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RAUTIO, ELISA: Perception of Terminology Work in a Finnish Industrial Company: a Case Study

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Tämän tutkielman tarkoitus on arvioida sanastotyöhön ja sen rooliin liittyviä näkemyksiä suomalaisessa teollisuusyrityksessä. Tutkielmani aineistona käytin terminologiatyöaiheista kyselyä, jonka lähetin suomalaisen, monikielisen yrityksen työntekijöille selvittääkseni, millä tavalla sanastotyö nähdään yrityksessä.

Hypoteesini oli, että sanastotyö ei ole kovin tunnettu ala ja sen merkitystä yrityksen dokumentoinnissa ja prosesseissa aliarvioidaan. Taloudellisen tilanteen ollessa epävakaa, sanastotyöhön ei haluta sijoittaa, varsinkaan kun sen tuoma hyöty ei näy suoraan yrityksen liiketuloksessa. Siksi sanastotyön tekijät eivät ole aina sanastotyön ammattilaisia, vaan usein kääntäjiä, teknisiä kirjoittajia, sekä alansa eksperttejä, joille sanastotyö on yksi tehtävä päätoimisen työn lomassa. Se, että sanastotyön tekijät eivät ole termityön ammattilaisia, ei auta sanastotyön tunnettavuutta eikä asemaa. Lisäksi termityön tekijät saattavat nähdä sen negatiivisessa valossa, jos lisätyöstä ei saa tunnustusta ja se vie aikaa.

Teoriaosassa käyn läpi sanastotyön tärkeimpiä kasitteitä, sanastotyön tekemiseen tarvittavaa osaamista ja resursseja, sekä analysoin millainen rooli sanastotyöllä ja sen tekijöillä on kyselyyn vastanneiden työntekijöiden keskuudessa. Pyrkimykseni on tunnistaa, mtkä tekijät vaikuttavat sanastotyön onnistumiseen, ja sitä kautta vaikuttavat myös mielikuviin sanastotyöstä. Oletukseni on, että sanastotyön onnistuminen vaikuttaa myös siihen liittyviin mielikuviin. Onnistuneet projektit nähdään positiivisessa valossa, ja sitä kautta myös sanastotyöhön liittyvät mielikuvat ovat myönteisempiä. Tässä osassa pohdin, miten sanastotyön onnistumiseen vaikuttaa se, onko sanastotyön tekijä yrityksen työntekijä, sanastotyön asiantuntija, vai kenties työryhmä. Lisäksi onnistuneeseen tulokseen, ja sitä kautta sanastotyöhön liittyviin näkemyksiin vaikuttaa, millaisia resursseja yrityksellä on käyttää sanastotyöhön, kuinka paljon aikaa projektiin on käytössä, ja millaisilla työkaluilla taataan sanastotyön jatkuvuus ja sanastojen käytettävyys.

Analyysiosassa tarkastelen vastauksia, joita sain sanastotyöhön liittyvään kyselyyn. Kyselyssä esiintyvät kysymykset pyrkivät tuomaan esiin työntekijöiden tapaa nähdä sanastotyö, mitä etua siitä voisi olla, ja kuinka paljon sanastotyöhön olisi järkevää käyttää resursseja. Vaikka mielipiteiden mittaaminen kysymysten avulla on vaikeaa, kyselyn tulokset yllättävät positiivisesti: kyselyyn vastaajat arvioivat yksimielisesti kokeneensa hetkiä, jolloin sanastosta olisi ollut apua ja kokivat sanastotyön melko hyödylliseksi.

Avainsanat: sanastotyö, sanastotyön rooli, tapaustutkimus

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1. Introduction

As technology, services and techniques undergo constant development and change, and new objects and inventions emerge, old concepts may not cover them or be accurate enough to describe them. This leads to a situation where new terms arise to be used alongside with the old ones. In some cases, the result is a terminological chaos unless systematic terminology work is done to harmonize the terminology. Or, in Wright's words (1997c, 199):

Different companies, even different departments within a company, frequently use different terms for the same concepts. This practice results in misunderstandings that waste time and money and can also lead to lapses when it comes to quality assurance. Furthermore, product liability concerns, particularly with respect to customer safety and environmental protection laws, have led standardisers and manufacturers alike to appreciate the value of carefully defining their terminology in order to protect company interests in the event of legal challenges.

In this thesis, I will study the perceptions of terminology work in a Finnish industrial company among the employees. I chose this theme because there was a real, existing need; in 2010, the industrial company expressed an interest in compiling a preliminary terminology to facilitate the communication with their subsidiaries, international employees, and different departments within the company. The company has subsidiaries in several countries, and employ over 400 people around the world. Regarding their communication, this may sometimes be problematic. Since their terminology had not been harmonized, referring to products or their parts with different names could cause misunderstandings even within different branches of the company in Finland. The aim of this research is not describing the process of compiling a terminology, but rather observing how terminology work is perceived in the corporate field. Is terminology work considered something useful or important? Is it recognised as a field of its own? My hypothesis is that companies in general tend not to pay too much attention to the advantages or the prerequisites of terminology work, and that the corporate structures still rely on short-term projects carried out by non-specialists of terminology work. The industrial company of this case study should not make an exception. Neither the scope of this thesis nor the time reserved for it can be extended to cover several Finnish companies, so I will concentrate on the case study alone, which may reflect the way terminology work is perceived in other Finnish companies as well.

The method used for this thesis was a questionnaire sent in 2010 to employees of the company of the case study. It included questions on the role of the respondents in the company,

whether they had experienced situations where a terminology could have been helpful, and what kind of a terminology could have been the most useful. The most important questions from the perspective of this thesis were on the resources appointed for terminology work and whether the respondents consider it important.

In Chapter 1, I will concentrate on the theoretical background to terminology work, on what is understood by the term *terminology work* and define the essential terms that are used throughout this thesis. Chapter 2 will sketch a brief overview of the advantages of terminology work and observe the changes that the field has undergone over the past decade. In chapter 2.1, I will outline the European infrastructure and the evolution of the role of terminology work in Europe, a task in which the POINTER project (Proposals for an Operational Infrastructure for Terminology in Europe) conducted by Ahmad et al. in 1996 is used as a starting point for comparison. This project explored the status and the infrastructures for terminology work already in place in Europe in 1996 and proposed some solutions to ameliorate it. Although the field has changed tremendously since the POINTER project when it comes to the number of terminologies and the entities producing them, the project's take on the role and status of people involved in terminology work in Europe remains a point of comparison for the development of the field between then and now.

In chapter 2.2 the focus is shifted to Finland, as I will trace the existing structures and the demand for terminology work. The ground breakers, the Finnish Terminology Centre TSK and The Finnish Standards Association SFS have a solid history in the field, and according to Seppälä (2009), there is still demand for their services, although they are no longer alone: there has been a boom in the emergence of terminological committees, and terminology has gained ground as a serious discipline in some universities.

Chapter 3, in turn, will concentrate on the variables affecting terminology work, or the "practical side to things"; costs and tools, human resources, the range of the project, and time (or the lack of it) used for the process. My hypothesis is that the results of a terminological project will impact the status of future terminology work. Consequently, the factors having an impact on the outcome of the projects will also affect the way terminology work is perceived. Therefore, optimising the processes for successful terminology work will eventually have positive effects on the status of terminology work in general. Allowing time, a sufficient budget, the right people and the right tools would enhance the chances of not only initiating a terminological project, but also of seeing the project turn into a permanent part of the company's documentation processes.

Chapter 3.1, will outline the main areas of expenses of terminology work, without unnecessary details; it is virtually impossible to calculate a realistic cost for a project without knowing the range of the project. In chapter 3.2, the choice of tools is discussed. The aim is not to suggest a tool, but rather compare types of tools and their advantages and weaknesses. Many factors need to be taken into account before finally choosing a terminology tool; will it allow constructing complex semantic references, can it be used for more than one language, can it host several users or user profiles, is it easy to edit or retrieve data, and so forth. Version management, the compatibility of the format of exported information with other applications, as well as usability are also discussed.

In chapter 3.3, Personnel Appointed for Terminology Work, the emphasis is on the constitution of a terminology work team, and the profiles, skills and knowledge needed to successfully realise a terminology. In an ideal situation, the terminology work team would consist of terminologists and subject matter experts, sometimes reinforced with translators. I will analyse the effects on the perceptions of terminology work with different scenarios. The position of internal versus external employees and the impact that this could have on the perceived quality of work is also discussed.

Chapter 4 will give more information on the method and how the questionnaire was conducted, explain why I chose this method, and what are its advantages and disadvantages. In this chapter, I will analyse the relevance of my method and discuss whether the act of conducting a questionnaire will have an impact on the results. Perceptions or attitudes as such are hard to define or measure, and anyone responding to a question on a given subject, will be obliged to reflect on their feeling that may have been neutral from the beginning, or the subject may have been completely unknown to the respondent. However, I believe that with the questionnaire it is possible to, first of all, voice some of the terminology users' and producers' opinions, and secondly, draw attention to a field that is not very well recognised.

In chapter 5, the analysis part, I will present the material gathered with the questionnaire and analyse it as I proceed, answering my research question along the way. I will analyse the responses to whether terminology work is perceived as something important or useful, and if the employees believe that compiling a terminology might ameliorate the company's communication. I will also discuss the type of terminology that would be suitable for this case study's industrial company's needs.

Chapter 6 will draw up conclusions based on both, the theory section and the analysis part. It compares the results of the questionnaire with the hypothesis of terminology work being not very valued or well recognised.

There are previous MA thesis studies about terminology work in Finland (for instance, Perälä 2014, Johansson 2008 and Rintamäki 2002), but not, that I know of, from the perspective of how terminology work is perceived within the companies undertaking such work. The aforementioned POINTER project, on the other hand, does discuss the subject, among other things, but from a broader perspective and from a different situation twenty years ago. Nonetheless, although these sources do touch upon the subject, there is no existing research that I know of about the role of terminology work in Finland.

This thesis gives information on how terminology work is perceived on a smaller scale, what kinds of terminologies the industrial company's employees considered useful, and may establish some guidelines for future terminology projects.

2. Terminology Work – an Overview

This chapter will outline the necessary context in order to understand what is meant by terminology, what is required to do terminology work, and how this work is perceived among its users and its contributors. The material about Terminology as a discipline, or even about compiling terminologies, is abundant, but there is not much research on the perception of terminology work as such. Consequently, it is necessary to describe the evolution of the field to know where it comes from, where it is headed, and whether in the process, terminology work has acquired a status of its own as an interdisciplinary line of work, no longer conducted in the shadow of translation and documentation activities. Chapter 2.2 will outline its evolution in the European context, and 2.3 from a narrower perspective, in Finland.

However, let us start with the following chapter 2.1 and some of the essential concepts that are used in terminology work and the comprehension of which is primordial for constructing concept systems and semantical references.

2.1 Essential Concepts of Terminology Work

In order to be able to understand the central concepts in terminology work, let us first define *terminology*. According to Wright (1997d, 325), *terminology* means "a structured set of concepts and their representation in a specific subject field... [and the term] tends to be used with reference to serious disciplines (i.e., engineering, law, art, etc.)." This definition, although quite accurate, does not, in my opinion, make a difference large enough between *terminology* and *vocabulary*, which she defines as "a list of words used in a language or a particular book or branch of science, etc., or by a particular author." Because both *terminology* and *vocabulary* can be applied to specific subject fields (*terminology* to "serious disciplines", and *vocabulary* to a "branch of science"), according to Wright, the difference seems to lie in that *terminology* is a conscientiously structured set of concepts. However, if such structuring has not been done, can terminology still be referred to as terminology?

In consequence, Sager's (1990, 19), rather simplified distinction between *terms* and *words*, and *terminology* and *vocabulary* seems more appropriate:

The items which are characterised by special reference within a discipline are the 'terms' of that discipline, and collectively they form its 'terminology'; those which function in general reference over a variety of sublanguages are simply called 'words', and their totality the 'vocabulary'.

Sager (1990, 2) also specifies *terminology* as an academic discipline; "Terminology is the study of and the field of activity concerned with the collection, description, processing, and presentation of terms, i.e. lexical items belonging to specialized areas of usage of one or more languages." In addition, he presents a third definition on *terminology*: that of a theory, or "the set of premises, arguments and conclusions required for explaining the relationships between concept and terms which are fundamental for a coherent activity [of terminology processing]" (1990, 3). Therefore, *terminology* means all three things: a set of concepts, their study and processing, and finally the theory aiding in understanding the first two.

Although the definitions above cover the subject quite well, it is important to note two things. Firstly, in this thesis, by *terminology* I will most often refer to the definition meaning "set of concepts in a specific subject field". Secondly, it is important to remember that unlike in Wright's definition of a "structured set of concepts", the terminology used within a field is not necessarily collected in any database or dictionary, but may be scattered in documents or files without ever being collected into one form or other. It may even exist in spoken language only. Thus, a terminology is not a closed set of terms or concepts, but rather a "living" one, changing according to the changes taking place in the field.

As Ahmad et al.¹ point out,

terminology ... is the main vehicle by which facts, opinions and other higher units of knowledge are represented and conveyed. Sound terminology work reduces ambiguity and increases clarity - in other words, the quality of specialist communication depends to a large extent on the quality of the terminology employed, and terminology can thus be a safety factor, a quality factor and a productivity factor in its own right.

This is where terminology management is needed, because in order to convey complex ideas, the terminology with which they are expressed needs to be unambiguous.

