SHIFTING CAPITALS: [SOFTWARE TRANSLATORS IN CORPORATE AMERICA]

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Abstract

The main task of this theoretical and empirical research project is to describe and explore the work situation of techno-translators employed by software publishers in the US. More specifically, this study aims to measure job satisfaction using three dimensions: Job Satisfaction Inventory, Job Burnout Inventory and Self-realization Inventory. The researcher demonstrates the crucial role that localizers have played in the IT world. A brief history of the computer industry and software publishing is provided. The first part of the analysis is conducted using Bourdieusian tools of *habitus*, field, capital and *illusio* and melding this with Durkheim's concepts of division of labor and solidarities to underpin the theoretical framework. Translators' corporate standing in relation to their cultural and educational capitals is discussed. The second part of the analysis is based on a quantitative Internet survey questionnaire. Herzberg's two-factor theory and Maslach's burnout constructs are used to conceptualize job satisfaction of in-house translators. This is followed by a review of the literature and the pertinent discussion. Partial findings from the survey have been included. This paper then concludes with detailed questions for future research.

Keywords: in-house software translators, software publishers, localization industry, job satisfaction, burnout and self-realization

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Introduction

Major advances in computer technology, satellite communications systems and the explosion of Internet usage in the last two decades have revolutionized and for ever changed the way we communicate, work and interact.

The increased connectivity and interdependence of markets and businesses around the world, also known as globalization, has had a tremendous impact on the language industry as well as on the technology sector. The development of new software applications has definitely changed the work of translation practitioners (Koskinen 2003), and will continue to do so. Computer-assisted translations tools (CATs) and content management systems (CMS) have not only facilitated the translation process but have reshaped the work conditions and environment for a vast majority of translators. These developments have also helped change organizational forms and careers. Not only do new technologies create new jobs but they also eliminate others, thus generating a new division of labor and reshaping wages, salaries and job distributions (Levy and Murname 2004). Productivity, consistency and on-time delivery of the final product (localized version of a software application) have increased recently while, at the same time, these very technological gains have exerted a downward pressure on the rates charged by free-lance translators. On the other hand, localization, the process of translating and adapting a software application product or service to a certain *locale*, has created new job opportunities for language translators, linguists and terminologists alike in corporate America. The world of academia, mainly in North America and Europe, has benefited from the growth of globalization and localization processes in a three-fold manner:

1. By broadening their range of curricula to include localization training at both undergraduate and graduate levels;
2. By creating new positions for teachers and professors; and
3. By expanding academic research into this newly born "paradigm" (localization).

According to data from the Bureau of Labor Statistics of the US Department of Labor there are about 10,000 establishments engaged in computer software publishing (see US Department of Labor, 2006-07 Career Guide to Industries, 155-159, Website address in the Reference section). These business corporations develop, produce and

distribute applications software and systems software to other corporations or businesses as well as to consumer computer users. "Software and information companies employ more than 2.7 million Americans, total employment in the sector has surged more than 17 percent in the past 10 years" (Barrett 2008:1).

David Deluc, Software and Information Industry Association's director of Public Policy, expressed that not only has the US software industry become a "multi-billion dollar success" but it also leads the world both in innovation and productivity (Barrett 2008:2). "US software companies continue to outperform the US gross domestic product, growing at 10.8 percent in 2005 compared to a paltry 3.2 percent for the overall GDP" (ibid.:1). Industry analysts are predicting that the software industry will grow in 2008 in spite of a US economic recession (ibid.:1). At a global scale, it is predicted that the global translation market will grow about 180% until 2015 (Zydon 2006:15).

Michael Anobile, a founding member and a Managing Director of LISA, claims "the localization and translation industry accounts for about $26 billion in worldwide revenue. Its growth is accelerating as US companies realize they must do more to make their products marketable in other countries" (Downey 2004:1). More recently, the Software and Information Industry Association (SIIA) has reported that "… American software companies recorded more than US$60.4 billion in 2006 sales and contributed another US$19 billion in international exports" (Barrett 2008:2).

