

Seven sins of problem-driven document design research

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Twenty years ago I was much inspired by an article on pragmatics by Doro Franck (1980), entitled Seven Sins of Pragmatics. This was when pragmatics was having growing impact on linguistics and discourse studies. Doro Franck warned us about an "ivory tower" approach to the phenomena, pointing out the role of context and the essential qualities of discourse. She argued for the revival of rhetoric, conceived as the study of "the repertoire of strategies, communicative principles, and formal patterns of use." Since then - perhaps due to this seminal paper - research strategies in conversation analysis, at least in my view, have changed.

We are currently confronted with a growing amount of research into the design of documents. In journals like The Journal of Business Communication and The Journal of Research and Reading, much attention is focussed on such questions as how to improve defective documents. And, at least in the Netherlands, government agencies, business corporations, and non-profit institutions are increasingly appealing to universities, especially the communication departments, for answers to questions such as: Is the criticism on the quality of our information to our citizens justified? Do our advertisements contribute to our company's intended message? Are we meeting the needs of our supporters with our information through this medium? In the past five years, our department has conducted a dozen projects on these questions. When I analyzed all these projects again, it occurred to me that we now have another seven sins to cope with.

1. NEGLECTING THE REAL PROBLEM

Many companies want to approach their clients with a series of leaflets containing a mix of information and special offers for new products. Retirement funds are no exception to this rule. The Dutch State Employees' Pension Scheme had spent a lot of money on new leaflets, but the results were very poor. So they decided to consult our department, and asked us to rewrite the leaflets.

A thorough analysis resulted in the conclusion that a reformulation was possible, but the structure of the document that was particularly unclear (see Sanders & Sanders, 1996). They succeeded in clarifying the documents using a reader-oriented structure. But in our attempts to design a better text, we discovered another problem: the question of who the intended readers were. Look at the following passage.

If you live together, whether married or unmarried, and you have more than one pension together, then you may qualify for a supplementary arrangement. This arrangement prevents your old age pension from being cut back due to the payments mandated by the general retirement pensions act. This arrangement applies to married couples and to unmarried couples living together who are considered married by the Social Insurance Bank. Obviously, the arrangement applies only when you are entitled to an old age pension according to the general retirement pensions act. The pension that you or your partner receives may be paid by the National Civil Pension Fund or by another governmental or private institution.

This passage addresses a large target group, ranging from employees just starting their career at about the age of thirty to employees of fifty years and older, who are beginning to think about retirement. But young employees are not interested in cutting back a pension after thirty years, and older employees need more information than this. A content analysis and a description of the demands of the different readers showed that passages like these are too intricate for younger employees and too vague for older ones. The real problem of the document did not lie in its formulation or structure, but in the diverse target group with differences in information need. So our advice was to write two documents, a short folder for younger employees and a leaflet with more information for older employees. In the end it turned out that rewriting the document was not the best solution. The first step was to split up the information over different documents, in different text types.

2. SEPARATING THEORY-BOUND AND PROBLEM-DRIVEN RESEARCH

A large number of the questions that ask tax payers the Dutch Internal Revenue Service, for example concerning tax deductions and special tax benefits, occur frequently enough that the Service has designed more than 2500 standard letters to answer them. Here is an example.

Re: reduction in withholding

Dear [GENDER] [LASTNAME]:

You have requested a reduction in the withholding based on the schedule for exceptional remuneration on behalf of your client [GENDER] [NAME].

The submitted calculations indicate that because of a proportional excess in the withholding on exceptional remuneration the withholding for income tax / social insurance premiums exceeds the income tax / social insurance premiums presumably owing by 10% or more and by at least f 500.00.

By virtue of the order by the Underminister of Finance dated December 1989 (no. DB89/3237) I hereby authorize the withholding body to apply a percentage of [...]% to the portion of the income that falls under the schedule for exceptional remuneration. This percentage does not apply to compensation and indemnification in case of dismissal from employment, nor to pension-related lump sum payments.