Although throughout this thesis and especially in some quotations, the terms *terminology* management, terminology work and terminology processing are used, I understand all three of them more or less in the same way. Ahmad et al.² make a distinction in their POINTER project between terminology work and yet another term, terminological activities. Terminology work, for them, means "the work performed in the creation or documentation of terminological resources", whereas by terminological activities they understand "a broader term which includes not only terminology work but also such areas as training, tool development, and organizational and

1 1996, Why terminology? (The source is a report on the Internet with no page numbers. Therefore, I will refer to the chapter in which the citation can be found.)

administrative measures." *Terminological activities*, for me, also include decision-making and planning ahead.

In my view, all the aforementioned terms refer to different activities related to compiling a terminology, such as the extraction, ordering, transfer, storage and maintenance of terminological information as well as creating concept systems and defining term meanings. However, I do feel there is a subtle difference between *terminology work* and *terminology management*. The latter, for me, is similar to Ahmad et al.'s *terminological activities* and includes decision-making and planning ahead, a property that is lacking in *terminology work*. *Terminology management*, then, is the term I would prefer to use when it comes to making plans of action for future terminology work or managing the activities of the terminology department in a company. Therefore, I will keep to *terminology management* when referring to the administrative measures and the actions of the management level, and the term *terminology work*, on the other hand, will be used when describing the tangible aspects of handling terminology: collecting terms, crafting definitions and making term entries.

Another crucial distinction must be made between *terminology work* and *standardization*. Whereas *terminology work* consists of gathering, classifying, ordering, documenting and sometimes coining terminological elements from different sources, *standardization* means attributing values of acceptance to already existing elements. Or, in Pearson's words (1998, 23):

Standardized terms are generally terms that have already been coined by users of the terminology. What the standardizing body does is give its seal of approval to one term and make recommendations for preferring that particular term over others which may have been used to describe the same concept in the past.

To resume, standardization is an activity of prescriptive nature and often a logical continuation of terminology work. The two activities do not exclude one another and can be realized simultaneously or separately, although standardization is significantly easier if there is existing terminological documentation.

Although this thesis will not cover actual terminology work, that is, creating concept systems, making term entries and writing accurate definitions, the basic terms related to terminology work should still be briefly explained. This is important to understand what terminologists' work includes and, more importantly, what kind of knowledge base is needed to perform terminology

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² 1996, What is terminology?

work. This will be one of the key issues of chapter 3.3, and the essential terms will also reappear in chapter 3.2.

As already briefly discussed above, *terms* are the most elementary components of a terminology. The ISO 1087 *Vocabulary of Terminology* (1990:5) defines a *term* as follows:

5.3.1.2 **term:** Designation (5.3.1) of a defined concept (3.1) in a special language by a linguistic expression. (In Pearson, 1998, 14)

In other words, a *term* is a word or a label that refers to a certain, defined concept. This may sound extremely simplified. However, since Pearson (1998, 8) – who also offers us the ISO definition above – draws attention to her argument that "there is no usable definition of *term* ... which allows us to identify when *words* are being used as *terms*," the simplified explanation is justified (italics are mine). To further ground this claim, Pearson (ibid) continues: "This is because terms very often look the same as words and frequently not only look the same as words but can also function as words, albeit in different circumstances." Even if this discussion about *terms* versus *words* may seem somewhat tedious, it is, to me, one of the paradoxes in terminologists' work; one of the criteria for engaging a terminologist and not a subject-field expert to produce terminologies is the terminologist's ability to distinguish terms from words and maintain the necessary level of specificity of reference. Nevertheless, if it seems that there is no clear method of truly recognizing terms from words, perhaps the gap between the abilities of terminologists and subject-field experts is not that wide. This issue will be expanded in chapter 3.3.

However, as terms are labels that we attach to ideas and concepts, let us continue with *concepts*. Talaván Zanón (2011, 24) defines them as "mental representations of objects and subjects belonging to reality; they are the result of a selection process of the main features that define each type of object and subject".

The last of the three essential elements in forming a concept is *definition*. In short, according to Tavalón Zanón (ibid.), "[i]n Terminology, a definition of a concept is a description of a notion that allows it to be distinguished from other notions within a specialized field", even though "we may sometimes find concepts defined through images or icons." Sager (1990, 39), on the other hand, states that

[a] terminological definition provides a unique identification of a concept only with reference to the conceptual system of which it forms part and classifies the concept within that system. In this way we separate the necessary and sufficient definition of terminology, which is required for the identification of the concept—

term equation, from the many other definitions which explain a concept to all manner of dictionary and database users ranging from children and laymen to specialists.

In Sager's description, it is worth mentioning that the notion of definition needs to be specific to its context and to its users. This way, in compiling a terminology specific to its subject field and for the user groups of the field, the terminology itself creates and maintains the separation between terms and words, or terminology and common vocabulary.

It should be stated that in terminology, even defining a concept is a matter of definition. When is a definition accurate enough? Ten Hacken (2015, 11) exemplifies the question with cases of *intensional* definition, where general characteristics are given to describe an object, and *extensional* definition listing all elements that are part of the same group. Pustejovsky (cited in Faber, 2015, 15-16), on the other hand, uses "mini-knowledge representations" to define the role of an object:

- 1. Formal role: the basic type distinguishing the meaning of a word;
- 2. Constitutive role: the relation between an object and its constituent parts;
- 3. Telic role: the purpose or function of the object, it there is one;
- 4. Agentive role: the factors involved in the object's origins or coming into being

These are only a few of the examples of definition types that may be applied when describing an object. Subject fields may have their own standards and companies may have their own guidelines. This should be taken into consideration when reflecting on a terminological project and choosing the adequate tool, resources, and methods to be used.

2.2 The Structures and the Role of Terminology Work in Europe

As there is only little research about the development of the status of terminology work in Finland, I will first take a look at it in a broader, European context. This may be helpful in mirroring the development of the attitudes towards terminology work in Finland, and give some indications on what to expect from the results of the case study.

In order to highlight the changing needs and different expectations for terminology work, I will sketch a brief historical overview of the recent development of terminology from the emergence of the first terminology works, and to its becoming an academic discipline. In addition, I will take a look at the results of Ahmad et al.'s POINTER Project (Proposals for an

Operational Infrastructure for Terminology in Europe, 1996), which gives an indicative view of the field and its structures from two decades ago.

As Sager points out (1990, 211), before corporate terminology management, the objective of terminology work was mainly harmonizing different languages. This was the case in Germany and Austria, where the main problem was the existence of two standardization bodies, which were simultaneously establishing different linguistic authorities for the standardization of the German language. This led to the active support for a "theoretical framework ... which would justify the harmonisation, unification and lastly the standardization of terminology and at the same time support principles for its collection and description on a supranational level." This school of thought, founded by Eugen Wüster, would also promote the simplification of international technical communication by using elements from Esperanto, Greek and Latin origin. However, the most substantial need for terminology work on a larger scale emerged with the expanding international trade. Pearson (1998, 9) states that the formulation of new ideas required new adequate terminology, which led to new words being coined and existent words being assigned additional or more precise meanings. Consequently, she observes a rising "concern about possible confusion in science and technology and a desire for a greater linguistic clarity which led to the emergence of a principled approach to the naming and description of concepts."

In 1996, where the POINTER Project picked up, the status of terminology work in corporate world was not yet fully established, although considerable progress could be observed from the early years. As evidence of this, Ahmad et al.³ state that "the number of terminologists with formal academic or vocational qualifications in the subject is relatively small, although growing." Furthermore, it must be noted that this was before the Internet became as largely accessible as today, making it considerably more difficult to estimate the amount of published terminologies at the time, because the large majority of them were intended for the internal use of companies or organizations and not published online. Moreover, as Ahmad et al.⁴ point out, there was "a great variety in the organization of terminological activities, not only between countries, but also between economic sectors and regions of the same countries, with notable disparities particularly in the commercial availability of terminology." Because of this, it is hard to make any "compact" generalised notions of the status of terminology work in the world or in Europe at the time. However, Ahmad et al.⁵ do bring forth some common factors that could be seen in the

³ 1996, Impact and Awareness - Problems

⁴ 1996, National and Regional Aspects of Terminology Work – Present Situation

⁵ ibid.

terminology work being performed in Europe. First of all, they note that "some degree of infrastructure for terminology activities exists in almost all European countries, ranging from associations for translators, technical writers or even specifically for terminologists, to public bodies active in terminology work or promotion, and to courses in terminology offered in university, technical and whole-of-life education contexts." Secondly, it seems that only very few of these institutions and organizations produced terminologies for commercial purposes. Although terminology services were starting to be commercialised and offered, the sector seemed to still be underdeveloped, even in the most terminologically aware countries. And finally, the bodies producing terminologies or that were involved in activities related to terminology work did not seem to maintain any coordination, which led to possibly several similar publications with double efforts.

Furthermore, Ahmad et al.⁶ also note that although some structures for terminology work do exist, the branch suffered from lack of awareness and "invisibility":

[I]t must be clearly stated that, in general, the strategic, commercial and practical value of terminology is basically unrecognised. This applies at all levels of activity (national, regional, European and international) in all sectors and types of organization (i.e. both public and private), and in all branches of trade and industry. In fact, to a surprising degree, terminology can be said to be "invisible". At a very basic level, many people have not even heard of the concept, while many others have no idea of its importance or of the basic methods associated with it, even though in practice they may be users or even creators.

In addition to the problem of invisibility, Ahmad et al.⁷ raise the question of status, or a "general image problem" to overcome. One of the factors strengthening this problem seems to be that "since everyone speaks at least one language, everyone is a language expert, and hence services in this area are 'nice to have' rather than essential." In consequence, the skills of terminologists (as well as those of experts in similar fields, like translation and technical writing) are undermined, and terminologists and other language experts generally occupy "a subordinate position in corporate hierarchies". This problem is a two-fold one: first of all, the many "amateurs" working in terminologists' place will continue to strengthen the impression that terminology experts are not really needed. Secondly, as these enthusiasts often collect terminological material as a side-project and not as a full-time occupation, the impression of terminology work being only something half-serious will also be enforced.

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⁶ 1996, Impact and Awareness - Problems

⁷ ibid.

The POINTER study was concluded only a few years after the recession of the 1990's, which, as Ahmad et al.⁸ observe, had a significant, negative effect on the development of terminological activities in some industries, and forced some terminological units to be closed down. The status of terminology work suffered from a setback that took it back to "it's previous position as a part-time, low-priority activity, ever vulnerable to cutbacks in times of crisis."

It is only logical to suppose there is some fluctuation in terms of willingness to invest in terminology work if the economy is in crisis. This can be seen in the notable change that could be observed after the crisis of the 90's and at the turn of the millennium, when terminology as a science gained ground. To cite Wright (2001, 467), "[t]he extensive recent growth of terminology management has been spurred by mounting pressure for government agencies, companies and other institutions to produce high-quality documentation pertaining to virtually all aspects of their operations." As an example of this, we can name a number of European and other bodies alone producing specialized terminologies: IATE (Inter-Active Terminology for Europe), TermCoord, EuroTermBank, UNTERM (The United Nations Terminology Database)... to name a few. She notes a perceptible change for terminology management in the corporate world, where "[it] has been centred in language service or technical writing departments and, even more specifically, has focused on multilingual document generation and translation."

However, Wright (2001, 468) regrets that in many companies, there is still overlapping of terminological activities with translation services, which "represents a narrow view of the significance of terminology management for government industry and the economy in general." Perhaps this was still the industry recovering from the crisis, as she joins the view of Ahmad et al. in that compiling terminologies in isolated corners as almost a by-product of translations "also meant that terminological products were primarily used (and sometimes even generated) at the very end of the production process" (ibid.).

There is no way of knowing whether the economic crisis of 2009 had perceptible impacts in Europe, but at least the more recent publication of Kockaert and Steurs (2015, ix) seems to have adopted a rather triumphant opinion on the status of terminology as a discipline, which "has nowadays grown into a multi-facetted science, which seems to have reached adulthood." Although this citation refers to terminology as a discipline instead of a field of work, it can still be assumed that the situation of 1996 has changed significantly. If the discipline has evolved by integrating "multiple contributions not only from different linguistic schools, including computer, corpus, variational, socio-cognitive and socio-communicative linguistics, and frame-based

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 $^{^{\}rm 8}$ 1996, National and Regional Aspects of Terminology Work – Present Situation

semantics, but also from engineering and formal language developers" (ibid.), surely the field of work as well must have followed this evolution.

2.3 Terminology Work in Finland

In this chapter, I will discuss, among other things, terminology work and its role in the Finnish framework. Because the analytical part of this thesis deals with a Finnish company, some responses regarding the role of terminology work that we will see in the analysis may reflect the national, cultural context. That is why a brief overview of the development of terminology work in Finland is needed.

The Finnish Terminology Centre TSK was founded 43 years ago, in 1974. According to Katri Seppälä, the director of TSK (2009), "in 35 years the TSK has published 39 vocabularies on various subjects in the TSK vocabulary series and many other publications, too ... [which] proves how important terminology work is." These numbers, however, seem quite insignificant, when compared to The Finnish Standards Association SFS's estimation of 50-60 terminology projects per year in the field of technology alone since 1988 (Sanastotyön käsikirja, 1988). However, the explanation may be that special language vocabularies are usually compiled by the fields in question, without contacting the leading organizations in terminology work. This causes difficulties when it comes to counting the actual ongoing or finished terminological projects. It is thus virtually impossible to estimate the number of ongoing or recent terminology projects in Finland.

Terminology has gained visibility in the form of recurrent publications, such as the Finnish terminologists' magazine, Terminfo, and as a discipline: Helsinki, Turku and Vaasa Universities offer courses in terminology. It is therefore safe to say that at least the field is not invisible and furthermore, continues to develop.

