THE INSUFFICIENCY OF ERROR ANALYSIS*

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La notion d'analyse des erreurs (EA) est restreinte, par définition et contrairement à celle d'analyse contrastive, à l'étude des erreurs et à l'exclusion des non-erreurs. Pour l'auteur, cette position est insoutenable, surtout du point de vue de l'enseignement des langues. La spécification de la maîtrise courante de la langue ainsi que des limites de celle-ci, et aussi des buts à atteindre par l'élève, implique qu'on rend compte d'une structure linguistique dans laquelle il serait incorrect de voir dans les erreurs des éléments isolés et hors système.

Die Fehleranalyse ist im Gegensatz zur Kontrastiven Analyse *per definitionem* auf die Untersuchung von Fehlern beschränkt, während die nicht fehlerhaften Leistungen unberücksichtigt bleiben. Der Autor dieses Artikels hält diese Eingrenzung – vor allem vom Standpunkt des Fremdsprachenunterrichts her – nicht für gerechtfertigt. Wenn die jeweilige Kompetenz des Lernenden in der Fremdsprache bestimmt werden soll, dann muß die Sprache des Lernenden systemhaft als Ganzes beschrieben werden; die Fehler dürfen dabei nicht isoliert betrachtet werden.

Abstract. *Error analysis* (EA), unlike the related discipline *contrastive analysis*, is limited by definition to the study of errors, whereas the non-errors are not taken into account. The author takes the position that this is inadequate, particularly from the language-teaching point of view. Specifying the learner's current command of the language, its limits, and his learning tasks means accounting for a pattern of language structure in which the errors cannot be viewed as isolated, self-contained items. An example is given for the fact that in practice even the decision whether an item is an "error" or not, may be dependent on analysis. Useful clues for the teacher, provided by significant non-errors, are systematically discarded in EA. The problem of securing the evidence of both errors and non-errors calls for planned elicitation. A cyclic procedure of elicitation and analysis is outlined, in which EA plays a limited but useful part at an initial stage.

Error analysis (EA) has a great deal in common with that type of *contrastive analysis* (CA) which is based on the examination of language data obtained from foreign-language users. But whereas CA by definition takes into account only the cases of interlingual transfer (influence usually from the native language on the target language), EA is not restricted in this way. EA allows the joint

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description of all types of linguistic errors (esp. in foreign language use), whether arising from interlingual influence or not. In particular, EA can compare various inter- and intralingual ways of explaining an error, and thus avoid a somewhat artificial limitation inherent in pure CA. On the other hand, EA, as the name tells us, is concerned only with the *errors*. The *successful* treatment of the target language is not taken into account. This, again, is not necessarily the case with CA.

In my opinion this restriction – analysing only the errors and neglecting the careful description of the non-errors – is arbitrary and inadequate for the purposes that EA is commonly said to have. This is what I intend to comment on in this paper.

There are several statements in linguistic literature of the contents and aims of EA. Thus, e.g., Nickel, in a survey of the issues (1972, 11 ff.) names three main aspects of the study of errors, viz.,

- a) description (Fehlerbeschreibung);
- b) grading (Fehlerbewertung);
- c) therapy (Fehlertherapie).

A similar, although somewhat more detailed account of matters to be investigated is found in a working paper from the “TUP” Project¹ by Rossipal (1972, 109ff.):

- a) *types* of errors (classification with respect to the target system);
- b) *frequency* of errors;
- c) *points of difficulty* in the target language;
- d) *cause* of errors;
- e) *degree of disturbance* caused by errors (from the point of view of communication and norm, respectively);
- f) *therapy* (how teaching should be arranged so as to eliminate the errors).

The purposes of EA range from the more practically oriented to the more theoretical side. Rossipal, in the paper I mentioned, hopes that EA may provide relevant data within the following areas:

- contrastive language description, prediction of potential interference;
- improving the description of the target language;
- describing general traits of linguistic errors;
- describing linguistic universals;
- improving language teaching.

1 “Tyskans Universitets-Pedagogik”, a project at the German Institute of the University of Stockholm. “TUP” includes an extensive investigation, led by H. Rossipal, of errors made by Swedish students of German.

