data often includes notes on suggested adjustment. I shall discuss some of the questions reproduced in the Swedish Terminological Agency's newsletter, *TNC-AKTUELLT*. The editors reproduced 76 selected questions to Tekniska Nomenklaturcentralen (TNC; the Swedish Center for Technical Terminology) in two issues of its newsletter, *TNC-Aktuellt* (34:2, 1992 and 35:1, 1993). The editors classified the questions under the following headings:

Definitionsfrågor [definitions]
Etymologifrågor [etymology]
Formfrågor [expression form]
Förkortningar [abbreviations]
Ordvalsfrågor [word choice]
Översättningsfrågor [translation].

Some of the questions were quite well documented and revealing of discourse context. One comes from a working group in the police force. It asks TNC for suggestions for possible

terms; the superordinate terms are evaluated as adequate but subordinate terms are seen as problems. To the superordinate 'brottsförebyggande verksamhet' and 'brottsförhindrande verksamhet', the group suggests some subordinate possibilities such as 'proaktiv' and 'reaktiv' or 'repressiv' to specifically designate activities directed at people who never committed crimes (and not as victims) and people who have committed crimes. TNC responds [my transl.]:

"*Proaktiv* is difficult to interpret. With a Swedish word one could say *brottsdubbs-hindrande* for such activity as aims at preventing youths and others to commit crimes; with a foreign word one could say *preventiv*. *Reaktiv* is also a term that is hard to interpret and *repressiv* has dangerous, negative associations when linked to police activity. *Återfallsförhindrande* is a better, transparent Swedish term (TNC-Aktuellt 34:2:18, 1992)."

Negotiated adjustment is invited and TNC accepts the invitation. TNC offers terms that are overtly evaluated as 'Swedish' but does not directly reject terms evaluated as 'foreign' in Swedish; this is brought out by the fact that it suggests also *preventiv* (which is perhaps less 'foreign' by a degree). It rejects the working group's suggestions partly by their 'foreignness' (i.e., therefore not transparent) and by their negative associations in a police context. Another term is offered. From the analytical perspective that this paper takes, one would wish to know how the particular interests enter the management process, and how participants project their interests in the negotiation of solutions to the posed problem.

Four more questions are sufficiently documented for us to understand some aspects of process. Questions arise out of a surprising variety of contexts. One concerns the word (term) *diagonal*:

"A customer ordered diagonal carpeting in a rectangular room. Following GBR [professional] practice we put it down corner to corner. The customer maintains that it should have been put down at a 45 degree angle to the wall. What is truly a *diagonal*?" [TNC-Aktuellt 35:1:6, 1993]

TNC answers with a definition of *diagonal* and elaborates on occurrence of diagonals in geometrical patterns. There are other contexts of usage, e.g., with parquets. Meaning is determined in accordance with professional practice. "Linguistic arguments" do not contradict professional practice, in this case GBR practice. A definition of *diagonal* would not have made anybody the wiser. Attempted evaluation by criteria of clarity, efficiency, beauty, standardization (and so on) would be meaningless, produce more nonsense. Adjustment can be successful in this case because it took into account the discourse situation in which participants noted and evaluated a deviation from norm (expectation) as inadequate, and made use of situated usage in suggesting a solution.

Another problem deals with *fasad* in much the equivalent kind of context:

"How to define *fasad*? Are windows for example included? If a construction contract [Swedish: *entreprenad*] comprises painting the *fasad*, shall then also the windows be painted?" [TNC-Aktuellt 35:1:6, 1993]

TNC answers that the definition does not help and practice apparently neither: sometimes windows are painted but often with another paint in another manner. It's a matter of what's reasonable, says TNC; TNC suggests that perhaps the parallel case of *fönster* can help:

“the pane is part of the window [*fönstret*], but if one has ordered the painting of the window one doesn’t expect the pane to be painted.”

There is also the question concerning *vindruta* [TNC-Aktuellt 35:1:7, 1993]. A parking permit had been placed in the back window of the car. The parking guard didn’t see it because he looked in front and fined the owner of the car. Isn’t the back window also a *vindruta* says the owner who feels that a Swedish dictionary (*Svensk Ordbok*) supports him. TNC says no, because the settling of disputes should not rely on transferred meaning (Swedish: *överförd betydelse*). TNC in fact formulates a legal principle of adjustment based on linguistic theory. Negotiation in law and in language appear to merge in this case to adjudicate in the dispute process and to adjust in the language problem-solving process. All parties have to accept as authoritative the metalinguistic principle of transferred meaning *and* its relevance to settling disputes of interpretation of regulations.

Authority to pronounce on norms both determines and hopefully resolves the last exhibited problem:

“We want to include the abbreviation *3D* in our company name, but the relevant government agency (Patent- och registreringsverket) says that this is not a customary and acceptable [Swedish: *vedertagen*] abbreviation. Is that right?” [TNC-Aktuellt 35:1:8, 1993]

TNC however says it is, internationally too. But its application of non-linguistic interest is supplemented by a comment out of linguistic concern: TNC adds that numbers in the beginning of names can cause problems of alphabetization.

3. Terminology as special purpose language

There are as many agreements on verbalizations as there are discourse communities: “grammars” in this view from language management reflect on linguistic practices of communication in public discourse bounded by non-linguistic political-administrative interests: Swedes speak Swedish for which there are grammars of Swedish that guide adjustment in response to noting and evaluation. Terms, however, serve to eliminate the possibility that one interlocutor may mean something else by the term than the other, especially when confirmation is not easily obtained, relative to the progress of their transaction. Terms are vocabulary items that have been overtly negotiated and agreed to name a concept—and the concept in the most rigorous management system has a unique definition. Terms are typically authorized by a representative body, e.g., by an international conference as is the case in physics, chemistry and the electrotechnical field, or by a national professional association. In this regard, terminology concerns specialists on special purpose language.