Although many important technological leaps have already been made and terminology management has evolved accordingly, there is no reason to imagine that terminology work has reached its highest peak. Although it has proved its utility, it has not yet developed into a wholly self-sufficient, independent domain, but remains largely dependent on the support and financing of the public administration. As Seppälä (2009) points out,

terminology work and the need for it have also been taken into account in the plan of action for the language policy in Finland published in May [2009]. The plan recommends that an explicit framework for terminology work should be created and that the financing should be provided for to guarantee the continuity of the work.

The problem is that, in these financially unstable times, who would want to "provide for an explicit framework for terminology work"? According to Seppälä (2010a), nothing had been done yet in 2010 to assure the realization of this plan of action.

However, although the economic situation may not be at its best, the picture is not all that grim as one might imagine. Evidently, Seppälä (2010a) acknowledges that the recent economic development affects the demand and the interest towards terminology work, but states that the effects have not been too substantial. She maintains that it is not only the large, international corporations that contact TSK. Often, though, when the commission comes from one company, it is very probable that the company is of significant size and that the project is a multilingual one. Nevertheless, many TSK projects are so called sectoral projects and may be sponsored by several organizations and not only by corporations. It is also noteworthy that not all of TSK's clients are companies and that it is not at all uncommon to come across organizations of public administration, associations or other organizations ordering a commission or participating in sectoral projects.

Seppälä (2010a) observes that usually there is a preference for engaging an outside contractor. However, there is still interest in laying the foundations for permanent terminology work within some companies, and consequently clients are sometimes interested in training their own staff.

In addition to the work done by TSK, the continuity of the field is assured by other means as well. According to Seppälä (2009), independent, permanent terminology committees for paper industries, construction work, fire departments, IT, medicine, etc. have been established so that the documentation corresponds the level of national and ISO standards. These committees not only monitor the quality of documentation but have also published field-specific terminologies. Moreover, terminology courses have made their way to Finnish universities, although not in great abundance. All of these factors make it reasonably safe to assume that the field of terminology work is nowhere near a crisis in spite of the economic situation.

3. Variables Affecting the Status of Terminology Work

My hypothesis is that the attitudes of employees towards terminology work depend most often not on the work itself, but rather, on two things: their attitudes towards the personnel appointed to it and the efforts invested in the work. The actual work may be judged unnecessary unless proven otherwise, or in some cases, especially in large companies where departments do not necessarily come into contact with each other, the whole existence of terminology work may be left unnoticed.

The attitudes towards terminology work may not be the same before and after the moment that the terminology has been taken into use, but may change according to the estimated usefulness of the terminology. In this case study, the focus is on the work itself, not any actual terminology, although the work and its end result both play an important role in how terminology work is perceived. I will concentrate on what I consider the first important factor affecting the status of terminology work, that is, the attitudes towards the personnel appointed for it.

The second factor, namely the efforts invested in terminology work, is less obvious. By *efforts* in this chapter I mean anything that could be considered to be an input affecting the quality of the work; expenses, trained personnel, time and tools. In this chapter, I will cover some of the different variables affecting the status and the expectations for terminology work. These factors form the core of the perception-related questions in the questionnaire. Nevertheless, some of the aforementioned variables are too complex to introduce as such in the questionnaire (for instance, expenses, tools and time) for the simple reason the employees do not necessarily have sufficient background information for assessing how much to invest in terminology work. Each factor is still somehow presented in the questions, although in a subtler manner. I will return to this when discussing each element.

3.1 The Costs Related to Terminological Projects

Although the idea of a thorough "mapping" of the terminology of a field seems if not absolutely necessary, at least useful, it often depends on the actual costs whether or not terminology work is carried out in a company. Or, presented in other terms: the money invested in terminological projects seems not to bear fruit immediately after the investment, but rather in the long run, and even then, it is difficult to calculate in monetary terms what has been gained or saved.

Unfortunately, as the economic situation is still somewhat unstable, and cuts and savings are made anywhere possible, it is often the least productive units that will have to make the sacrifice. As the productivity of terminology work cannot be seen instantaneously in, for example, the sales, it is hard to estimate the true value of such work.

Obviously, it is as hard to try to estimate the costs of successful terminology work as well. To illustrate this point, let us imagine a company with one appointed terminologist for a one-year project. The actual costs for this project would then consist of the salary for the terminologist and, eventually, if needed, the purchasing or development of terminology retrieval, processing and storage tools. The result is a five or a six-digit number. In addition, the one formed terminologist compiling the terminology may not necessarily stay on the project forever. A training for his or her follower may become necessary. Furthermore, purchasing or developing a tool would be only the starting cost – the rest depends on whether a licence is required, not to mention the costs of updates, maintenance, storing data... Nonetheless, as will be seen in the next subchapter, one terminologist alone will not produce the best results. Consequently, let us imagine the same – although perhaps somewhat idealized - situation with a whole terminology department, consisting of two terminologists, one expert in information management and two subject-field experts. Suddenly, to produce high-quality terminology work, the expenses are five-fold. This little exercise, even if somewhat vague, gives at least a rough image of the total investment. In reality, it is nearly impossible to evaluate the size of the total investment as other measures may be required in order to reach the optimal result.

Ahmad et al. confirm that "[t]he true cost of terminology is bound to be affected by a variety of factors, including available resources, the number of terms and languages to be documented, the creation processes involved, data maintenance requirements and the status of the subject field as established or newly emerging." Accordingly, the range of the project may be considerably larger than the company had even thought of, and cannot necessarily be counted as simple work hours. Furthermore, the needs of companies are all different. Other factors as well render estimating the actual expenses more difficult. As Ahmad et al. (ibid.) observe, "[a]nother problem where costs are involved is that there is often an explicit unwillingness by terminology creators to disclose the cost of their data (where known) or even to assist in its analysis." They explain this with the terminology creators' fear of failing to justify the costs of terminology work in relation to the benefits from it, as well as with their lack of business skills required to convince the client. Seppälä (2010b) confirms that, at least in the Finnish framework, details concerning

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⁹ 1996, Economic Aspects of Terminology and Terminology Work – Costs – Problems

the pricing of terminological projects remain classified information. In regards to the need to justify the costs of terminology work, she states that the more the client is familiar with terminology work, the less there is need for explaining the reasons for its costs.

The purposes of terminology work may also greatly affect its costs. A terminology to be used mainly for translation purposes differs from a terminology compiled for other reasons. I will return to this below when discussing aspects concerning the acquisition of terminology management programs. Similarly, Ahmad et al. ¹⁰ draw attention to the fact that

[w]hilst a relatively low cost may well be expected in small language service enterprises producing small collections of terminology on an ad-hoc basis, the cost of highly prescriptive terminology (in particular for standardisation purposes) can be substantial, especially in small countries or markets.

All these factors cause noticeable variation in the pricing of terminology work. Therefore, it is difficult for enterprises offering terminology services to give, offhand, an exact estimation of the expenses to be invested in a project without having discussed the details that may seem insignificant to the client but tend to have considerable effects on the final costs. On top of that, Ahmad et al. 11 criticize the lack of sufficiently accurate costing models, of substantiated market data and of business and management skills among terminologists, which would allow elaborating more coherent pricing models. This would also permit the sector to benefit from an image facelift, as its marketing and offering consultancy services would be made easier.

To resume, sometimes the expenses seem too great for profits that can be only seen in the long run, which may cause reluctance in the corporate management to invest in terminology work at all. However, the attitudes towards investing in terminology work are difficult to measure unless interviewing the actual managers deciding about the company's investments. I do not expect employees to know the "reasonable" amounts to invest in terminological services, since, as we have seen, there is no simple way of calculating the costs and the benefits of terminology work. Therefore, the most elegant way of asking the employees their opinion on whether terminology work is worth investing in, is to phrase it in a way that the actual sums are never mentioned. Consequently, in the questionnaire, I will ask the respondents their opinion about the *current* state of terminology work in the company and if they feel that terminology work should be invested in more. I will return to this in chapter 5.6.

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¹⁰ Economic Aspects of Terminology Work – Costs: Problems

¹¹ Economic Aspects of Terminology and Terminology Work – Pricing: Problems

3.2 Acquiring Adequate Tools for Terminology Work

Term banks, translation memories, retrieval tools and other applications have become an essential part of terminology work. They affect every part of it, from work pace for those who store and compile terminological data, to usability for those who benefit from it. Their influence on the user is eminent, since after all, the program used will render terminological data their external appearance, or the interface that the users will come to contact with. Thus, it is only logical to assume that the users' experience of the application itself will affect their way of thinking about terminology. However, because there are numerous tools that could be presented here, and because presenting them would not be very relevant for my case study, I will not go into too much detail. It would not be relevant, because in the company of this case study, no previous terminology work had been done by 2010, the company had not acquired any terminology management tools, and, consequently, the employees had no significant experience of terminology management tools. Therefore, it is reasonable to say that terminology management programs had not – at least to a great extent – affected their opinions on terminology work. Nevertheless, since terminology management tools have unquestionably become a major factor affecting every aspect of terminology work, including the expenses to be invested in it, I cannot exclude them altogether.

In the company, a tool to store terminology data in - a term bank at its simplest - would be of crucial importance for the continuation of terminology projects. Without one, every project has to be started almost from scratch; its form of realisation must be discussed every time anew since there was no database to store the gathered information into. In addition, the employee's easy access to the collected terminology should be ensured. If it is stored in different documents, searching for one particular term becomes exhausting. Furthermore, an ideal term bank application would include several different aspects that cannot be provided by simply collecting terms in, say, a PDF document, such as extended query features, different modes of access for those who use and those who collect the terminology, a guide for the application, tools that would enable creating concept charts, access from Intranet, a user-friendly interface... to mention a few. Combined with translation memories, term banks would be of substantial help in communication with foreign clients. Nevertheless, opting for a term bank or a program that would combine all of the aforementioned aspects can prove to be difficult. Roulin (2001, 38) states that the thesauri would partly cater for the features that lack from term banks: "A thesaurus is more than a mere list of terms. It is a semantically structured set of concepts. The vocabulary is organized according to relations so that it will be easier to understand, survey, and use in a way that

emphasizes the meaning of the terms that comprise it." In addition, using a multi-lingual thesaurus would allow constructing identical semantical relations between language versions, never losing the relation to the concept itself. Other aspects to consider when opting for a thesaurus would be whether the integrated tools are sufficient for all users and all tasks. The advantages of the integrated tools according to Roulin (2001, 383-384) include immediate availability of corrections and updates as well as the availability of usage statistics. If more than one user groups are involved in using the tool, a specialized tool would probably be more adequate in that it would allow controlling the management of versions and separating different user systems in target systems.

Therefore, the acquisition of the "right" terminology tool may become more difficult than what it may seem at first. A term bank should enable storing different kind of information on terms and concepts and presenting them simultaneously in a coherent manner. Extraction functions, their layout on and compatibility with different supports, as well as the research and editing functions should also be considered in advance.

The choice of the program conditions, then, largely the way the project will be led: if the tool allows differentiating user profiles from administrator profiles, this means that there are several people involved. Are all of the users allowed to make entries? If yes, who validates them? Must entries follow specific rules for their format, and is there a control function in the tool to ensure these rules are followed for new entries? Can images be used as definitions? All of these questions would ideally be considered before-hand.

Steurs, De Wachter and De Malsche (2015, 222) compare five different tools: "SDL MultiTerm: the market leader, MemoQ: voted the best TMS [Translation Management System] tool, Wordbee: the new trend of tools in the cloud, i-Term: the ISO-standard, and finally TermTreffer: the exception, made-to-measure." The five were analysed according to five principal criteria (2015, 227): presentation, interface, record structure, in- and output and integration, and chosen because they differ greatly. I will not present each of them in as much detail as Steurs, De Wachter and De Malsche, but give a brief description in order to demonstrate that the choice of the right tool is not only important, but very difficult.

The first tool, SDL MultiTerm package, consists of separate modules: SDL MultiTerm Desktop, SDL MultiTerm Convert, and SDL MultiTerm Extract, each of which reply to a specific need and can be used together or separately. To resume the advantages listed by Steurs, De Wachter and De Malsche (2015, 229-231), the search functions of SDL MultiTerm are advanced, it allows unlimited simultaneous connections, is available online and as a desktop application, is

relatively easy to edit and it supports numerous formats. Its disadvantages are the lack of control on term entries – only double entries are automatically recognised, not the format of the entry – and also the fact that editing is easy. If anyone can edit and add, there is no need to validate the entries separately, which may weaken the quality of the terminology.

The second tool, MemoQ, and its module MemoQ Translator Pro, as its name indicates, is optimised for translators. However, other versions and add-ins have emerged since the comparative analysis of Steurs, De Wachter and De Malsche. The MemoQ family now includes stand-alone products such as MemoQ Free Translator, MemoQ Project Manager and MemoQ web licenses alongside with MemoQ Translator Pro for individual use, and for teamwork, there are MemoQ Server and MemoQ Cloud Server (www.memoq.com). The Project Manager module offers the most comprehensive features for terminology management with several import and export formats, control for approved and forbidden terms, multilingual entry possibilities, and customisable entry structures, even allowing embedding images. However, the division into different modules is rather confusing, and acquiring the project management module for terminology management, and then acquiring an optional module, server or cloud server might prove costly.

The third tool on Steurs, De Wachter and De Malsche's list (2015, 236-237), Wordbee, differs from the two previous tools in its interface accessible only online:

The tool tries to offer a web-based approach, aimed specifically at user-friendliness for collaborative projects. Users do not buy a conventional license, but subscribe to the tool through SaaS. SaaS stands for "Software as a Service" and it means that users do not have to install, manage or maintain any software or servers, because that is part of the "Service". The software is accessed via any popular web browser. This also implies that the initial setup cost is much lower than is the case with the conventional purchase of a tool with a perpetual license.