Seen from the viewpoint of language learning, errors have come to be regarded by modern linguists as evidence of the learner's strategy and the route he follows when building up his competence in the target language. This is the standpoint taken by Corder (1967) and by Stevens (1969). To quote Corder (1967, 167),

“A learner's errors ... are significant in three different ways. First to the teacher, in that they tell him, if he undertakes a systematic analysis, how far towards the goal the learner has progressed and, consequently, what remains for him to learn. Second, they provide to the researcher evidence of how language is learned or acquired, what strategies or procedures the learner is employing in his discovery of the language. Thirdly (and in a sense this is their most important aspect) they are indispensable to the learner himself, because we can regard the making of errors as a device the learner uses in order to learn. It is a way the learner has of testing his hypotheses about the nature of the language he is learning. The making of errors then is a strategy employed both by children acquiring their mother-tongue and by those learning a second language.”

It seems to me that if foreign-language data is used in order to shed light on the formal description of languages, on matters of language contact, language acquisition, and language universals, then those cases where it can be shown that errors characteristically do not occur, should be taken advantage of as well. For the sake of the present discussion, however, let me concentrate on the relevance of such data for what was called „therapy“, and for the description of languages with a view to teaching them. This is largely a matter of specifying the learner's current command of the language, its limits, and his learning tasks. In principle there is no difference between this and other cases of linguistic description, in that we have to do with interrelated facts of language structure. In this complex pattern, errors, or the facts they point to, cannot be viewed as isolated, self-contained items.

First, there is the problem of deciding whether an item should be taken as an error or not. This is particularly crucial in the area of pronunciation, and it is not always just a matter of deciding what the norm is. Consider the following example.

In Standard Central Swedish, the vowel [ɔ:] in *bok* ‘book’ is pronounced with a particular type of lip-rounding sometimes called “in-rounding”, the lips moving towards narrow bilabial constriction.² A German learner of Swedish

2 See Fant (1971, 259ff.) for a careful description of the relevant aspects of Swedish vowel articulations. I choose the symbol [ɔ:] here to avoid confusion with German [u:] in the following discussion.

pronouncing *bok* with the [u:] of his native *Buch* will sound slightly foreign, but his [u:] will hardly stand out as a conspicuous error of pronunciation.³ A teacher may feel inclined to consider it a non-error. But in the case of the front vowels the corresponding phenomenon leads to a serious problem. There are two rounded high front vowels, [u:] as in *buk* 'belly', and [y:] as in *byk* 'wash'. The former is pronounced with "in-rounding", the latter with protrusion and less narrow constriction of the lips, so called "out-rounding". German learners commonly substitute their native *ü* (as in *Bühne* 'stage') for both. This goes for perception as well. The distinction is essential in Swedish, and the student has to learn how to master the feature "in-" vs. "out-rounding". But then, the back in-rounded vowel [ɔ:] should of course be included and practised as well, since the task is to master a phonetic feature, and not a phonetic segment. Thus, the innocent-sounding [u:] will have to be taken into account along with the clear and indisputable errors. In other words, it may be necessary to do some of the descriptive analysis on the material before even knowing which items you should call errors.

Second, errors are supposed to reveal to the teacher what the points of difficulty are in the target language, and thus tell the teacher what he has to teach. This assumption is only half true. For in order to define the task properly, the careful description of those cases where errors tend not to occur, is essential. And this, in turn, requires the evidence of the non-errors. A well-known point in Swedish grammar may illustrate this. Let us assume that Swedish is taught to native speakers of English. The problem in question is the distinction between reflexive and non-reflexive possessives, the "*sin-hans*" problem.

The English sentence (1) corresponds to the Swedish sentence (2):

- (1) John and *his* wife kissed.
- (2) Jan och *hans* fru kysste varandra.

For the sentence (3), however, there are two Swedish equivalents, (4) and (5):

- (3) John kissed *his* wife.
- (4) Jan kysste *sin* (= his /own/) fru.
- (5) Jan kysste *hans* (= his, i. e. somebody else's) fru.