This approval takes effect on [DATE] and ends on December 31st, [YEAR].

This authorization must be submitted to the employer. The employer will note the percentage in the payroll and will retain a copy of this authorization with the salary administration records.

In closing I must point out that what is at issue here is the amount presumably owing. It is therefore not possible to derive any rights from the granting of this authorization as regards the determination of the final assessment of income tax / social insurance premiums owed.

Yours sincerely,

[...]

These letters are stored in an intranet computer service in order to enable each tax official to answer the most common tax payers questions as easily as possible. But most of these letters have been severely criticized by the tax officials themselves. They are poorly written, ill-conceived, etc. Unfortunately the communication employees at the Tax Department were unable to design letters that could meet the desired quality standards. Hours and hours of discussion resulted in documents that were considered only slightly better than the original documents. This led to the question: what kinds of discourse phenomena have to be considered when analyzing the quality of a document? To answer this question we developed a hierarchical schema of fifteen evaluation points divided over the three main criteria found in discussions about the quality of documents. This schema is based on insights from the field of rhetorics (see, for example, Nystrand, 1986).

	Correspondence	Consistency	Correctness
<i>A Text type</i>	1 Appropriateness	2 Purity of genre	3 Application of genre rules
<i>B Content</i>	4 Sufficient information	5 Agreement between facts	6 Correctness of facts
<i>C Structure</i>	7 Sufficient coherence	8 Consistent structure	9 Correct linking words
<i>D Wording</i>	10 Appropriate wording	11 Unity of style	12 Correct syntax and choice of words
<i>E Presentation</i>	13 Appropriate layout	14 Lay-out adapted to text	15 Correct spelling and punctuation

Table 1: *The CCC model for evaluation of text quality*

With this model it was possible to clarify troublesome discussions about document quality (see Cleutjens & Renkema, 1997). For example, many critics of the texts mentioned some mistakes which could be classified under evaluation points found lower down in the list, such as wording or presentation, and then stopped. But improving these shortcomings was not at all a guarantee that the document was improved enough. Here is part of a systematic analysis of the letter mentioned above.

Text type

2. Purity of Genre

This letter has a dual function: it grants the employee's request, but at the same time authorizes the party that actually carries out the withholding to lower the percentage of the income tax / social insurance premiums to be withheld. In reality this letter is intended for both the employee *and* the employer. This can be confusing for the actual recipient, the employee.

Content

4. Sufficient information

The third and fourth paragraph lead one to conclude that the request to lower the percentage of tax withheld has been granted, but the employee does not receive an explicit answer to his or her request. Because the employee is expecting a "yes" or a "no," the granting of the request should be indicated explicitly. This could be indicated not only in the letter itself but also in the subject line, for example: "Request granted to lower percentage withheld for income tax / social insurance premiums."

Some of the information the letter contains is vague; other information is superfluous. Because the letter contains a positive decision (a request is granted), the person making the request will have little interest in the arguments leading to this decision. Because the request was granted it is clear that the taxpayer's request was justified. The references in the second paragraph to the information the taxpayer had provided and to the order of the Underminister in the third paragraph can therefore be left out.

Last, in the description of the rest of the procedure in the fifth paragraph, it could be stated more clearly that the employee is to hand the letter in to the employer.

Structure

7. Sufficient coherence

The employee has to wait until the fourth paragraph to be sure that his or her request has been granted. The essence of this letter should be stated more prominently. The reader is, after all, most interested in the answer to the question; explanations are of secondary importance. The granting of the request should therefore be placed in one of the first sentences.

The position of the other paragraphs is not very logical either. After the granting of the request the taxpayer will probably want to know what the lower percentage is and what possible restrictions there may be. A logical sequence would therefore be the dates (paragraph four) followed by the restrictions for the final income tax levy (paragraph six) and the follow-up procedure (paragraph five).