The obvious advantages are the low initial cost and freedom from version management, perhaps even storing the data on Wordbee's well-secured servers. Nevertheless, the online interface is Wordbee's worst disadvantage as well, as the term entry structure is rather limited, does not allow adding images or organising concepts according to fields and does not provide double entry control. Furthermore, the structure is only partly ISO compliant.

The approach of i-Term, on the other hand, is similar to that of Wordbee. It is a wholly web-based interface with a hosted server environment for customer data. I-Term, however, is designed from the ISO perspective and, consequently, provides a very detailed entry structure with the possibility to customize fields according to the customer company's needs, and include

representations of the whole concept system, as Steurs, De Wachter and De Malsche (2015, 241) describe:

Users can add concepts to an i-Model diagram and interactively build complex representations of the concept system. Each concept is represented by a box containing the term. These boxes can be linked according to their relation (type relation: "part-whole relation", "temporal relation" and "associative relation"); each represented by the ISO approved symbols. Furthermore, characteristic features can be added. All this information is included in the term record automatically with hyperlinks to the term records of the linked concepts.

Unlike the other tools presented above, i-Term is purely a terminology management tool and does not provide a translation environment. The other difference is that it supports all languages, but does not provide an automatic spell-check.

The last tool described by Steurs, De Wachter and De Malsche (2015, 242-244), TermTreffer, is a term extractor rather than a terminology management tool, and designed for a very specific context; extracting Dutch terms from Dutch corpora. Consequently, TermTreffer is not a tool to consider as such as a possible acquisition, but a point of comparison of what exists or could be developed for the specific needs of each terminological project. That said, a solution of this type would be suitable for a project where there are already existing corpora. The extractions create clusters of term candidates around their entries, which can be edited, added or deleted by the users. The entry structures are more limited than in the other tools, and it would be unreasonable to imagine ISO compliant entries as a result, but an extraction tool might facilitate considerably the planning and the selection of terms of a terminological project.

The diversity of the domains involved in terminology projects also requires different types of classification. Santos and Costa (2015, 163) introduce yet another approach to classifying information: knowledge representation. In their scenario, the conceptualization of knowledge is no longer conveyed only through concept-term relations, but a visual concept map of a domain of knowledge was created. In order to do so, they used a collaborative software tool, CMapTools for the graphic knowledge mapping. Nevertheless, the problem identified with this representation is that "[a] concept map does not intend to be a formal representation artefact. The relations between concepts established in such products, require knowledge on formalization languages" and that eventually, the visual representation is unable to contain all of the relations between concepts that the text-based terminology tool could.

As seen above, a multitude of tools and applications exist on the market. Although there is no shortage of options, the company may solicit terminology service providers to negotiate the creation of a customised terminology tool to answer to all its needs. Another problem arises from the development of terminology management programs. Extreme care should be taken to develop the essential features, so that there would be no surprising problems with its usability, the program functions as it is supposed to, and nothing is missing. Nevertheless, products are rarely perfect, and the initial expenses are likely to grow if the finished program does not, after all, meet the expectations and has to be completed with additional modules, or replaced with a better or a more modern one.

At the moment of making the decision of acquiring a term processing tool, all of the expectations of the terminology project and of the tool should be considered. Nonetheless, it would be unrealistic to expect that the people making the decision are aware of all these different factors unless they are themselves familiar with the field of terminology work. Thus, without thorough groundwork in order to map the expectations for the terminology tool, the purposes it is supposed to fill, and the kind of investment the company is willing to make (time and expense wise), there is a risk that the acquisition does not fully correspond to the needs.

Seppälä (2010 b) adds that TSK, although it offers terminology services, does not develop tools for their clients but may help only in defining the necessary features. Therefore, if a company wanted to invest in terminology work by ordering terminological services and an appropriate tool for supporting them, one subcontractor may not be enough to supply both, terminology work and the tool required for it. This may, in turn, weaken the motivation in investing in such a task at all.

3.3 Personnel Appointed for Terminology Work

As already discussed in 2.1, the status of terminology work may be somewhat unrewarding. Ahmad et al.¹² point out that "individuals who are required to create and use terminology are expected to be particularly proficient. In spite of this, the status enjoyed by these creators/users is highly dissatisfying, and career development paths offered prove to be rudimentary." In addition, terminology work is not always recognised as a "legitimate" branch. Consequently, although according to Ahmad et al.¹³, in an ideal situation it is a group of terminologists and subject matter experts that compiles the terminology, the task is more often appointed to other employees in addition to their "normal" work tasks.

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¹² 1996, Actors and working conditions - Problems

In this chapter, I will contemplate on the different possibilities of personnel engaged for realizing a terminological project and the expectations that are attached to them. Since logically the expectations should depend on the know-how of the personnel appointed for the task, my hypothesis is that the appreciation from other employees grows in direct relation with the skills of the personnel appointed for terminology work. The second factor affecting the role of terminology work is if people engaged in it are "insiders"; in other words, whether other employees know them from work or whether they are outside contractors. In some cases, an outside contractor may be seen almost as an authority, and thus increasing the value of terminology work, whereas in others, as a simple outsider whose presence may annoy or be left unnoticed.

The opinion of experts (Dubuc and Lauriston, 1997, 87 and Ahmad et al. ¹⁴) is highly unanimous: the best solution for realising a terminology project is to engage a team consisting of terminologists and subject-field experts. As Dubuc and Lauriston (1997, 87) state, "[a] terminology research team should not be composed exclusively of either terminologists or domain experts. A kind of symbiosis must develop between these two kinds of specialists." I would emphasize the word *team*, since it includes a notion of cooperation. Terminologists alone would not necessarily have the technical knowledge base needed for compiling a highly technical terminology, and on the other hand, subject-field experts usually lack the knowledge for producing high quality terminology. And finally, a team is necessary simply because one person working alone would only be capable of either realizing a terminology with only a small amount of term entries in a reasonable time, or of producing a larger terminology but relatively slowly. Thus, a group is important so that the access to special knowledge – terminological or technical – is ensured, and to increase productivity and quality. Cabré (1999, 220), although she fully agrees on the notion of *team*, goes even further by claiming four types of specialists in order to obtain the best results:

- o translators of technical texts
- o technical writers and editors
- terminologists, who carry out systematic terminological research, write dictionaries, vocabularies and glossaries and find solutions for terminological queries raised by translators, technical writers and editors
- o information scientists, who are in charge of storing and disseminating information, and providing the other groups with the documents necessary for their work.

¹³ 1996, Actors and Working Conditions - Recommendations

¹⁴ ibid.

In addition to this, Cabré (1999, 222) elaborates this quasí-utopist view, maintaining that "[a]lthough it is true that translators, documentation specialists and subject field specialists can be trained in terminology to intervene at a specific point in a research programme, terminologists should be the only professionals who actually write terminologies." By quasí-utopist I refer to the hypothetical situation where a company 1) engages all of these experts, and 2) trains them accordingly, and 3) in spite of the investment in personnel and their training, chooses to use only the expertise of terminologists for the writing of terminologies.

Not surprisingly, the reality is often in blatant contradiction with the opinion of experts. As Bruno de Bessé (1997) states,

most terminological definitions are written by subject-field specialists, because terminologists often lack the understanding of the field to be able to write appropriate definitions. The assistance of specialists is nearly always indispensable. However, specialists will not replace terminographers. In general, they do not lay claim to special terminographic skills, and will willingly cooperate in any terminography work.

Although de Bessé uses the term *terminographer* here, I will keep to *terminologist*. There may be some differences in their job description, but since both represent experts in terminology as opposed to subject-field experts, I will not go into further details.

Although subject-field experts unquestionably master the terminology used better than any outside contractor could, some problems may arise, namely the issue of distinguishing essential terms from common words, as already mentioned in chapter 2. Without the appropriate background knowledge to distinguish and define the essential concepts, the risk of elaborating an unsound concept system increases. Furthermore, Ahmad et al. 15 argue that "[subject-field specialists] are also often unwilling to learn since, in addition to the time this would entail, their hierarchical position is almost always considerably higher than that of terminology and/or language specialists." This entails that the question of position is of importance, and reinforces the impression that the terminology project could be handed to newcomers of low ranking.

I will return to the question of terminology training in the analysis part of this thesis.

Additionally, as Wettengel and Van de Weyer (1997, 458-9) point out, there are other risk factors in using subject field experts for initiating a terminology project as well, namely confusing product names with concepts. In reality, product names cannot be straightforwardly conceptualised, because they not only arise in an uncontrolled manner, but their classification systems may also be created following commercial logic instead of consistent and organised

¹⁵ Actors and Working Conditions – Problems

structures. Wettengel and Van de Weyer (ibid.) illustrate this point with a case that occurred in a company producing electrical devices:

At some point in the firm's development, the sales catalog became difficult to understand because different products had nearly the same name, and the same product, when intended for different usage, had different names. Products were also grouped in *families* (product types) based on different criteria (same usage contexts, same market sector, etc.). One of the side effects of this slightly chaotic situation was that the firm's overview of its market share was blurred.

Even if this fragment concerns only the sales catalogue and not a terminology, the problem is visible. Although subject-field experts may know their products better than anyone, the essential knowledge of what qualifies as a *term* and how to classify them may be lacking. This issue was already mentioned in chapter 2 in connection with the definition of *term*. Even if, according to Pearson, there is no clear definition that could easily help in making a distinction between terms and words, I still believe terminologists are better prepared for solving this sort of problems with at least some experience-based knowledge. Therefore, active cooperation between terminologists and subject-field experts helps produce high quality terminology.

In my opinion, the one positive feature relating to subject-field experts conducting a terminology project alone might be the fact that because they are an inherent part of the company and known to their co-workers, the project they are leading is perceived as "something extra for the company", and thus a positive thing. The same goes for an individual terminologist or a group of them: the quality of the work may not be the best possible without adequate knowledge of the field, but the attitude towards it may depend on wholly different factors - whether they are inhouse –terminologists or not. However, as already mentioned, this may affect in two ways. On one hand, if the company has engaged a reputable outside contractor and the other employees are aware of this, the project may be seen of high value, since the enterprise is willing to invest in it. On the other hand, the fact that the terminologists come from outside of the company may lead to lesser opinions due to their supposed lack of knowledge of the field. It may even be that the information of such a project being realized has not reached all the levels in the company. If this is the case, employees are not likely to understand the reasons for which terminology work is important, either.

As seen before and in chapter 2.1, it is rare to find an actual terminologist charged with the realization of a terminology project, let alone a work group or a department specialised in terminology work. Consequently, we may come across different solutions for undertaking a project of this kind. According to Wright (1997c, 199), "in [some] companies, terminology

standardization is frequently conducted as a collaborative effort among different departments on the one hand and technical communicators (writers, translators and information specialists) on the other." Although this kind of solution lacks the actual terminology experts, to me this seems to be the best of the worse solutions in regard to the status of terminology work and the attitudes towards it. Interaction between departments ensures that the information about such a project reaches the people who actually benefit from the existence of a terminology. In addition, the people involved in it must be aware of *why* such work is being done, which adds its value. To resume, if there is no special terminology work group to undertake a terminological project, the work may still be perceived as better or more valuable if different skills and departments are combined than what it would be if only one person carried out the whole project on their own.

However, we must bear in mind that in this study, I will emphasize a point of view that highlights the factors affecting the *perceptions* of the work itself and towards the personnel in charge of terminology work, and not the quality of the terminology work realized. Therefore, if a choice should be made between either one skilful terminology expert or a team combining different skills – terminological skills not included - Budin and Wright (1997, 19) seem to prefer the terminologist:

Under *ideal* circumstances ... the *terminologist* has the luxury of collecting representative words in a given subject field, compiling the appropriate term lists, developing concept systems, and establishing equivalent relations for two or more languages based on coherent research ... [but] [d]espite the advantages offered by systematic project planning, *translators and technical communicators* are frequently forced to perform terminology management on an ad hoc basis... [italics mine].

Furthermore, this leads us to think that it is *rarely* the case to find actual terminologists realizing the project, but rather a single or several translators, a technical communicator, an information specialist or a group combining some of the above. Wright and Wright (1997, 148-149) see several disadvantages to this kind of situation. The first reason is – not surprisingly – that translators (or technical communicators, or information specialists...) are not subject-field experts and may lack the access to them. The second inconvenience, according to Wright and Wright (1997, 148-149), is that the traditional translation environments are often incompatible with efficient terminology management methods:

Most theoretical treatises and terminology training programs stress the advantages of *systematic terminology management*, which unfortunately fails to take into account the limitations that are imposed in the conventional translation workplace. In scope and methodology, the systematic model is *subject-field-driven*. Here

terminologists have the time to collect materials, selecting terminology, and organizing it according to logical concept systems. This approach affords the opportunity to work with experts end to craft careful definitions. In contrast, ad hoc terminology management is *text-driven*: terminologists and translators creating their own terminology resources are presented with random extracts from a domain.

In other words, if in-house translators are appointed to do terminology work in addition to their own professional tasks, they lack the time and the methods to do systematic terminology work. The structure is inadequate for efficient, organized terminology management and will not produce the best results. In my opinion, the attitudes towards terminology work in these circumstances are slightly different from the cases we have seen above; the resulting terminology may not be of as good quality as if it would have been compiled by a terminologist, and moreover, if there is little or no interaction with subject-field experts, the latter may not even be aware of any terminology work being done. The terminology may thus be discarded as something that is of use for translators, but not necessarily to other employees.