3 I have tested Germans on the word *bok* (among others) in taped interviews, and then presented the tapes to three phonetically trained native Swedes to listen to. Judgments on the vowel vary from "good" (12 judgments) to "too short" (11 judgments), "too low" (4), "too weakly rounded" (3) and "faulty lip position" (9). It is clear that the deviations from the Swedish norm are not drastic. Cf. fn. 5.

In Swedish, in the object position, a distinction must be made between the reflexive *sin*, referring to the subject of the same clause (4), and the non-reflexive *hans*, having some other referent (5). In the subject position (2) as well as in both the English sentences (1), (3), this distinction is not expressed. What you can observe in learners' speech, is uncertainty, or even total confusion, about the choice of *sin* or *hans* in sentences like (2), (4) and (5). That means that error analysis will account for learners' sentences like

- (6) *Jan och *sin* fru ...
- (7) *Jan kysste *hans* (= his own) fru.
- (8) *Jan kysste *sin* (somebody else's) fru.

and for the fact that they alternate with their correct counterparts.⁴

The teacher (or the one who devises the teaching material) is faced with the problem of defining exactly what the learning task is, particularly delimiting the task and picking out the relevant points, further coordinating it with other tasks and building his approach on what the learner already knows.

Here, it is useful for the teacher to notice that English speakers can handle the reflexive vs. non-reflexive distinction in *personal* pronouns. They generally have no trouble with sentences such as (9) and (10), for the obvious reason that there are close parallels to these sentences in English.

- (9) Ville tvättade *sig*. 'Bill washed himself'.
- (10) Ville tvättade *honom*. 'Bill washed him'.

Thus the learner's task does not consist in grasping the reflexive vs. non-reflexive distinction, as the study of errors such as (6) to (8) might lead us to assume. The learner is already familiar with the distinction as such. The task is to extend its use to the object case of the possessive pronouns. The teacher needs to know that he can use the personal pronouns as "*footholds*" when he approaches the possessive pronouns. There are two ways in which he can discover this: by taking the structure of the native language into account (CA), and by systematically studying the whole of learners' speech – not just the errors which occur.

The same is true in a great many other instances. Describing errors is very well, but as soon as you want to use your EA in "therapy" the next question will be, "What is the task, and where do I find footholds for the learner?" And the point is that such information is systematically discarded in the procedure of EA.

The inventory and description of footholds in language teaching is a sadly

⁴ I rely here on unrecorded, but strikingly often confirmed evidence from teaching experience.

under-developed field at present. Grammar handbooks could be more helpful in this respect. The teacher who shares his students' native language, as is mostly the case in regular school instruction, has some intuition about footholds. But if he is a native speaker of the target language, he is not thereby equipped with the same intuition. I cannot see how the problem can be overlooked, particularly in a multi-lingual setting, such as immigrant instruction, where the teacher has students from many different countries, whether in linguistically mixed classes or not. There certainly is need for *error and non-error analysis*.

There is one practical objection to which attention should be given. It may seem that errors are tangible evidence that can easily be spotted in a corpus, whereas systematic non-errors are more difficult to pin down. This is, however, an accidental situation, conditioned by the traditional form of EA that is based on excerpts from regular tests and exercises collected from classes for language students in their normal program.

This problem can be solved by devising suitable tests specifically for the purpose of eliciting and analysing the learner's responses. Such tests should cover specific points of language structure on which the investigator wants information, and various responses, both right and wrong ones, should be systematically recorded. The following is a brief outline of one example from phonology.

In Central Swedish, an [r] and a following dental consonant are assimilated into a single retroflex segment, retaining the feature specifications for voicing and manner of articulation of the dental. Thus,

rt	→	ɽ
rd	→	ɖ
rs	→	ʂ
rn	→	ɳ
rl	→	ɭ

Retroflexation also operates across boundaries, e.g., *stor* 'large', *stort* (*stor* + Neuter Affix), *stor tavla* 'large picture'; *kör* 'drive', *körd* 'driven', *kör dit* 'drive there'. This means that retroflexation underlies a very large number of morphophonetic alternations in Swedish. Orthography retains the *r* and the dental.