All organizations across the world rely on computer technology and telecommunications to run businesses more efficiently. In an ever-competing business environment publishers fiercely expand their local markets and establish a global presence in order to increase profits and beat rivals. Jaap van der Meer, director of the Translation Automation User Society (TAUS), explains "the Internet makes clear to the world that the last barrier for global communication is not of a technical nature. The last barrier is language" (Strauss 2008:4). To become successful international players, corporations need to overcome language barriers, and cultural differences. Localization offers enterprise software publishers a relatively easy way to leverage assets and maximize profits by reaching geographically distant regions and diverse cultures. In order to do so these publishing establishments hire or contract out a labor-force possessing a unique combination of skills. Software translators, also known as localizers in the industry jargon, are one of the key players in the software localization and services industry.

1.1. Statement of the problem

Software in-house translators are charged with multiple tasks: trans-editing and translating different varieties of technical English user interface strings and online documentation into a source language, generally into their own; keeping, and managing consistent and updated terminology in the form of terminology databases and translation memories (TMs); editing and reviewing thousands of files containing technical support documentation within unrealistic deadlines; testing applications and on-line help guides; authoring and updating a myriad of glossaries and language publication guidelines; prioritizing and planning translation, review and testing projects; keeping abreast of new software applications; attending staff meetings and training courses; and learning and satisfying both in-country reviewers' and patrons' linguistic needs and whims. To enjoy a successful corporate life, in-house translators are supposed to have a deep technical knowledge of the applications they translate as well as to a full understanding of the localization and internationalization processes. As Esselink explains "the localization industry tried to turn translators into semi-engineers" (2003:28).

Many language professionals feel burnt out two or three years into their jobs and consider a move to project management as a stepping stone to more social prestige and better pay, that is, to more capital. Taking advantage of additional technical skills acquired through corporate training and the localization experience gained through their positions, some localizers move on to other careers, more often than not outside the language and/or IT industry. Others replace full-time employment with part-time employment or new forms of employment like 'patchwork or portfolio careers' (Handy 1996:28).

Software translator turnover may have a negative impact on a corporation. By rule of thumb it takes about two years for a translator to become familiar with one single application. Translators invest a significant number of hours yearly researching new English terms, and newly coined words or expressions as well as deciphering acronyms that are generated at the speed of light. They also invest time on learning new software translation tools and understanding the latest features added to each of the applications they translate and test. Employee turnover is a given fact in any industry. Yet, retaining competent staff members is important to maintaining and increasing quality standards of the localized applications.

Consequently, it could be said that the successful sale of a localized application will depend on the careful and consistent choice of words made by these language professionals. When translators are replaced with new hires, it is argued that the latter will tend to change the terminology used by their predecessors, which, in the end, will negatively affect the customer/reader's use of the application.

Within an IT organization in-house translators are cultural mediators between customers and software developers. Their skills are extensive and varied: linguistic and translation skills coupled with terminology research and management; as well as quality and functional testing skills of the localized software versions. Knowledge of the target audience or readership is crucial from a sales point of view. The proficiency required to successfully perform these tasks go far beyond linguistic and cultural knowledge. Besides fluency in two or more languages, software translators often have a strong background in computer technology, area knowledge expertise, and proficiency with CAT tools. While most corporate translators have invested many years in schooling to earn Masters and/or Ph degrees, their educational backgrounds range widely: - from studies in translation to linguistics, economics, engineering, literature, business, education, computing and other disciplines. Many software publishers hire only translators with two to three years experience in the field or with a degree in translation, or both.

Software translation shares many features of a profession. However, its practitioners can advance their careers by moving into a different organizational setting. This might be due to the dual nature of the staffing of localization departments in the US: professional translators versus non-professional translators. Some techno-translators have earned a college or a graduate degree in translation. Some others have a college degree or a graduate degree in fields that are not related to translation at all.

Besides the intrinsic responsibilities that come with their jobs, in-house translators have to cope with changes in the software industry and the global economy. Downsizing and outsourcing are business strategies to cut down costs. Maslach and Leiter explain that corporations get the work done with fewer people by the "use of sophisticated technology and tight human resource management" (1997:5).