Wright and Wright also raise the question of whether the translator or translators are working on a free-lance basis or in-house employees. I find it hard to believe that translators on a free-lance basis would accept an additional task – especially if they do not have the qualifications for it – if they were not paid accordingly. However, in-house translators might see no problem in performing several tasks that are still somewhat related to their own role. In fact, some may not even realize that they are actually doing any significant terminology work at all. As Ahmad et al. ¹⁶ poignantly observe, "[t]he bulk of terminology work is actually performed by people active in related professions as a part-time (or even spare-time) activity. In fact, many such 'terminologists', particularly those outside large institutions, are not even aware that they are involved in terminological activities and have received no formal training in the subject." Therefore, the terminologies produced by translators may be seen as being part of what translators do and not considered as valuable terminology work at all. The translators themselves and the other employees may share this opinion.

Sometimes, if a company simply does not have the resources to engage terminologists or does not have in-house translators, it is possible to come across a situation, where a person interested in terminology without real competences is appointed to produce a terminology. Although Grattidge and Westbrook (1993, 10) state a "current strong interest in terminological activity [that] arises from the increasing participation of 'non-terminologists', i.e., persons not

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¹⁶ 1996, Actors and Working Conditions – Terminology Producers

academically trained in terminological methodologies and who therefore are coming to the field from professional necessity rather than from scholastic choice," it is still uncommon to encounter a "non-terminologist" with no link to the subject-field either. This type of situation could arise when a person is reappointed to other tasks within a company due to reorganisations, because the company policy encourages polyvalence, or when trainees are hired. Consequently, I assume that the attitude towards someone with similar qualifications realizing a terminology project might be less appreciative than towards a terminology expert. Having learned that the optimal configuration for such a project would combine expertise on the subject-field and on terminology work, it is relatively easy to imagine that a person with no knowledge in either field would easily be discredited. However, there is one redeeming factor that may influence the manner in which the employees perceive the project: informing about it. If the superiors communicate about a project realised under these circumstances, the project, although not as successful as in an ideal situation, is still better than no project at all. Employees might regard it as "a little extra" for the team.

To resume the chapter, my hypothesis is that there are three things that affect the way in which terminology work is perceived in a company: Firstly, the qualifications of the person or the team appointed for the task and having access to subject-field and terminological information. If this is the case, the expectations towards the terminology are supposedly positive. Secondly, if the person or people realizing the terminology work come from within the company. And thirdly, if there is interaction between employees and information about the project concerned. With interaction, the employees also tend to be better informed about the terminology work and the need for it. Although the processes leading to the realization of a terminology project may not be optimal, it is still plausible to think that the attitudes towards terminology work may remain positive if the community that will benefit from the terminology is informed about the advantages of such work.

These factors are addressed in the questionnaire through a set of questions. I will return to the results in chapter 5.5.

3.4 Time Limitations and the Range of the Project

Logically, one might think that "the bigger the better" and "the sooner, the better". However, even if small terminologies covering fewer term entries are undoubtedly less applicable than larger ones, size is not necessarily always the key. As Sager (1990, 209) points out, when

terminologies are expanded to cover too many term entries, the accuracy and the predictability of use for some terms suffer. Especially if several technical terminologies are combined in a collective one from different subject-fields, without meticulous definitions of areas of application, the user will not know in which contexts terms are to be used. Furthermore, same terms may appear in different subject-fields and have diverging meanings. Even if Ahmad et al. ¹⁷ call for more networking and exchange between terminological organizations, the lack of it may sometimes be a positive thing. Too large terminologies may actually hinder and confuse the user who is not familiar with the subject-field in question. Also, according to Budin and Wright (1997, 22),

care should be taken not to standardize terms that are currently in a state of flux because of rapidly evolving technology. This aspect can be difficult to judge, however, in new disciplines where inaccurate, inelegant or polysemic terms can establish themselves very rapidly and lead to difficulties later.

In other words, standardization should not become an issue until the field in question has developed enough and is relatively stable. On the other hand, Wright (1997c, 201) draws attention to fields that undergo constant change. "Premature or inappropriate standardization should be avoided in very young domains or areas where extremely rapid development is drastically changing the appearance of a discipline. Given the rate of change in today's world, however, this distinction can be difficult to gauge." As discussed in the Introduction, standardization and terminology management are not synonyms for one another, but too large terminologies may actually lead to a situation where harmonisation would be needed. For me, there is no reason why terminology management could not be part of a company's processes from the start. This would facilitate the process of standardization in its due time.

Time limitations affect terminologies in a self-evident manner. It is hardly no surprise that a project given too short a time range will not have the time to mature and the work has to be realised in a haste, which may be visible in the resulting terminology in either fewer term entries or in inaccurate or lacking concept relations. Evidently, if a project is faced with a schedule that imposes the publication or ceasing the compiling of the terminology before it is ready, the quality of the terminology will suffer, and the user experience with such a terminology would supposedly be unpleasant. This, in turn, will deteriorate the image of terminology work. Wright and Wright (1997, 150) reinforce the impression: "...unfortunately, the terminology provided by some clients is sometimes so bad that it actually slows down production instead of assisting it. Time

¹⁷ 1996, National and Regional Aspects of Terminology Work – Solutions and Recommendations

limitations, however, remain the greatest hurdle, one that can only be surmounted by virtue of high-level keyboarding skills, experience, and highly efficient, interactive software design." The best remedy for a short deadline, is again, experience.

The aspect of time enters in the picture in also if a short terminological project is juxtaposed with continuous, ongoing terminology work inside a company. In my opinion, if a terminological unit was established within a company, it would add the value of terminology work in the eyes of the employees, whereas a simple terminological project of a defined length may be seen as short-ranged and thus less useful in the long run. Cerrella Bauer (2015, 338) seems to agree: "Terminology is not an end product. It changes and develops constantly. A well-conceived terminology process is the precondition for ensuring a successful development of the terminology collection." I understand it so that although a terminology has been initiated in the framework of a project, it would ideally outlive the project and continue to grow, be used and managed.

From the perspective of my thesis, the problem with time limitations is that asking a question on deadlines would be too leading. There is no easy way to address the question, even though of great relevance when it comes to high-quality terminology work. Consequently, it becomes difficult to actually measure how time limitations affect the attitudes towards terminology work. The best way to do this would be through comparing two or several similar terminologies that had been compiled under different time limitations. It would, perhaps, then be possible to draw some conclusions on the experience of satisfaction of the users. Nonetheless, this is something that is out of the range of my thesis. The only reasonable way of asking respondents about how they feel about time limitations in terms of terminology work is to disguise it in a different form. Questions such as "Would you be willing to sacrifice speed for quality?" or "What, in your opinion, would be a reasonable time range for a terminology project?" would be either too loaded or too vague, given that the respondents most likely have no notion of what is reasonable in terms of time range for a terminology project. The questions I included in the questionnaire address the time issue from a more personal aspect. I will return to this question later in the chapter 5.6 (Investing in Terminology Work).

4. The Method

To gather material for my analysis, I drafted a questionnaire (see Appendix) to be filled in by the employees of the Finnish industrial company. I chose this method, because it seemed like the simplest way to gather comparable opinions. For instance, interviewing the employees would have taken considerably more time and required some organization in order to collect a sufficient number of responses. In addition, the method chosen did not require my presence, which was a significant advantage given that I did not have to travel to Vantaa repeatedly.

The questionnaire was originally meant to be online, but due to the strict Internet security control in the company's premises, the employees could not access the questionnaire page. Therefore, I finally relied on an "old school" method, that is, a paper-and-pen questionnaire. This may have affected the response rate, but in the end, the number of responses was nevertheless fairly satisfactory. The form and a cover letter were sent on the 15th of April 2010 to 38 people, with a response time of one week. 24 responded, which gives a response rate of 63,2 %. The disadvantage of the paper form was that respondents do not always respond to the questions as straightforwardly as they would have done with an online form. The paper-and-pen method enables the respondents to add "unwanted" clarifications, which are sometimes hard to categorize. Also, there is no way of ensuring that they respond to every question or that they tick only one box if the question is not a multiple choice one. The same factors can sometimes also be considered an advantage: if the respondents do not find a suitable option, they may choose to tick two boxes that may better represent their answer than only one box. An online form is certainly easier to analyse but it does not allow any responses deviant of the form.

The questionnaire was in Finnish, because a large number of the company's headquarters' employees is Finnish. I did consider about sending two questionnaires, one in Finnish and one in English, but since the response rate with the Finnish form was reasonably good, I decided not to use the English one. In addition, although I translated the questionnaire as best I could, there is still a risk that the questions do not correspond entirely.

I used Weintraub Austin and Pinkerton's (2006) guidelines for questionnaire design, but there may be flaws in the design of the questionnaire causing bias. The form consisted of 15 questions, of which most were multiple-choice questions. In addition, there were some clarifying open questions.

The first three questions were designed to gain some background information on the respondents, namely their work sector, their educational background and the amount of time they

have been working for the company I did not ask their gender or age, because I thought it was not relevant for analysing the responses. Furthermore, leaving these factors out helps guarantee the respondents' anonymity. Their roles at the company, their work experience and their educational background might have an impact on their vision of terminology work. The information about the respondents' work sector was important because different user groups might emerge and there may be differences in the use of terminology between different sectors. For instance, in product development and maintenance the employees would be more likely to require knowledge of specific parts, where as in marketing, what may be important is understanding "the bigger picture". Knowing that terminological studies are taught mainly under humanities, I thought that the educational background might affect the respondents' view about terminology work. And finally, the years of experience in the company may have an impact on the respondents' knowledge of the subject field and its terminology. Those who have longer work experience within the company may feel more at ease with specific terminology than those that have joined the team more recently. Therefore, the need for a terminology that the respondents may experience may be in part proportional to the respondents' years of experience. Funnily, it did not occur to me to ask if the employees had had any previous experience of terminology work or working with terminology management tools. This would have been a useful addition to the set of questions.

Questions 4 to 6 deal with the respondents' "communicational background information", that is, if their work includes communicating with foreign clients or subsidiaries, how often, and if they have experienced a need for a terminology. These questions were designed to understand better if a terminology would be considered useful in their day-to-day activities.

Question 7 reflects on the kind of terminology the respondents consider the most suitable for their needs. This question is aimed to identify the structure of the ideal terminology, whether it would require solid terminological knowledge to compile one, and eventually to identify tools that would correspond to the expressed need. This turned out to be a tricky question, since I assumed that the respondents did not have any significant knowledge on terminology work or the tools to realise it, and had to limit the question to the representation of the relation of term and concept. I did not venture to ask what kind of a tool would be preferred.

The rest of the questions measure perceptions of and opinions about terminology work. More specifically, questions 8 and 9 address the perceived usefulness and importance of terminology work, and questions 10 to 13 outline the employees' perceptions on the resources appointed for terminology work, and whether they might show any signs of the respondents'

willingness to accept internal or external contributors in conducting terminology work. A question is asked on the most suitable person or a work team to conduct terminology work. These are the core of my research question, analysing the perceived importance or usefulness of terminology work within the company.

Finally, questions 14 and 15 address the respondents' views on whether they consider terminology work should be invested in more.

5. Reporting and Analysing the Results

In this chapter, I will report and analyse, hand in hand, the responses gathered with the aid of the questionnaire.

The answers to the first questions "Questions 1-3: Background Knowledge about the Respondents", will be analysed in chapter 5.1.

Questions 4 to 6 on respondents' "communicational background information", will be analysed in chapter 5.2. Although question 6 and 7 are similar, the analysis of question 7 is separated in chapter 5.3 in order to isolate the question of the most suitable type of terminology the respondents considered the most useful.

In chapter 5.4, I will analyse the responses to questions 8 and 9 on the perceived usefulness and importance of terminology work, and in chapter 5.5, questions 10 to 13 on perceptions of the resources appointed for terminology work. Finally, chapter 5.6 will discuss the responses to questions 14 and 15 on investing more in terminology work.

5.1 Questions 1-3: Background Knowledge about the Respondents

Upon the question about the respondents' work sectors in the company, I found out that the five categories that I chose as options — *Product development, Project management, Sales, Maintenance*, and *Something else* — were not necessarily comprehensive enough, because as many as 5 respondents ticked the option *Something else* and 3 respondents ticked two options simultaneously, which I also counted under the same label *Something else*. I should have included more sectors to choose from, although obtaining the tendency of line of work is more useful than obtaining all the actual titles. The table below shows the number of responses per sector.

Table 1. The respondents' work sector.

Sector	Number out of 24
Product development	6
Project management	5
Sales	3
Maintenance	2
Something else	8

Table 1 does not quite correspond to reality with its simplicity. As already mentioned, the category Something else assembles the different answers for sectors and titles, such as Marketing, Logistics, Acquisition, Sales and Business development, and Expert in commercial projects. Therefore, the category swallows a large part of the responses and also hides the fact that between the work sectors, there is some overlapping; two respondents ticked Sales and Maintenance, and one chose both Sales and Project management. Some overlapping could perhaps have been avoided by adding another category, After sales. However, what Table 1 and the high number of responses in Something else does show is that the questionnaire reached a fairly heterogeneous group of respondents. This is a positive factor, since the questionnaire was open to all of the company's employees and the goal was to collect opinions from different sectors. Although the take was too small to draw generalisations on, reflections can still be made on, for instance, the role of the sector or of work experience on respondents' opinions, if obvious differences between two groups appear. The majority, approximately a quarter of the respondents, work in Product development – although only six in number – and five respondents in Project management.

Upon question 2 of their educational background, the large majority of respondents – 18 out of 23 – answered having received a technical education. Four had a commercial education, two a combination of technical and commercial, and none had studied the humanities. This is hardly a surprise in a largely technical field. Not surprisingly, those who work in *Sales* had a commercial educational background.

The third question on the respondents' background concerned their years of experience in the company. Table 2 below shows that the majority – 10 respondents – had worked there for fewer than or up to two years, and nine people had worked there from two to five years. Three respondents had been working there from five to ten years, and only two for more than ten years.

Table 2. Work experience.