4. Term[inological] management.

Discourse must not get in the way of continued communication. To that end, people manage discourse; they manage spellings, pronunciations, formats, phrases, styles, but especially vocabularies, terminologies and nomenclatures. Although not empirically verified, overt and systematic management of discourse typically deals with lexical matters.³⁾ In highly specialized

discourse communities, performance is expected to adhere to explicitly agreed norms of usage. Troubles of certain kinds should not appear, so the burden of possible divergence of meaning is placed on the speaker/author who is expected to make explicit deviations when s/he initiates communication. ~~In public discourse communities, among folk at large, diffusion of vocabulary takes place in the normal manner of exchanges of talk or writing.~~

Groups of a lesser rigor of term management would need a greater measure of interaction to adjust to change: in public discourse communities diffusion of vocabulary takes place in the normal manner of exchanges of talk or writing. There is much variation, and in-discourse management would be called on in the process of verbal performance to overcome troubles, e.g., simply by asking what someone means. Uncertainties and disagreements can be resolved during the process of performance as the need arises. At either end of the rigorousness scale, some person would have to note a differential from norm in discourse performance, evaluate the differential, and make up his or her mind whether to query, reissue, or create a new expression, perhaps propose use a new term (Jernudd & Neustupný 1991). We can model the individual's action to overcome trouble in speaking in the following manner:

note, a deviation or gap
 evaluate, as adequate or not
 adjust, the inadequacy (correct, fill the gap)
 implement, in speaking or writing.

Or interlocutors may continue communication but with different concepts in mind for same vocabulary.

A process-oriented model of overt and systematic language management would fit facts and claimed features of interest that:

- (a) seeks to capture the discourse in which participants noted a difficulty (deviation from norm or expectation) and evaluated it as inadequate, and
- (b) seeks to capture the translation from discourse-embedded noting and evaluating to overt problem-formulating discourse about discourse, including suggested adjustments, and with explication of interests, and
- (c) seeks to capture the discourse of negotiation of adjustment.

Notes

1. Languages are created and upheld by systematic grammatical management that is motivated by a variety of non-linguistic interests, very importantly by birth-right and recognition of individual competency that was acquired during adolescence in sozialization and education. While the English language is becoming proportionately more dominant in scientific literature in this historic phase of global integration, there continues to be a large and relatively stable non-English language scientific literature. This non-English literature is not likely to diminish in importance. To obtain some data on the relation between English language selection in science communications and selection of other languages, Baldauf and Jernudd (1983) examined the database MATHFILE by language over a seven year period. While English language articles increased proportionally to the total for each year using 1972 as the base line year, Russian,

German and Japanese language articles were relatively stable in absolute terms. Studies of databases are selective and often biased in favour of English language publications. Thus the extent of the non-English language literature is undoubtedly underestimated. Scientists working in a particular language area also tend to cite more articles from their own language than do scientists from other language areas. For example, Lange (1985) examined the language of citation for the theoretical sections of psychology journals in four countries. In the Russian journal, 10 per cent of the articles cited were in English, in the American journals 89.1 and 94.2 per cent of the articles cited were in English, while in the two German language journals the percentage of citations in English were 38 (GDR) and 69.4 (FRG).

2. However, Sager (1991) clearly separates a "data gathering and presentation function of terminology" from an agency's "advisory function" in the service of users:

"Terminologists should advise on the basis of available information and be able to justify their advice by reference to facts, documented theories and methods. The ultimate choice of terms, definitions or usage must, however, rest with the user as it is the user who originally invents or develops and names the concept (210)."

3. Elsewhere I have supported the view then held by Pawley and Snyder that communication behavior favors lexicalization, i.e. routinization of not just lexical usages but of phrases into idioms and patterns of expected expression; Jernudd & Thuan 1983.

References

- Jernudd, B. H. *et al.*, Language problems as reflected in newspapers. Ms.
- Baldauf, R. Jr. & B. H. Jernudd (1983) Language use in the fisheries periodical literature. *Scientometrics* 5:245-55. *Errata* (1984) 6:1:67-69.
- Jernudd, B. H. & J. V. Neustupný (1987) Language Planning: for whom? In L. Laforge, ed. *Proceedings of the Int'l Symposium on Language Planning*. Pages 69-84. Ottawa: Les Presses de l'Université Laval.
- Jernudd, B. H. & J. V. Neustupný (1991) Multidisciplined language planning. In D. F. Marshall, ed. *Language Planning. Focusschrift in honor of Joshua A. Fishman*. Pages 29-36. Amsterdam/Philadelphia: John Benjamins.
- Jernudd, B. H. & E. Thuan (1983). Control of language through correction in speaking. *International Journal of the Sociology of Language* 44:71-97.
- Lara, L. F. (1986) On the difficult path of terminology in Spanish-speaking countries. In Rondeau & Sager. Pages 91-99.
- Rondeau, G. (1981) *Introduction à la terminologie*. Montréal: Centre Educatif et Culturel inc.

Rondeau, G. & J. C. Sager, eds. (1986). *TERMIA 84. Terminology and international cooperation. An International Conference on Terminology Luxembourg, August 27-29, 1984*. Louisville: Girsterm.

Sager, J. C. (1990) *A practical course in terminology processing*. Amsterdam/Philadelphia: John Benjamins.

Stellbrink, H. J. (1986) Efficient terminology work in a medium-sized translation service and the benefits of international cooperation to a private sector company. In Rondeau & Sager. Pages 207-215.

Add:

Lange, L. (1985) Effects of disciplines and countries on citation habits: An analysis of empirical papers in behavioural sciences. *Scientometrics* 8:205-215.
