From specialized content to popularized nontent, or: the challenge of specialized communication to laypeople!

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Reading, communication and writing used to be standard, basic skills required from every learned person. Facts and fiction used to be two opposites. However, some of the post-factual trends that have emerged as companions to the ubiquitous use of Facebook, the YouTube avalanche, and quick communication such as smartphone texting devices, twitter, etc., show that information and infotainment are increasingly difficult to separate.

Reading maketh a full man, conference a ready man and writing an exact man (Bacon 1625:27)

It used to be the way that specialized content involved specialized people who created specialized language for a specialized audience. Non-specialized writers only minimally required specialized language when communicating with non-specialists. For centuries, these two statements seemed to be two inter-dependent simple truths.

The increasing gap, however, between specialists and non-specialists calls for communication of specialized content to non-specialized readers. Who should then convey such content? And on which background? Many claim that specialists are not able to bridge the gap, because they get caught in knitty-gritty details and use nerdy language. Others claim that non-specialized writers cannot do it, because they do not know the specialized content. So, creating specialized content is a challenge whenever the content has to be communicated to non-specialists.

A researcher from the Southern Denmark University, Charlotte Wien, together with the editor of a local Danish newspaper set out to test this dilemma. They made an experiment where 10 researchers were paired with 10 journalists with the mission to write a popular science article for the newspaper. The sad result was that not one pair came up with an article that was accepted by the newspaper editor. According to the researcher, the news criteria that had to be fulfilled made researchers take a retreating role in the projects; and according to the editor, the articles did not render anything that could not be googled in a couple of minutes. The texts lacked facts and in-depth insights and contained far too much small-talk (Forskerforum 2016:11).

Generally, researchers are often blamed for not communicating their research to a broad audience. Against the backdrop of the experiment described above, it is maybe not surprising that researchers often think that they are misunderstood by the media and that their research is pared down to something elementary, which in turn may result in credibility problems in their academic environments.

In most places, there is also the problem of the impact factor (Forskerforum 2016:10-11), which means that if articles are not peer reviewed, they will not count as academic production, which in turn may mean that the researchers do not get any credits for their articles. Therefore, many researchers see writing for non-specialists as a waste of time.

The comment from the editor in the example above was that the journalists involved had underestimated the complexity of the discipline of science communication for a broad audience, which requires more experience and insight on the part of the journalists than what would normally be expected (Forskerforum 2016:11).

So the question I want to pursue in this article is which methods may be used to bridge the void between professional audiences and non-professional audiences, and in turn comment on some of the possibilities and pitfalls of using popular writing methods in connection with the communication of specialized language.

Degree of professionalism

The communication of specialized issues takes place by different professional groups with different interests. A researcher of nanotechnology has a basic interest in publishing the findings of new nanotechnological results and to discuss the validity and use of these results with peers. A producer of nanotechnology-based data storage is interested in using the results of nanotechnological research for applied solutions. They are both interested in nanotechnology and in communicating their field, but to different groups with different interests, either professional and semi-professional groups, or occasionally laypeople. Although both need to communicate their knowledge, the researcher tends to stick to very informative – and objective – means of communication, whereas the nanotechnology-based, data-storage producer would also lean on more directive and phatic and subjective elements in the communication process.

Need for knowledge and knowhow

In professional writing across professions, there is a need for special knowledge and knowhow. If somebody wants to go walleye fishing, there is a need to know about walleye lures and walleye fishing sites. Any writer who would venture into this topic, would have to know exactly what the audience of the text would like to know. Far too often, texts are filled with information the writers want to give rather than what the readers would like to know.

A specialized writer

Any professional community would often either depend on skilled subject-writing members or specialized writers. Many job adverts for especially TechCom writers look for either a professional with an added communicative skill or a specialist writer with a knack for looking into professional contexts. According to Truity, a California-based publisher of personality and career assessments: *Some technical writers begin their careers not as writers, but as specialists or research assistants in a technical field. By developing technical communication skills, they eventually assume primary responsibilities for technical writing* (Truity 2016).

Truity also writes on the website that it might be the vice versa situation that a technical writer develops content skills to make professional communication. Whichever way, the road to becoming a technical (or professional) writer is not straightforward. It takes a combination of professional knowledge of the field and its details as well as of communication. On their website, they define technical communication skills as the language used in the field coupled with the knack of writing for different audiences and a bit of imagination, too. Not to forget the skill and willingness to work with other writers, editors, illustrators and other groups in a team (Truity 2016).