Work experience	Number of respondents		
0 – 2 years	10		
2 – 5 years	9		
5 – 10 years	3		
> 10 years	2		

It can be stated that the majority of the respondents had less than 5 years of experience in the company, and that the need for a terminology might emerge more from there.

5.2 Questions 4-6: Communicational Background Information

The four questions 4-7 are designed to gather some communicational information about the respondents. By this, I mean the type of communication that might require using a specific terminology or foreign languages. I did not chart the means through which the respondents communicate or interact (e.g. e-mail, telephone, fax...) or the amount of time they use for their communication. These questions were also drawn to measure the respondents' experience of a need for a terminology. However, question 7 was also designed

I deliberately left out the definitions for the time adverbials and did not present options such as "on a daily basis", "weekly", "several times a week", "once a week", etc. If I defined the time adverbials according to the actual instances of communication, it might leave out the time spent preparing the message to be communicated, which may vary from an e-mail of confirmation saying "O.K." to an entire file containing several documents. Therefore, I thought it best to rely on the respondents' judgment. After all, what some may consider to be "often" may not be the same for others, but the essential was to capture their impression of it.

As Table 3 shows, both of these questions raised a high number of "Often" answers and a fair number of "Sometimes".

Table 3. Communicating with foreign clients.

Communicating with foreign clients	Number of respondents		
No	2		
Sometimes	5		
Often	17		

One respondent among those who ticked "often" replaced the word "clients" with "writers", but I still count the response in the same way, because the emphasis was on the notion frequency and the "foreign" nature of communication. Nevertheless, this shows that there is perhaps more than one kind of interlocutor and specific needs for their communication.

Table 4 shows that there is perhaps less communication with foreign subsidiaries than with foreign clients. However, only one respondent's work does not include communicating with them.

Table 4. Communicating with foreign subsidiaries.

Communicating with foreign subsidiaries	Number of respondents
No	1
Sometimes	11
Often	12

The response to question 6 in the questionnaire was unusually unanimous. When asked if the respondents had found themselves in a situation where they would have needed a terminology, all 24 respondents answered "Yes" – although one did clarify his or her response with an additional "but rarely". This, again, shows that respondents could have hoped for less extreme answer options such as "No," "Rarely," "Sometimes," and "Often". However, there is a perceivable need for a terminology. The question was paired with a clarifying, multiple-choice question on what the respondents would have needed a terminology for. The respondents could tick one or several of the five different options. If every ticked option was counted, there were 53 answers. Of these, 18 were for "I could have expressed myself in a simpler way at work," and 13 answered "I would have needed a *translation* for a term for my communication with a client / foreign subsidiary." 10 opted for "I would have needed an *explanation* for a term to understand it better myself," 8 for "I would have needed a translation for a term to understand it better myself," and 4 "For something else." The following table illustrates the distribution of answers:

Table 5. Distribution of answers on different needs for a terminology.

What would you have needed a terminology for?	Out of 53
I would have needed a translation for a term to understand it better myself.	8
I would have needed an explanation for a term to understand it better myself.	10
I would have needed a translation for a term for my communication with a client / foreign subsidiary.	13
I could have expressed myself in a simpler way at work.	18
For something else.	4

What the table does not show is that most of the 24 respondents only chose one or two options, but five of them ticked three options, two chose four options and one respondent ticked all five options. Those four who chose "For something else," listed having experienced a need for a terminology for the following purposes:

- o Finding synonyms
- Copy-pasting ("If terms had English explanations, they would be easier to copy and paste to foreign clients. I wouldn't have to translate them myself, which sometimes may lead to mistakes or misunderstandings"),
- o Communication on type approvals
- Localisation of the marketing materials. ("Localising marketing materials would be easier
 if everyone used the same terms (in the English originals as well). Sometimes, it would
 also help if we could give a terminology to writers or editors outside the company.")

These answers show that a terminology would be of use for many different purposes: from understanding better to speeding up communication by copy-pasting and to harmonising terminology for simpler localisation.

5.3 Question 7: The Type of Terminology Considered the Most Useful

Question 7, "What kind of a terminology would you consider needed the most?" aims at defining whether a concept system would be necessary for the terminology in the company, and if so, identifying the skills and terminology needed in compiling the terminology. This issue was already briefly introduced in 3.2 Acquiring Adequate Tools for Terminology Work

Table 6. Distribution of answers on needs for a type of terminology.

7) What kind of a terminology would you consider the most useful?		
You can choose more than one option.	out of 38	
A dictionary type Finnish-English terminology	5	
A concept terminology, where definitions for terms are given in Finnish	2	
A concept terminology, where definitions for terms are given in		
Finnish, and an equivalent is given in English		
A concept terminology, where definitions for terms are given in English	16	
and an equivalent for the term is given in Finnish		
A concept terminology charting the relationships between concepts	2	

This employees' responses to question 7, chart the different kinds of terminologies that the employees felt they needed. The respondents were given five different options, of which they could choose one or more. All in all, 38 responses were given, of which 16 favoured "a concept

terminology, where definitions for terms are given in English and an equivalent for the term is given in Finnish," and 13 "a concept terminology, where definitions for terms are given in Finnish, and an equivalent is given in English". In other words, there is a clear-cut preference for a terminology that would combine two languages and a definition. "A dictionary type Finnish-English terminology" was ticked five times, "a concept terminology, where definitions for terms are given in Finnish" two times and "a concept terminology charting the relationships between concepts" equally two times. What is interesting with question 7 is to note that 15 respondents, which is more than a half, chose only one option. Nine of them opted for an English definition and a translation of the term in Finnish, five for a Finnish definition and a translation of the term in English, and one for a dictionary-type Finnish-English terminology. Only nine respondents chose two or more options, of which six ticked two options, one respondent three options and two ticked four options. I had not only expected more answers combining two or more options, but furthermore, the combinations themselves were somewhat surprising. I had expected the respondents to tick one of the options combining a definition and a translation with the option of a dictionary type terminology. I had imagined that this type of combination would respond to the need to browse for a quick translation and possibly a definition. To my surprise, only two respondents had chosen this combination, whereas four respondents had ticked both of the two different options combining a definition and a translation. The small number of responses favouring the Finnish-only options, however, was not a surprise.

I assumed that the respondents have no specific knowledge of terminology work, and orientated the question around the most tangible aspects of everyday communication: language and whether what was needed would amount to something relatively "simple" as a bilingual dictionary, or more complex, such as a concept system. I wanted to include the notion of another language so that the results would also give an indicative view on what kind of a tool would be the most suitable for presenting terminological data. If the notion of translation is important, the tool a should allow not only submitting term entries in two languages, but also submitting the definition in two languages and maintaining the reference in the two.

I should have also included a question on the type of definition the respondents preferred: definitions documenting function or structure, identification numbers, or even illustrations. However, the more exhaustive the list, the more would be expected from the terminology. For illustrations and identification numbers, the resources appointed for documentation would need to follow.

5.4 Questions 8 and 9: On the importance or Usefulness of Terminology Work

In question 8, the respondents were asked to assess the importance of terminology work on a Likert scale, that is, by choosing a value from 1 to 5, 1 being "not important at all," 2 "not very important," 3 "somewhat important," 4 "important" and 5 "very important".

Table 7: The importance of terminology work on a scale from 1 to 5

8) How important, on a scale from 1 to 5, do you consider	Number of	
terminology work to be?	answers	
1 not important at all	0	
2 not very important	3	
3 somewhat important	8	
4 important	9	
5 very important	4	

The average value of all the responses was 3,58 on a scale from 1 to 5, which would place it in between "somewhat important" and "important". This is rather optimistic compared to Ahmad et al.'s rather pessimistic view of the appreciation of terminology work discussed in chapter 2.1. The high average is explained by the fact that the lowest values, 1 and 2, obtained surprisingly few responses. No one responded "1, not important at all," which was somewhat surprising after having come across rather grim descriptions of the status of terminology work. The lack of responses stating that terminology work is "not important at all" may, on the other hand, be due to the respondents' politeness and unwillingness to express opinions that they suppose contrary to the questionnaire's maker's. According to Weintraub Austin and Pinkerton (2006, 232), however, respondents are more likely to be truthful with this type of scale than if they were presented a statement and asked to respond by "I agree," or "I disagree". Similarly, only three respondents chose "2, not very important", and the only one having given an explanation to this view, grounded his or her opinion by stating that "[t]erminology work is not productive, that is, it does not add value to stockholders. Terminologies are mostly a tool making communication easier at the workplace". This response follows closely the opinion held by Ahmad et al. that clients (and stockholders) are hard to convince of the benefits of terminology work.

The respondents were also asked to justify their choices in the following question "Why?" All 24 respondents answered the question of evaluating the importance of terminology work, but only 17 filled in the following question,

The eight respondents, in turn, that had assessed terminology work to be "3, somewhat important", were more eloquent and justified their opinions with these arguments:

- o It makes communication easier and makes it sound more professional. It also saves time because I wouldn't have to a) google things b) ponder too much myself c) be misunderstood and correct mistakes and d) be ashamed. ☺ [The smiley was part of the response.]
- o It would make life easier, but on the other hand, there are other ways to find out things.
- o Gives a better impression of our skills. Makes it easier for the interlocutor to understand things if we use the right terms.
- Would be important for giving more professional credibility.
- o It would be important that everybody at in the company used the same terms and understood their meanings right. Our internal communication would be better and the message to clients coherent.

Nine respondents estimated terminology work to be as important as 4 on a scale from 1 to 5. The justifications were similar to those listed above; most of the responses emphasized making communication accurate, reducing the possibility of misunderstandings, increasing efficiency and giving out a coherent message. Among the comments, one drew attention to the fact that "Market areas are constantly growing, and new staff should be trained." However, the role of terminology work in this statement was, to me, left somewhat unclear. One possible interpretation is that training new employees would perhaps be easier if a terminology defining the essential concepts was in their disposition. It could also mean that growing market areas imply new concepts to be covered by terminology work, and that terminology work could use new experts. Another ambiguous statement, "Technical terminologies are often deficient," appeared among the explanations on why the respondents gave the importance of terminology work the value they did. It can be interpreted either as an opinion favouring terminology work in order to improve the existing, deficient terminologies, or as a negative opinion about terminologies in general. However, since the respondent thought terminology be as important as 4 on a scale from one to five, the favourable interpretation is justified.

Four respondents assessed terminology work to be "5, very important". Although no generalisations can be made on four people, it is interesting to note that all of them work at Sales or Maintenance (or After Sales, if that is the correct assumption of those who ticked both of the Sales and Maintenance boxes when asked their work sector). The Sales aspect became apparent from one respondent's statement "To be able to offer the best service to our clients." The other comments stressed the importance of "one common language": "A standard / an existing terminology would make work easier and clearer. 'A common language' to discuss things," said

one, and "Technical vocabulary is in use on an everyday basis," commented another. Efficiency was again touched upon, as well: "It would make work pace faster, which would leave time for other work tasks." These opinions echo those that justify the need for terminology work with a significant gain of efficiency and time.

Question 9, "Do you believe a terminology would be helpful to you in the future?" assembled a 100 % unanimous "Yes" response. This question concerned any future terminologies, which was made clear to the respondents with a clarification accompanying the question. However, the fact that the question concerned hypothetical, larger terminologies (which may never come into existence) and that the answer options included only "Yes" and "No" boxes, and not a "Maybe" or "I don't know" option, may make the unanimous "Yes" response seem somewhat dubious. The question was followed by a clarifying question "If yes, how?". This question was similar to the one in question 8, "Why [do you consider terminology work as important as you assessed it to be]?" and did not add much new information on the respondents' views about it. Eight respondents did not fill in the "If yes, how?" question in question 9, and three marked "the same as in question 8". Although question 8 was designed to gather responses about the respondents' views on the importance of terminology work on a more general, corporate level, and question 9 on the uses of terminologies on a more personal level, the two questions seem to have been judged too alike. I should perhaps have added explanatory comments on the nature of these questions, but I did not see the need for this when drafting the questions. Therefore, some of the comments were similar to the responses to question 8: "Communication is easier," said one respondent, and "Would sometimes be useful for my communication with the customer interface," added another. One of the recurrent themes was also that everybody should speak "the same language". However, the other 9 respondents gave answers that were significantly different from their responses to question 8, so the "general vs. personal" aspect of these questions was not completely lost. For instance, the respondent who answered "It would make life easier, but on the other hand, there are other ways to find out things" to question 8 ("Why [do you consider terminology work as important as you assessed it to be]?"), emphasized in question 9 that terminologies would "make learning quicker and improve my knowledge of the products". Similarly, the respondent who answered simply "It would be easier" to question 8, went into much detail in his or her response to question 9: "Standard terminologies would ascertain that everyone means the same thing with the same term. My work would be easier and there would be less mistakes." In addition, one of the respondents who esteemed terminology work to be "2, not very important" and justified this opinion with the

statement that "Terminology work is not productive, that is, it does not add value to stockholders," did nevertheless answer to question 9 that "I believe they [terminologies] would make my communication clearer and more coherent in many different situations." Other comments, such as listed below, also stress the personal aspect:

- o I'd rather check the meanings of terms than use words whose meanings I'm not sure of. This is where terminologies and concept terminologies come in handy.
- o I don't have to deal with technical issues all the time, so sometimes it would be good to just *quickly* check some term.
- o [Terminologies] would make it easier to absorb new information and to explain it again to someone else.

What was interesting to note is that five of the eight respondents that had not given an answer to question 8, did answer question 9. Consequently, this question did finally gather some new opinions.

5.5 Questions 10-13: Resources Appointed for Terminology Work

Questions 10 to 13 were designed for gathering information on the perception of the resources appointed for terminology work and of the work itself. It is rather difficult to phrase questions informative enough to obtain responses on the desired aspect, but not too leading. Therefore, many of the following questions are formulated in a more personal manner.