3. DISREGARDING THE DOCUMENT'S INSTITUTIONAL CONTEXT

From the example under 2 it could be concluded that the wording and the spelling and punctuation are less important. Indeed, in relation to other discourse phenomena they are. But in many contexts wording, and especially the correct use of technical terms, is very important. In improving documents, designers pay attention to this level with good reason. This only shows the importance of the institutional context. Every document is a product within a special setting with norms for use and special connotations of fixed meanings. These norms and connotations are produced by the so-called institutional context. This is not only the case in institutions like the government, health care, education, etc., but also for one institution of religion. When we were asked to advise a Bible translation, we had to ground our advice on the norms within this institution. First some background information.

The Dutch and Flemish Bible Societies are planning a new translation of the Bible for the next century. A very special aim of this project is that it has to be a translation for all the different religious denominations (in the Netherlands they say "one Dutchman is a theologian, two Dutchmen are a church, and three Dutchmen are a schism") and for all the people who want to use the Bible as a cultural document. The Bible Societies aimed at a new Authorized Version with a general authority comparable to such well-known translations as the King James Version for the English language.

How do we cope in this translation with a key term such as "the Lord"? Feminist theologians were not the only ones who protested against this old term reminiscent of the feudal system of the Middle Ages. Why not "The Everlasting Being" or "The Eternal." Many denominations were against this, but other denominations said that this new translation provided a chance to bring in a new word, and proposed others, like "the Unspeakable",

following the Jewish tradition in which the name of God (YHWH) is never pronounced. Theologians who want to promote this tradition write the word "God" as "G'd." Other denominations supported an old archaic Dutch form for "Lord" used especially in a religious context.

We had so many opinions which made it impossible to make a decision. Some denominations had such strong feelings about some proposals were not certain they would accept a translation with what they felt was a theologically incorrect term. I am happy to say that I was not the only advisor on this tricky question! After months and months of discussion it proved best not to deviate from the traditional "Lord," not because this was the best, but because everyone who is acquainted with the Bible, is accustomed to it. To prevent associations to old, masculine societies and to evoke the connotation of unspeakable, the term "Lord" is written in capitals if referring to God. This little example demonstrates nicely that spelling can sometimes be very important.

So far I have claimed that in document design studies much attention has to be given to choosing the right text type and information load, to a systematic analysis based on old rhetorical insights, and that the institutional setting has to be taken into account. But even if this is done, there are still four sins left.

4. APPLYING DISCOURSE CONCEPTS IN AN IMPRECISE WAY

Again I have to refer to an investigation conducted at the request of the Internal Revenue Service or Tax Department. The board of directors wanted to know whether the letters written to individual taxpayers met normal standards for text quality. Tax officers have to respond to numerous personal questions from taxpayers which cannot be handled by standard letters like those mentioned in 2. But how do we implement such a vague notion as document quality?

In this research (see Renkema, in press) we chose an external criterion, namely the image of the sender. The quality of a text is considered fairly effective when the judgment of the receiver on characteristics of the sender remain the same after reading a text. The qualification "fairly effective" is a minimal demand. For more effective communication the criterion should be that the image be positively influenced by the reading of the text. We therefore designed a research project with a pre- and post-test image inquiry. Preceding the text inquiry the respondents were informed that the research would focus on letters from the Tax Department, and they were requested to pass judgment on this government institution on 7-point scales using statements like "I think the Tax Department is trustworthy/friendly," etc. Two aspects were at stake: the procedure the Tax Department used and its relationship with the taxpayer. Four image questions were asked on both aspects. Figure 2a shows the results of the pretest.