A genre for a communicative purpose

The need for specialized knowledge and knowhow to answer the readers' questions should determine the organization of the communication around facts, procedures, processes and results. In the walleye example above, the walleye fishermen would benefit from an instructive genre of some kind, maybe a direct instruction or an instructive blog. It follows that specific groups with specific interests would benefit from reading a familiar genre with genre moves that would fulfil their need for information. The more efficient and clear-cut a genre is, the better its readers will understand the information given, specialized or not. This does not mean that there is no room for improvisation. Newton's "Optics" was written in a form that was – at the time – accepted as a genre of specialized writing, but today would be considered very free, if not downright lacking a serious background, as when he wrote about an experiment that: *When I was trying this, a Friend coming to visit me, I stopp'd him at the Door, and before I told him what the Colours were, or what I was doing; I asked him, Which of the Whites were the best, and wherein they differed?* (Newton 1721:133).

Today, the requirements for obeying genre conventions are much stricter. Researchers who do not follow the basic genre features, do not make their way into journals or books.

Specialized structures across genres

A professional speech community requires a more abstract level of reading because of the quest for information, knowledge and insight rather than action. Thus, the move to a scientific or professional world, for instance,

will involve more abstract thinking. Abstractness in specialized writing does not agree well with narrative genres. Therefore, most specialized language, jargon and specialized genre structures are better suited to its audiences, because combined these contribute to ease of reading, economy of language and clarity of the issue and not least precision. Let us just for a moment muse on the use of one element of specialized writing; the much-hated passive form. Edling, for instance, claims that the passive form is better suited for approaching an adult natural science academic prose (Edling 2006:133). Also in non-academic, but still professional, specialized-language circles, the passive structure would be the natural choice. For instance, the decommissioning of an out-of-date windfarm would be written without any specific agents to perform the tasks. Specific agents would only be assigned if specific tasks should be performed, say the *Electricals* section would call for electricians to perform the job. This is in most cases so obvious that the style would still be written in a passive form, because the alternative would be maybe 200 sentences stating the *electrician* as the forced subject or as a *by*-passive. In other cases, the designation of specific agents would be downright wrong or dangerous because of requirements for competences needed to perform the task that would be unknown at the time of writing. Another fallacy would be to give certain professional groups access rather than others. Focus should be on the process, the procedure or the result, which would request certain linguistic structures to cater for a professional context.

Register in specialized language

We still need to talk about register: the terminological, lexicographic and textual-linguistic features. Such features are today found by means of software applications used to datamine and categorize text and context according to certain objectives. Corpus linguistics, i.e. the compilation of electronic text corpora and subsequent software processing, is used for identification, documentation and efficiency in specialized language studies. Biber and Conrad (2016:2), for instance, explain in their book that: *(...) register perspective combines an analysis of linguistic characteristics that are common in a text variety with analysis of the situation of use of the variety.*

This approach is useful in many contexts across the genre moves of a text as well as for modern-day search-engine-optimization (SEO) purposes, which for the lexicographic variety requires trickled-down core terminology. Therefore, the need to get used to the register of a field is a fundamental requirement in specialized-language contexts.

Doubts about specialized language

However, the market for communication services is full of people who claim that professional knowledge can be communicated in much the same way as non-professional knowledge. The claim is that many of the same tools that are used in journalistic and literary circles can be used to spice up specialized writing: the rhetorical perspective, the journalistic perspective and the literary perspective. I claim that each perspective can easily fail because there is a fundamental clash of communication when specialized writing is coupled with a non-specialized perspective.

The rhetorical perspective creates much better specialized writing, the argument goes. However, classical rhetorics where the ideal is argumentation, and in turn persuasion, is fundamentally wrong in most specialized writing. A company that wants to sell special screws, for instance will not be taken seriously if it adds too much of a persuasive approach. Either a special screw is needed or it is not.

The journalistic perspective creates a text with an angle of approach, the argument goes. In a specialized context, an angle of approach would sometimes be adequate, but sometimes it would remove focus from the real issue. Pontoppidan and Graae (2016:59-61)suggest using the story of a pig trial to prove the function of receptor-ligand 238. However, this way of using an analogy would create a story about the pig's end of life, not about the function of receptor-ligand 238. But this does not exclude analogies as a tool to convey knowledge of science. Using the story of Benjamin Jesty and why milk maids never got smallpox because of their exposure to cowpox is a good example to explain the basic idea of vaccination (Skydsgaard 2014; Rosenheck 2005). The journalistic angle of approach, however, risks skewing the purpose of the text if it is not real or directly pertinent to the issue.