Question 10, "Would you be willing to participate in the terminology work?" (and the accompanying explanation, "For example, in checking the definitions for terms and concepts, explaining terms or adding suggestions for the term list") was designed to gain information the employees' attitude towards three things. First of all, the question measures, exactly as it says, the respondents' willingness to participate in terminology work if such a possibility existed. Secondly, the answer options "No," "Yes, as long as it does not take too much time," and "Of course, so that the resulting terminology will be as good as possible" were designed in such a way that the time issue could be addressed. The last two options could possibly reveal an unwillingness towards sacrificing one's time — which is understandable. And thirdly, as mentioned in chapter 3.3, the question was designed to give an indicative view of the respondents' feelings towards interaction between the terminological and the technical side. However, the answer options may not have been in balance together, as the "No" option seems rather blunt compared to the other to options. This can also be seen in the answers: only five respondents answered "No", and one of them perhaps felt the need to justify such a brusque

response by adding "I don't have enough experience." Thirteen of the respondents replied "Yes, as long as it does not take too much time," and four "Of course, so that the resulting terminology will be as good as possible," although one wrote "If only I can?" after the latter. There were two ambiguous response combinations: one respondent ticked both of the affirmative boxes ("Yes, as long as it does not take too much time," and "Of course, so that the resulting terminology will be as good as possible,") but added a comment next to them: "I don't think I have much time..." The other chose both "No" and "Of course, so that the resulting terminology will be as good as possible," and added (possibly as an afterthought after first having ticked "No",) "I could be the one who checks if a layman understands the definitions!" From the three "modified" answers I gather that the willingness to participate exists, but the respondents doubt their abilities to do so or do not want to sacrifice too much of their time.

Question 11, "Would you be interested in participating in terminology training organized in the company if such training was available?" was presented with three answer options: "No," "Maybe," and "Yes". Six employees answered straightforwardly "No," of whom one commented on his or her answer with "I don't have time." Sixteen respondents ticked "Maybe," and two "Yes".

The next question, question 12, "Who, in your opinion, would be the best person to realize the terminology work at in the company?" is somewhat difficult to report for the simple reason that it was a multiple-choice question with several different answer possibilities resulting in different combinations. The answer options and the number of occurrences figure in the table below:

Table 8: Best choice for people appointed for terminology work

Who, in your opinion, would be the best person to realize the terminology work at in the company?	Number of occurrences
A terminologist	3
A group of terminologists	2
A translator	4
A subject field expert	3
A work group consisting of a terminologist and subject field experts	13
Anyone interested in terminology work	6

Although it may seem that the options are in an imbalance with each other, that is, there are options presenting one single person and groups of people, it was intentional. This way, there might be a way of measuring if the respondents make any difference in assigning terminology

work to a group or a single person, or to their roles or terminological skills. I did not expect the employees to know an ideal composition of a terminology work group, so I included some options that represent the realistic situation in the field of terminology work. This is why "A translator" appears among the options, as well as "Anyone interested in terminology work". It must be borne in mind that here is no "right" answer to this question, although some may seem more evident than others. I intentionally formed the "self-evident" option of "A work group consisting of a terminologist and subject field experts" so that the terminologist is in singular and subject field experts in plural although it may not be the ideal combination. However, I should perhaps have included the "information scientist" or the "documentation specialist" (proposed by Cabré, see chapter 3.2, 16-17) among the options to see if respondents appreciated skills of this kind harnessed for terminology work. I also left "A technical writer" out of the options, although that could have been added.

One respondent left the question blank. Of the 23 three respondents that answered the question, eleven ticked only one box, "A work group consisting of a terminologist and subject field experts". This result may be a positive and a negative one at the same time: positive, because almost a half of the respondents recognise that to realize a terminological project, at least two different kinds of know-how must be combined. On the other hand, the result could be regarded of questionable reliability on the grounds of the seemingly imbalanced options. The respondents might feel that the more complete option is the expected answer and choose accordingly.

Five other respondents ticked only one option also, but other than "A work group consisting of a terminologist and subject field experts". Three of them chose "Anyone interested in terminology work", one "A translator", and one "A subject field expert". These responses are more in accordance with reality in many companies, but not necessarily the best alternative. Although attitudes are hard to measure, these responses may reveal a certain tolerance for "lesser" terminological skills.

Six other respondents ticked two boxes at the same time, and one respondent three boxes. There were no significant similarities in their responses, which are listed below:

- A group of terminologists + a work group consisting of a terminologist and subject field experts
- A translator + a subject field expert (A combination chosen by two respondents)
- A work group consisting of a terminologist and subject field experts
 + anyone interested in terminology work
- A subject field expert + anyone interested in terminology work

- A terminologist + anyone interested in terminology work
- o A terminologist + a group of terminologists + a translator

What can be said, though, is that the respondents may have proceeded differently from one another when choosing their answers. They may have ticked two (or three) actors that would complete each other and perhaps form a good team, as for instance, with the combination of a translator and a subject field expert. Or, they might have reasoned with an "either – or" approach in mind (that is: "The best person for terminology work would be either 'a group of terminologists' or 'a work group consisting of a terminologist and subject field experts'") and ticked both options. I did not think of this when drafting the question. This makes it more difficult to analyse the results when the respondents might have chosen their responses according to different thought patterns. Therefore, the best way to proceed is by examining what the respondents did not choose. It seems that only two of the responses combining two or three options include both terminological experts and subject field experts. The other responses left out either terminologists or subject field experts. In addition, three of these responses included "anyone interested in terminology work." This matter was briefly discussed in chapter 3.4, Personnel Appointed for Terminology Work. Here, the situation could be interpreted in to ways: as an equation "x + x = team" or as an "either – or" situation as explained above. In other words, some of the respondents tolerate or even support the presence of "anyone interested in terminology work" as a part of a team. In an "either – or" situation, this could also be interpreted as tolerance: if the primary choice (be it subject field expert, a terminologist or a group of terminologists) of personnel is not available, anyone could do. Of course, it would be better if the people in charge of terminology work had experience in it, but if it is not possible to engage experts, anyone is better than no one - especially if the realisation of a terminological project depends on available resources.

Question 13, "Do you think that the person in charge of terminology work should come from within the company?" was presented with three optional answers: "Yes," "No," and "It doesn't matter". All respondents answered the question, but two of them chose more than one answer, which makes it harder to interpret their opinions. One ticked both "Yes" and "It doesn't matter," which I will count as a "yes" answer based on his or her response to question 14 "What do you think about terminology work in the company?"). I will return to this when reporting question 14. In the other ambiguous response, all of the three options were chosen, and next to them, there was a written comment: "It depends." However, as this was the only explanation, and

I do not know on what "it depends," I cannot venture to guess. Consequently, I had to exclude this answer from the responses. Therefore, only 23 responses were valid for this question.

Table 9: Terminology work from within the company?

"Do you think that the person in charge of terminology work should come from within the company?"	Number of answers (out of 23)
Yes	11
No	2
It doesn't matter	10

Ten respondents answered that "It doesn't matter," and eleven (including the one having ticked two options) answered "Yes." Only two respondents were of the opinion that the person (or people) in charge of terminology work should not come from within the company. One of the respondents having answered "It doesn't matter" wrote a comment next to his or her answer saying that "Of course somebody from the company should participate *also*" [italics mine], which suggests that the respondent would prefer to see a team consisting of both "insiders" and "outsiders". Again, I should have thought of this and perhaps offered an option such as "Not necessarily; a team could consist of people from within and from outside the company," along with the other suggestions. However, this could have been too leading. In addition, the fact that normally if terminologists are employed, they do work with someone from the company, namely, subject field experts. Therefore, adding a fourth option could have led the question in a different direction and make it difficult to judge if respondents feel differently if the person *in charge* of the terminological project came from outside.

5.6 Questions 14 and 15: Investing in Terminology Work

Question 14, "As mentioned in the cover letter, there is one preliminary terminology project going on in the company at the moment. What do you think about terminology work in the company?" was presented with four alternative answers: "The current situation is good," "It should be invested in more," "I don't think terminology work is necessary," and "I don't know." No one replied "I don't think terminology work is necessary," ten respondents ticked "I don't know," three thought that the current situation is good, and eleven opted for "It should be invested in more". Although a large number of respondents remained neutral on the subject,

almost the same number of people took a favouring attitude towards terminology work. The question was followed by another one: "If you think it should be invested in more, how?" Of the eleven respondents having replied that terminology work should be invested in more, ten replied. In addition, one respondent having replied that the current situation is good and one respondent having replied "I don't know," answered to this question. These two respondents may have answered inadvertently, not paying attention to the phrasing of the question, or perhaps they were at least not *against* the idea that terminology work should be invested in more, although they stayed rather neutral on the matter in the preceding question. Consequently, twelve employees filled in the question. The six suggestions and the number of times they were chosen are listed below:

Table 10 – How should terminology work be invested in more?

How should terminology be invested in more?	Number of answers
By investing in programs applicable for terminology work	3
(for instance, in translation memory programs, in programs	
helping in collecting terms.)	
By focusing on the quality of processes of terminology work.	3
By hiring more people to do terminology work.	1
By hiring a specialist in terminology work or by	6
commissioning a project from a contractor.	
By training people from inside the company to do terminology	4
work.	
In some other way, how?	1

Although the respondents had the possibility to choose more than one answer, seven out of twelve chose only one. Four out of these favoured hiring a specialist or a contractor for terminology work, one suggested investing in programs, one training people from inside the company, and one ticked "in some other way" and suggested "Processes + programs + people; a well-developed and structured framework to take it forward in a consistent manner." This answer, I gather, embraces all of the suggestions that were offered.

I addressed the question of choice of tools only in the first option "By investing in programs applicable for terminology work (for instance, in translation memory programs, in programs helping in collecting terms.)", since no terminology processing tools are used in the company, that I know of. I did not want to go into too much detail in the hypothetic acquisition or developing of a terminology tool as it would require some knowledge or previous experience of using terminology management tools. Also, the notion of investing would probably require some

knowledge of the cost of such a tool, as well as the budgetary resources of the company. Since I assume this is not the case, I did not include questions about the effects of investing in or using a program for terminology management in the questionnaire. It would be too leading to ask questions such as "Do you think terminology management tools are necessary for doing terminology work?" or "Do you believe that terminology work realized with terminology management tools is of more value than terminology work realized without them?" However, to gain some (although vague) information on the subject, I left the employees the possibility of choosing "investing in programs applicable for terminology work" as an answer to a question regarding possible ways of investing in terminology work.

Interesting observations can be made about the respondents' view on whether the people doing terminology work should come from within the company. Respondents were asked this in question 13, and, as noted before, ten respondents answered that "It doesn't matter," eleven "Yes," and only two respondents were of the opinion that the person (or people) in charge of terminology work should not come from within the company. In question 14, however, four of the respondents having replied "it doesn't matter" in question 13, favoured hiring a specialist in terminology work or commissioning a project form a contractor over training people within the company. Therefore, their answer "It doesn't matter" could be questioned, if they finally do have a small preference for engaging a professional terminologist from outside the company. Consequently, these responses could be counted as a negative answer to question 13, which would then make a total of six "no" responses. Those who had replied "yes, [the person in charge of terminology work should come from within the company]" to question 13, stayed true to their opinion and favoured, in question 14, training people within the company to do terminology work. The one respondent having written "Of course somebody from the company should participate also" in question 13, was the only one to have chosen the two options, hiring a terminologist or a contractor, and training people from within the company. This confirms that he or she would prefer that the terminology work team consisted of both, insiders and outsiders. And finally, one respondent having replied "yes" in question 13, did not take a stand on the matter in question 14, leaving blank the option of training and ticking only the option of investing in programs that could be applied to terminology work. This, to me, is interesting, because currently no one in the company is experienced in terminology work, and therefore there is no one from within the company that could realize a terminological project. Would investing in programs be profitable if there is no one to use them?

The other suggestions that I have not yet discussed gathered some responses as well. Investing in programs that could be used for terminology work was chosen three times, which was less than what I had expected. It must be said, though, that with only twelve respondents filling in question 14, the response rate was not very high to begin with. Similarly, focusing on the processes of terminology work gathered an equal number of votes. On the other hand, this suggestion could have been more detailed, as the "processes of terminology work" may remain too vague for the respondents. And finally, only one person chose the option of "hiring more people to do terminology work". This was somewhat surprising after having analysed the answers to the other questions.

The last question, question 15, concerned the respondents' views on whether terminology work should be included as a permanent part of the company's documentation. Three answer options were given: "Yes," "No" and "I don't know." One person did not fill in the question, which leaves only 23 responses. Eleven people answered "I don't know," ten "Yes," and two answered "No." What was curious about the "no" answers was that both of the respondents had evaluated terminology work to be "important", or a 4 on a scale from 1 to 5 in question 8. On the contrary, those who had evaluated terminology work to be a 2, or "not very important", replied "I don't know" to question 15, although one might have expected them to answer "no". Three out of the four respondents who had estimated terminology work to be a 5 on a scale from 1 to 5, replied "yes" to including it as a permanent part of the company's documentation, and one answered "I don't know." Thus, there is apparent inconsistency in the respondents' evaluation of the importance of terminology work and their opinions on including it as a permanent part of the company's documentation. However, I did not ask the respondents their reasons for answering the way they did, because I was worried that another question "If yes, why?" (or respectively "If no, why?") would be too repetitive and give vague answers such as "Because terminology work is important," or "Because terminology work is not important." To gather relevant information on their opinions on the matter, particularly concerning the "no" and "I don't know" answers, I would have had to ask specific questions related to the company's financial situation, terminology work's profitability, or on the permanent nature of terminology work suggested in the question, etc. I did not consider it relevant to ask questions such as "If not, why?" and suggesting answers such as "Because I esteem that the financial situation is not ideal for employing personnel for terminology work," "Because, in my opinion, terminology work is not profitable enough," or "Because in my opinion, terminological projects are sufficient and permanent terminology work would be unnecessary." Consequently, I cannot analyse the reasons

that the respondents may have had for answering the question as they did. Some may have replied on a "gut feeling" whereas others may have pondered on the financial situation, the opinion of their superiors, notions of quality, the possibility of having to participate in the actual terminology work, etc. Nevertheless, the "gut feeling" is sufficient enough for me, as the questionnaire's primary area of interest were the attitudes towards terminology work.