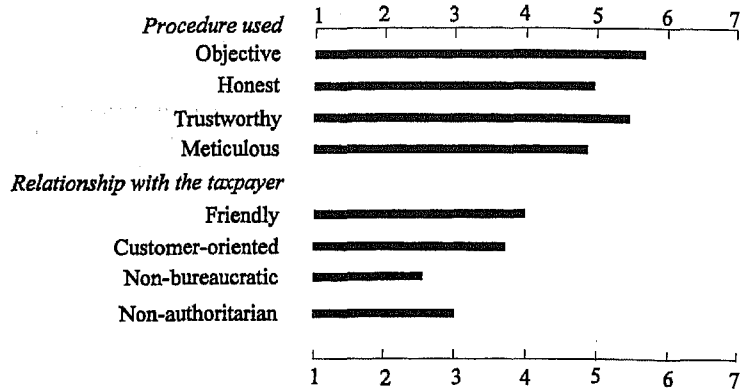


Table 2a: Results of the image pretest

The Tax Department scored fairly positively on the procedure it uses. The Department makes a rather objective and trustworthy impression; for honesty and meticulousness the judgments rank above average as well. Evaluations of the relationship with the taxpayer are much less positive. The Department is rated “average” on friendliness, but the judgments of customer-orientedness and authoritarian character rank below average, and the Department is considered very bureaucratic. (The last two characteristics were phrased negatively in the statements; the figure shows only characteristics which should be interpreted positively.)

After the evaluation of the response letter and an interview about the evaluation, the same image questions were asked again. The respondents were not told in advance that this would happen. In Figure 2b, the means of the image measurement are given. The pretest is given on the zero line; the means of those (see figure 2a) are given in parentheses on the left.

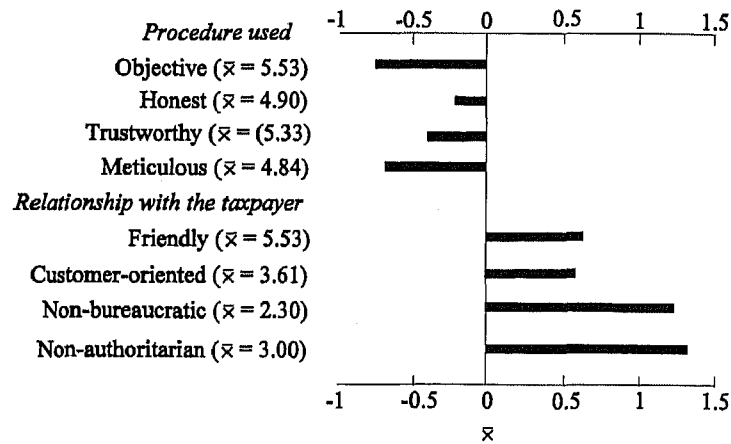


Table 2b: Results of the image posttest

The scores differ significantly (Wilcoxon, $p < 0,01$), with the exception of the item "honesty." The results show that the response letters have a negative influence on the image aspects "objectivity," "trustworthiness," and "meticulousness," and a positive influence on the image aspect "relationship with the taxpayer" (the bottom four bars). In other words, on average, taxpayers changed their view of the Tax Department on two aspects: the Tax Department is less objective, trustworthy, and meticulous than presumed. However, they are also friendlier, more customer-oriented, less bureaucratic, and less authoritarian than the taxpayer thought.

5. DOING RESEARCH IN THE LABORATORY TO SOLVE PROBLEMS IN THE FIELD

In 1994, a building company in the southern part of the Netherlands was involved in a bribery scandal. There were rumors that this company was acting against the rules in procuring building contracts. A regional daily published several articles containing one-sided information against the company. The lawyers for the building company protested against this "media justice": the company had to be considered innocent until proven guilty, and one-sided articles allegedly damage the company's image and, as a result, the economic position of the company. But how could this claim be proved? They asked a text office to analyze the articles in order to prove that they were indeed one-sided. The text office concluded, in a desk research study that the journalistic principle to hear both sides had not been applied. However they rightly feared that the lawyers of the regional daily would not accept this as proof. It is, after all, by no means clear that a one-sided article will damage the company's image. Such a colored article could, on the contrary, have the opposite effect of creating a positive image of the company as underdog. And even if it is damaging, the effects of one newspaper article will disappear after a few weeks.