The literary perspective may create the link to understanding specialized content by adding a narrative device, the argument goes. This may work, if it is done right. However, the purpose of a literary text is normally to be the starting point for interpretation, which is exactly what must not take place in a specialized context. If an analogy, a metaphor, storytelling, a fairy tale or a saying is used for illustration, the writer must be absolutely certain how it would be construed. That said, scientists use such devices to explain complex technical and scientific issues. As when Newton discussed how light worked and how it could be misinterpreted and misunderstood by using the analogy of our dreams messing up our mind or how we would see things differently by pressing our eyes. The analogy was used to understand the danger of

misinterpreting light by just looking at it. The analogy was thus used as an analogy of warning and not used to carry the content and the proof.

Translation of specialized texts

Translation is a special point when it comes to specialized language. The *lingua franca* of almost all specialized speech communities today is English, and translation plays a huge role. With its need for precision, specialized language still requires a human mind to make the link from Language 1 to Language 2.

There is another problem with the language of science: even if it is new terminology, it tends to develop differently in different languages and cultures. Freixa (2006) states that: *Experts may have different terminologies for the same concepts, or there may be a terminological battle in the coinage of new inventions.*

Within search-engine-optimization terminology, for instance, the English words *crawler* and *spider*, which are synonyms in the first place, would travel in different ways into different languages. In Spanish, the English terms would compete or co-occur with the local terms *rastreador* and *Araňa* (Jensen et al. 2012:29). In other places, there might not be any competition at all between the local and the globalized terms. Language use develops in different ways.

Moreover, the idea that technical and scientific language is culture-neutral is a misunderstanding. Especially, the applied sciences tend to develop in different ways depending on the cultural traditions, geographical differences and development in the society in question.

Conclusion

Reading maketh a full man; conference a ready man and writing an exact man. May I attempt a modern interpretation? Reading creates wisdom. Dialog is the basis for action. Writing calls for precision. If writing is not precise in a specialized context, it lacks detail and the information in it can be googled in a couple of minutes. Specialized speech and interest communities' primary goal is dissemination of knowledge and knowhow about their field. All other communicative goals have to serve that primary goal. Modern-day infotainment practices are interesting but dangerous. They tend to mix up information and infotainment. If infotainment skews the informative goal of professionalized practices, the professionals or researchers involved will withdraw from the communication forum. The result is specialized content that is not communicated well, or content that will suffer from what is termed with a new phrase – actually Oxford Dictionary's word of the year 2016 (Flood 2016) — *post-truth*, which is defined as

elating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief. (Oxford Dictionary 2016). A trend so strong that it creates the word of the year must definitely stir a world that is totally dependent on truth behind the information and knowledge conveyed.

Prezentowany artykuł *From specialized content to popularized nontent, or: the challenge of specialized communication to laypeople!* dotyczy zagadnień związanch z komunikacją w środowisku specjalistów, w którym używany jest język branżowy. Komunikacja w języku specjalistycznym ma na celu przede wszystkim wymianę informacji w określonej dziedzinie lub popularyzację określonej wiedzy. Wszystkie inne aspekty tej komunikacji powinny być podporządkowane temu nadrzędnemu celowi.
Autorka artykułu zwraca uwagę na specyficzne trudności związane z komunikowaniem specjalistycznych treści w języku obcym, zwłaszcza szerszemu odbiorcy. Zwraca też uwagę na elementy, które mogą decydować o skuteczności takiej komunikacji, zadając sobie pytanie szczególnie o to, kto takie treści powinien przekazywać i w jaki sposób.
Przekazywanie specjalistycznych treści odbiorcom, którzy nie są specjalistami w danej branży stanowi wyzwanie szczególnie dziś, w dobie *infotainment* (z ang. *information* i *entertainment*). Takie podejście zastosowane do komunikacji w kontekście specjalistycznym jest niebezpieczne – walor „rozrywkowy" tekstu jest często przedkładany nad precyzję przekazu, co powoduje, że wartość informacyjna tekstu jest znikoma.
Treści zawarte w artykule zostały także zaprezentowane podczas wykładu *Specialized Language for Specialized Audiences – 6 do's, 3 don'ts and a special point!*, który autorka artykułu wygłosiła podczas konferencji *Języki do zadań specjalnych* w Warszawie we wrześniu br. Cały wykła można zobaczyć na stronie internetowej: https://www.youtube.com/watch?v=UONyl8Q-i5Q

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