6. Conclusions

The field of terminology is a not only one subject field of its own, but three different concepts; firstly, terminology as such, meaning terms of a given subject field, secondly, what is understood by all terminological activities, and thirdly, the science or the discipline as a field of study. It has its own theories and concepts, the comprehension of which is necessary to be able to make the adequate choices for each terminology project. Each applied field may have its standards, and consequently, different practices. The Finnish industrial company of the case study was, in 2010, only beginning to show interest in terminology work and I assumed that their vision of terminology work would have been very limited.

However, terminology work has undergone a major change in Europe since Ahmad et al. deplored its poor status in 1996. They listed lack of communication between organizations and services offering terminology services, and the fact that terminology work is not considered a "special skill", as the main reason for the invisibility of terminology work. Some of the statements remain true: terminology is still somewhat underestimated and secluded "to the foremost corners of the office", performed by translators and technical writers, or by the users themselves. Accordingly, in many companies, employees may do terminology work alongside their "normal" work tasks. This will not help ameliorate the perception of terminology work, but rather might cast a negative light on the work that is accomplished in a what might be considered only a "semi-serious" way, and furthermore might reduce resources somewhere else. This can also be seen partly in the responses from the company employees; terminology might be worth investing in, but then again, if appointing a terminology work group, along with the terminologists and subject matter experts, "anyone interested in terminology work" would be acceptable. It remains true that properly conducted terminology work may be also considered too expensive for the benefits that can be gained from it.

However, in other companies and governmental agencies, terminology work has witnessed an emergence of a number of entities creating, publishing, and researching terminological material. Special terminological services are created to respond to the pressure of ensuring a quality documentation as part of quality assurance throughout the development process. On the other hand, although terminology work has secured a solid position in some environments, this development seems to be particularly frail when the corporate world is faced with budgetary cutbacks. Therefore, it can be stated that a lot can still be done to improve the status of terminology work, although terminology as a discipline seems to have gained ground. The Finnish Terminology Centre TSK also states that there is not only a permanent demand for

terminological projects, but that permanent terminology committees for several industries have been created to ensure the compliance to the Finnish and ISO standards. With the technological revolution, the demand is likely to have exploded. In this context, it is not surprising to observe a peak of interest from the Finnish industrial company of the case study as well.

As discussed in chapter 3, many different factors impact terminology work. Ideally, a terminological project would benefit from generous funding, qualified personnel, and time, and once the project is started, thorough planning would enable the choice of the right tool. This tool should enable managing the terminology in such a way that users could maintain and enrich the terminology with little effort and a small budget. It is difficult to analyse the final cost of a project, because the price depends largely on the range of the project, on the resources and on the possible acquisition of a terminology management tool. The size of the terminology, using two languages, existing previous terminology work, as well as the stability of the domain to cover, are also factors to consider when formulating a price estimation. In addition, terminology service providers are often reluctant to reveal this sensible information beforehand, fearing, firstly, that some aspects have been overlooked and the estimation is not accurate enough, and secondly, that it might discourage companies otherwise motivated in hiring their services. Although the initial investment may come as a shock for enterprises, it is important to note that the costs of ongoing terminology work are reduced when the tools have been acquired and the initial training has been organised.

The price is certainly an important factor in choosing the tools necessary for a terminological project. The structure must allow inserting definitions of terms or data in the desired format, be it textual, graphic, hierarchical, or even plural definitions. The tool should allow searching for terms, editing, exporting and classifying data, as well as permit creating different types of user profiles for specific tasks. Finding a tool that corresponds exactly to the needs of a project may prove to be extremely challenging. Other options exist: developing a customised tool tailored for the needs of the project, or combining modules to compensate a lack in an aspect. did not ask the employees what type of a tool would be the most useful simply because answering this question would require prior knowledge on terminology tools or terminology work. Based on the responses from the company employees, the bilingual concept terminology providing definitions in English and in Finnish would rule out term banks without the adequate classifying and referencing functions. A bilingual thesaurus with appropriate concept structure, research and export functions would perhaps be adequate for the needs that were expressed: understanding better, speeding up communication by copy-pasting and

harmonising terminology for simpler localisation. Even a web-based tool might be considered, if the company's security policies allow storing data on external servers. As the company had not acquired terminology management tools at the time of the study, the acquisition of the right tool may still need to be considered. Of the different types of tools presented in the study, the online tools with low initial costs could meet the expectations without having to invest in developing customised interfaces or storing terminological data.

As seen in chapter 3.3, when planning a terminological project, the ideal composition for a workgroup would consist of terminologists, subject field experts, translators, and even information architects. Usually, even if this is far from the reality, the need for terminological skills starts to be recognised. In addition, it may affect the quality of the project and the way that the terminological project is perceived, if the person or group in charge of the project come from outside the company. This seems to be partly true in the company of my case study. In their case, the respondents seemed to value the prospect of a work group consisting of terminologist/s and subject field experts but on the other hand, the respondents seemed to welcome also an extra pair of hands from anyone interested in terminology work. In addition, there were almost an equal amount of responses favouring an expert coming from outside the company, and answers "it doesn't matter". This seems to indicate that a division in internal/external contributors should not have a significant impact on the perception of terminology work as such.

However, if the communication between external and internal employees does not work, the resulting terminology may be of little real value. The inverse is also true; internal employees may have easy access to subject field information, but without terminological knowledge, the end result may be a terminology with inaccurate concept systems or definitions, or a terminology that is difficult to maintain or manage. This was also visible in some answers to the questionnaire: some respondents were willing to participate in a terminological project, but questioned their ability to do so. Overall, the employees' reaction to the questionnaire mirrored the presupposition that an external terminologist or a work group would be best, but if they were unavailable, anyone interested could do to help in a terminology project – as long as it does not implicate extra work. This, on the other hand, is understandable, as subject matter experts should only participate as support to the terminologist or the terminology team and not in charge of elaborating concept systems or references.

The results of the questionnaire show that firstly, the need for terminology work is recognised. Respondents stated almost unilaterally that they had experienced a situation where a terminology would have been useful. The most surprising feature in the results, however, was

that the company's employees' perception of terminology work was overall positive and useful, but nevertheless, only half of the respondents felt that terminology work should become a permanent part of the company's documentation processes.

Acquiring the right tools and skilled resources for terminological projects and communicating about it would help further the recognition of terminology as a domain requiring special knowledge and skills. In addition, successful terminological projects would help in demonstrating that gains of productivity could be achieved.

Although the presence of terminology as a discipline in universities has gained visibility for the discipline, and terminology as a field of work has been acknowledged in general, the perceptions of terminology work vary. The Finnish industrial company of my case study, for instance, seemed to have a rather realistic image of terminology work at the time of this study: it is recognised that terminology work requires special skills and knowledge, but terminology work had not (yet) been invested in, and there is still room for amelioration so that terminology work could become part of their permanent documentation processes.

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Appendix : The Questionnaire sent to the industrial company (in Finnish) Kysely – sanastotyön rooli yrityksessä 1) Ammattikuvasi? Merkitse rastilla. ☐ Tuotekehitys ☐ Projektinhallinta ☐ Myynti ☐ Huolto ☐ Joku muu, mikä? 2) Koulutustaustasi? ☐ Teknillinen ☐ Humanistinen ☐ Kaupallinen ☐ Joku muu, mikä? 3) Kuinka kauan olet ollut yrityksellä töissä? □ 0-2 vuotta ☐ 2-5 vuotta ☐ 5-10 vuotta ☐ Yli 10 vuotta 4) Oletko työsi puolesta tekemisissä ulkomaalaisten asiakkaiden kanssa? \square En

5) Oletko työsi puolesta tekemisissä ulkomaalaisten tytäryhtiöiden edustajien kanssa?

En
Ajoittain
Usein

☐ Ajoittain☐ Usein

5 "erittäin tärkeää"? Ympyröi.	6) Oletko kokenut ti	lanteita, joissa olisi	t tarvinnut sana	astoa?		
Voit valita useamman vastausvaihtoehdon. Olisin tarvinnut termin käännöstä ymmärtääkseni itse paremmin. Olisin tarvinnut termin käännöstä kommunikointiini asiakkaan / ulkomaalaisen tytäryhtiön kanssa. Olisin voinut ilmaista asiani selkeämmin esimerkiksi töissä. Johonkin muuhun, mihin: 7) Millaiselle sanastolle olisi mielestäsi eniten tarvetta? Voit valita useamman vastausvaihtoehdon. Sanakirjatyyppiselle suomi-englanti-sanastolle Suomenkieliselle käsitesanastolle, jossa termeille tarjotaan suomenkielinen selitys sekä englanninkielinen vastine Englanninkielinen vastine Englanninkieliselle käsitesanastolle, jossa termeille tarjotaan englanninkielinen selitys ja suomenkielinen vastine Suomenkieliselle käsitesanastolle, jossa perehdytään käsitteiden välisiin suhteisiin 8) Kuinka tärkeää sanastotyö mielestäsi on asteikolla 1–5, jos 1 on "ei lainkaan tärkeää" ja 5 "erittäin tärkeää Ei kovin tärkeää Melko tärkeää Tärkeää Erittäin tärkeää 1 2 3 3 4 5	•					
□ Olisin tarvinnut termin selitystä ymmärtääkseni itse paremmin. □ Olisin tarvinnut termin käännöstä kommunikointiini asiakkaan / ulkomaalaisen tytäryhtiön kanssa. □ Olisin voinut ilmaista asiani selkeämmin esimerkiksi töissä. □ Johonkin muuhun, mihin: □ Johonkin muuhun, mihin: □ Johonkin muuhun, mihin: □ Sanakirjatyyppiselle suomi-englanti-sanastolle □ Suomenkieliselle käsitesanastolle, jossa termeille tarjotaan suomenkielinen selitys sekä englanninkielinen vastine □ Englanninkieliselle käsitesanastolle, jossa termeille tarjotaan englanninkielinen selitys ja suomenkielinen vastine □ Englanninkieliselle käsitesanastolle, jossa perehdytään käsitteiden välisiin suhteisiin □ Suomenkieliselle käsitesanastolle, jossa perehdytään käsitteiden välisiin suhteisiin ■ Suomenkieliselle käsitesanastolle, jossa perehdytään käsitteiden välisiin suhteisiin			?			
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		Ei kovin tärkeää	Melko tärke	ää	Tärkeää	Erittäin
Miksi?	1	2	3	4	5	
	Miksi?					

9) Uskotko sanastosta olevan sinulle hyötyä tulevaisuudessa?
□ Kyllä □ En
Jos kyllä, miten?
10) Olisitko valmis osallistumaan sanastotyöhön?
(Esimerkiksi tarkastamaan termien ja käsitteiden selityksiä, selittämään termien merkityksiä tai lisäämään omia ehdotuksiasi termilistaan.)
□ En □ Kyllä, kunhan se ei vie liikaa aikaa □ Totta kai, jotta sanastosta tulisi mahdollisimman hyvä.
11) Kiinnostaisiko sinua osallistua yrityksen sisällä järjestettävään sanastotyöhön perehdyttävään koulutukseen, jos sellaista olisi tarjolla ?
□ Ei
□ Ehkä □ Kyllä
<u> </u>
12) Kuka mielestäsi olisi paras henkilö sanastotyöhön yrityksessä?
Voit valita useita vaihtoehtoja.
 □ Terminologi □ Terminologityöryhmä □ Kääntäjä □ Tekniikan erikoisalan asiantuntija
☐ Terminologista ja tekniikan alan asiantuntijoista koostuva työryhmä ☐ Kuka tahansa asiasta kiinnostunut

13) Tulisiko sanastotyön tekijän tulla yhtiön sisältä?
 □ Kyllä □ Ei □ Sillä ei ole merkitystä
14) Kuten saatekirjeessä mainitaan, yrityksellä on tällä hetkellä käynnissä yksi alustava sanastohanke. Mitä mieltä olet yrityksessä tehtävästä sanastotyöstä?
 □ Nykyinen tilanne on hyvä. □ Siihen tulisi panostaa enemmän. □ Mielestäni sille ei ole tarvetta. □ En osaa sanoa.
Jos siihen tulisi mielestäsi panostaa enemmän, millä tavalla? Voit valita useamman kuin yhden vaihtoehdon.
 ☐ Hankkimalla sanastotyöhön soveltuvia ohjelmia (esim. käännösmuistiohjelma, termien keräämistä helpottavia ohjelmia.) ☐ Keskittymällä sanastotyön prosessien laatuun. ☐ Palkkaamalla sanastotyöhön enemmän ihmisiä. ☐ Palkkaamalla sanastotyöhön erikoistuneen työntekijän tai teettämällä projektin esim. alihankkijalla. ☐ Kouluttamalla ihmisiä sanastotyöhön yrityksen sisältä.
☐ Muulla tavalla, millä?
15) Tulisiko sanastotyö mielestäsi sisällyttää pysyväksi osaksi yrityksen dokumentointia?
 □ Kyllä □ Ei □ En osaa sanoa
Paljon kiitoksia!