The company lawyers asked us whether we could prove that a one-sided article could damage the image. Since 1994 the incident had received extensive media attention. Local participants' judgments on the company would therefore no longer be based solely on the one newspaper report but also on other information that they might have acquired elsewhere on the incident. Therefore an experiment was set up in another area of the Netherlands with a report on a comparable incident and with readers of a comparable regional daily (see Renkema & Hoeken, 1998). We designed three news reports on the same topic, possible bribery by a building company: a. a one-sided report, b. a two-sided report and c. a short report with only factual information. We tested these reports for naturalness and offered one of them, with filler reports, to readers, and asked them to fill out a questionnaire about the image of the company directly after reading the article. We asked them the same questions again by telephone several weeks later.

We got the following results. A one-sided report damages a company's perceived reliability, expertise, and attractiveness. Furthermore, this damage is relatively lasting, thus contradicting the slogan "Yesterday's news is tomorrow's fish and chips paper." Finally, readers are sensitive to differences in the manner of reporting: even after several weeks, these differences are still reflected in the company's image.

How did the regional daily react? In our research report we focused on the ecological validity. Our reports were tested for naturalness; our subjects were readers of a regional daily and they were presented several articles including one version of the report. They did not know in advance that they were going to have to answer questions on the report. They also

did not know that they would have to answer the same questions again several weeks later. In our paper we also presented three characteristics of our 450 subjects: age, sex, and education.

The educational levels were as follows (figures are in percentages):

University	36%
University-track high school	41%
Regular high school	19%
Elementary education	4%

These characteristics were used to attack our results. The regional daily said that within their readership the percentage of readers with a higher education was far less than in our sample. So even if you are as ecological as you can be there may still be some minor point on which field research does not cover reality. In our view this is a minor point, for it cannot be proven that readers of different educational levels react differently to newspaper articles. In any case, we did not find any differences related to level of education in our sample.

6. SELECTIVE USE OF MATERIAL

In media courses and in professional journalists programs, the issue of objective versus subjective reporting is discussed frequently. In those discussions the phenomenon of intensification sometimes comes up. But it is by no means clear how to change a text with high intensification into a text with low intensification, or vice versa.

In psycholinguistic research (see for example Hamilton, Hunter, and Burgoon 1990), it is claimed that intensifiers heighten the persuasive power of a message, but only when the source is seen as reliable. Unfortunately, in this type of research the manipulations are not under discussion. It is only stated that some words are more intense than others, compare, for example *painful* and *unpleasant*, *astronomical* and *big*, *threat* and *danger*. But a systematic analysis of intensification is still lacking though it is a prerogative for experimental research. Look at the following examples: three different descriptions of the same event in three Dutch newspapers.

- (1a) "The Serbian troops have been firing on the city of Maglai since ten-thirty Friday morning," was made in a statement by the UN command in Sarajevo.
- (1b) "The Serbian troops started shelling the city of Maglai as early as Friday morning at 10:30," said a spokesman for the UN command.
- (1c) UN soldiers in Sarajevo said last evening that Serbian troops were fiercely shelling especially the city of Maglai.

One could attribute at least the following differences in the reports to the phenomenon of intensity. First, the personalization of the source of the quotation: (1a) is an impersonal statement; (1b) names an official, a spokesman; and (1c) puts the words in the mouths of soldiers. The personal aspect seems to be more and more emphatically present. But is personalization an aspect of intensified language use? Second, (1c) contains an emphaticizer before 'the city': through the use of the word 'especially,' the emphasis is placed on the city of Maglai. But is this focus an aspect of intensity? Third, the formulations differ in

preciseness. In (1a) and (1b) an indication of time is given. This use of details renders the description more concrete. But is the level of detail an aspect of intensified language use? Another element in the indication of time is the difference between 'since' in (1a) and 'starting as early as' in (1b). The time period is the same but the formulation in (1b) suggests that the period is experientially longer than the time period described with 'since.' Finally, the verb that is used to describe the activities of the troops increases in intensity: 'to fire on' versus 'to shell' versus 'to shell fiercely.'