When observing Germans speaking Swedish, we can notice that they often produce [r] + dental as separate segments even though they hear the retroflex sounds from Swedes. This is by no means surprising, since both the morphophonetic phenomena and the spelling tell them that a retroflex is to be understood as [r] + dental. We can also notice that a postvocalic [r], whether

followed by a dental or not, tends to become vocalized in the regular German manner, which is clearly unacceptable in Swedish. *Stor* [stɔ:r] and *stort* [stɔ:t] tend to be pronounced [stu:v], [stu:ɐt].

In order to find out how Germans react phonetically to the retroflexes (among other items), I have tested the *discrimination* of isolated words, as well as the *identification* and the *imitation* of nonsense words in standardized contexts.⁵ The four retroflex sounds [ʈ, ɖ, ʂ, ɳ] were included. It turned out that [ʈ, ɖ, ɳ] were remarkably often not discriminated from [t, d, n], and that they were to a large extent identified and rendered as dentals. [ʂ], on the other hand, was practically always distinguished from [s], and was typically associated with a sound whose source was obviously German [ʃ] (as in *Tisch* 'table'). This substitute can be accepted, and in fact often was by Swedes who listened to the taped imitation tests. The difference between German [ʃ] and Swedish [ʂ] is often minimal. It can probably be disregarded for the purpose of teaching Swedish to Germans. If so, this systematic non-error is important, because it may provide the teacher with a workable starting-point for instruction. The learning task, as we see, comprises both how to apply the retroflexation rule and how to perceive and produce the sound categories involved. In the latter case, learners have to acquire the notion "retroflex" as distinct from "dental", except on one point [ʂ], where it seems adequately established. This suggests that the teacher may use the "easy" [s] – [ʂ] distinction to make the students grasp the other dental-retroflex distinctions, and then proceed to handling postvocalic [r] and the assimilation processes involved in the morphophonetic alternations.

Apparently, for the purpose of "therapy" our analysis has to go beyond simple statements such as "Swedish retroflex sounds are difficult for Germans", by describing the network of related phenomena in greater detail. You may examine a pronunciation problem in perception and production, in spontaneous conversation and in isolated words, with respect to distinctive sound categories or phonological processes, etc. What is an error in one approach, may be a different error, or no error at all, in another approach. You have to combine your various results in order to use them. Some of the relevant findings may not turn up in the corpus unless you elicit them on purpose. Is it not time to abandon EA?

Perhaps not. Even if EA is not the adequate basis for a description of learners' difficulties that it has been believed to be, I think it has its given place in research procedure, as a partial and preliminary source of information at an initial stage of investigation. Errors are helpful since they are conspicuous and easy to identify

⁵ The full presentation of this test material is in preparation.

in excerpts from written or taped school exams, whereas in order to recognize specific non-errors, you must have some definition of the items to begin with. One can well use traditional error analysis, contrastive language description, and various other means as a basis for defining test items. The next step will be to devise tests to elicit information concerning these items where we have reason to believe that the learner's response – or repertoire of responses – is interesting. Facts brought up by the first tests may lead to new and refined questions and further testing to gain precision and completeness. Thus the study of errors becomes part of a cyclic experimental procedure to collect more and more specific information on target language treatment.

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References

- Corder, S. P., The Significance of Learner's Errors. *IRAL* 5, 1967, 161–170.
- Fant, Gunnar, Notes on the Swedish Vowel System. *Form & Substance*, Phonetic and Linguistic Papers Presented to Eli Fischer-Jørgensen, ed. by L. L. Hammerich et al., Odense 1971, 259–268.
- Nickel, Gerhard, Grundsätzliches zur Fehleranalyse und Fehlerbewertung. *Fehlerkunde*, ed. by G. Nickel, Berlin 1972, 8–24.
- Rossipal, Hans, Om felanalys och om en felanalys av svenskars tyska. *Språkforskning i relation till språkundervisning*, ed. by B. Lindgren et al., Copenhagen (Nordisk Sommeruniversitets Generalsekretariat, Fiolstraede 26) 1972, 109–127 (Mimeo).
- Stevens, Peter, *Two Ways of Looking at Error-Analysis*. Revised version of a paper delivered at GAL Meeting, Stuttgart 1969 (Mimeo)