Of the phenomena mentioned here, it would seem that personalization, focusing and level of detail are merely coincidental to 'intensified language use.' Through the mechanisms of concretizing, accentuation and specification, these phenomena are related to intensity, but the term 'intensified language use' would end up being exceedingly vague if these phenomena were included within the concept. It seems better to reserve the term 'intensified language use' for cases of reinforced language use, as in the addition of 'already' before 'from,' 'to shell' instead of 'to fire on,' and the addition of the word 'fiercely' in the examples above. In any case, the concept of intensification has to be clarified before it is applied in experimental research.

7. PRESENTING RESULTS WITHOUT CONSEQUENCES

The editors of the biggest trade journal in the Netherlands, BiZZ, with a circulation of about 100,000, have had their paper tested in general terms every year by a media research institute. They were not fully satisfied with the general approach, and asked us to conduct a more in-depth inquiry into the image of their magazine. They were especially interested in the criticism that the image was too modern for the older entrepreneur, and whether the articles met the needs of the very diverse readership, from one-man businesses to corporations of over a hundred employees. We designed a questionnaire, and got results like the following. (The numbers are mean scores on a seven-point scale.)

This journal contains information which is irrelevant to my professional activities	4.04
This journal does not have enough information which is relevant to my professional activities	4.44
The topics in this journal are, in general, interesting	4.21

In in-depth interviews it turned out that readers had totally different opinions about the level of difficulty of some articles about, for example, internet facilities. For some readers they were too easy, while other readers said that they needed more information. The editors of the journal could not handle these diverse results.

How do we deal with results that says the target group is too diverse? We ended this research with implementation proposals concerning the design of the articles in the journal. In the design we tried to solve the problem of readers with different levels of knowledge on a certain topic. These solutions are as follows.

- Present, a list of terms as a kind of illustration to each technical article. Especially important is an approach in which the reader is not implicitly accused of not knowing a term, or is bothered by explanations he already knows. Therefore, the list should include the most commonly used technical terms.

- Start every article with a short marker of the level of expertise necessary to make it easy for a reader to decide whether to read on.

Or: Indicate the level of expertise necessary to understand each the article, making it easier for the reader to decide whether to read on.

In giving these solutions, we did, in fact, more than the research. But this is highly necessary. Otherwise research reports are stored in the library or in the bottom drawer of a desk where they are useless.

8. CONCLUSIONS

These are the seven sins we have to try to avoid in problem-driven document design research. I hope that I have shown that this kind of research can only be useful for our clients and for us as researchers if we meet the following seven conditions:

- (1) We have to detect the real problem behind the first and often superficial research question. The questions we are confronted with are mostly variations on the theme of miscommunication. But the cause of the miscommunication often is not the document itself. It could be the case, as it was in the investigation for the pension fund, that we have to design different documents for different target groups.
- (2) We have to link the practical questions to theory-bound approaches, for example, a systematic and hierarchical system of analyzing documents, based on classical rhetoric and on criteria which are commonly used in all kinds of document evaluation. That is why we used the CCC model for analyzing documents.
- (3) Improving a document is not possible without knowledge of the institutional context of the document. The example of wording I presented - how to refer to the Lord in a Bible translation - can easily be transposed to, for example, institutional norms in government agencies and business corporations concerning technical terms or the tone used in addressing the reader.
- (4) Many discourse concepts cannot be applied to problem-driven research without an operationalization. This is not only true for the vague concept "document quality," but also for concepts like readability, personal style, cohesion, etc.
- (5) Many practical problems cannot be resolved by doing desk research or testing documents in a laboratory setting. Even in the most natural field research - see the alleged subjective reporting case - the results can be criticized by the parties concerned.
- (6) In testing different versions of documents one always has to check the text manipulations for naturalness. Manipulation of one point almost always makes other changes necessary. In many cases, not only in the case of intensified language investigation, it is questionable whether the phenomenon can be tested at all, at this point. Further theory-bound research is necessary.
- (7) In an academic setting, research is conducted to solve theoretical problems. In the field of communication, managers are more interested in the implementation of the results. It is not only in the case of the trade journal that one has to realize that improving documents requires another organization for the writing of documents.

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