Cory claims that the localization industry is in the outsource migration period. Not only translation projects are assigned to vendors but work processes are being outsourced to overseas locations as well (2003:2-4). "Localization is an industry-scale, not a company-scale activity" (Cory:2003:6). In company-scale, activities such as

administration, can be in-sourced and outsourced because the skills and tools are found inside the company, whereas industry-scale activities "cannot economically support on its own during peaks or troughs" (ibid.:2003:6). In the equation software publishers-localization, Esselink states that "software publishers increasingly realized that localization was not part of their core business and should ideally be outsourced to external service providers" (2003:24).

Consumers are now used to buying software on line, to get training on line and subscribe to online programs offered by companies (van der Meer 2002b:2). "As packaging and distribution moves off the page, and onto electronic formats, more of these activities are likely to go to vendors who can handle all phases of multilingual information provision - not just pure translation" (Lockwood 1995:3).

To make matters worse for the localization professional, machine translation projects are being funded by several business corporations both in the US and the European Union, in the high hopes that this new mechanistic technology will allow publishers to automate translation and, therefore, save billions a year. The TAUS home page reads as follows:

> The Translation Automation User Society (TAUS) is a community of users and providers of translation technologies and services. The ambition of the TAUS community is to translate a manifold of content in an increasing number of languages through technology adoption, service innovation and cross-industry collaboration. (Please see the URL in the Reference section).

Translation automation has not been perfected yet, in spite of fifty years of research and development (van der Meer 2002b:4). Though human translators are necessary to translate new words and keep consistent terminology, the impact of translation automation on the localization industry will be in the office headcount.

Localizers, like any other employees, are replaceable, but the investment on each one of them, as far as time and money are concerned, is enormous. There are many factors that negatively affect a translator's performance. Some of these factors escape the translators' control. Just to summarize: lack of integration of the translators within the business organization, translating text created by a myriad of authors, sharing translation and review tasks with vendors and in-country reviewers, facing unreasonable deadlines, heavy workload, low perception by peers of their work, noisy work environment, just to name a few.

1.2. Research questions

This research project attempts to analyze job satisfaction, job burnout and self-realization among software translators in corporate America. It also will attempt to explore how localizers are regarded and rewarded within the social hierarchy of traditional enterprise software corporations headquartered in the US. Many in-house software translators perceive themselves as being at the bottom of the corporate ladder. What is their real status? Is there a correlation between their educational backgrounds and their salaries? Are they regarded as linguistic assets from a managerial point of view, or just another cost? How do they see themselves? How does society see them? How are they valued within the corporate culture in relation to their coworkers, mainly, software developers or programmers, software engineers, technical writers and project managers? Are they integrated with the rest of the corporation? Are they satisfied with their present jobs? Are they overworked? Is there room for career advancement as translators in corporate America? Is there any job security in such a volatile industry as the Information Technology? Will they survive or become another extinguishing and forgotten breed?

Based on the hypotheses formulated in 1.3 below, we present the following questions to investigate in this research study:

A. Which job variables contribute to job satisfaction among in-house translators?

B. Which job variables contribute to job burnout among in-house translators?

C. Which job variables contribute to self-realization among in-house translators?

1.3. Hypotheses

As Williams and Chesterman (2002:16) argue, in the last decade "Translation Studies has been focusing increasingly on translators themselves", primarily on translators as opposed to the text or end product, or the translation process itself.

In the current study we plan to test the following three sets of hypotheses based on the research questions formulated above. Questions A and B are replicated from the dissertation on software developers written by Doré (2004: 62).

Research question A: Which job variables contribute to job satisfaction among in-house translators?

1. Company and administrative policies predict job satisfaction among in-house software translators.
2. Management supervision predicts job satisfaction among in-house software translators.
3. Work conditions predict job satisfaction among in-house translators.
4. Pay-related issues predict job satisfaction among in-house translators.
5. Professional development predicts job satisfaction among in-house translators.
6. Professional activities predict job satisfaction among in-house translators.
7. Job responsibilities predict job satisfaction among in-house translators.

Research question B: Which job variables contribute to job burnout among in-house translators?

1. Role extension and ambiguity and conflicts predict job burnout among in-house software translators.
2. Organizational commitment predicts job burnout among in-house software translators.
3. Workload predicts job burnout among in-house translators.
4. Final product predicts job burnout among in-house translators.

Research question C: Which job variables contribute to self-realization among in-house translators?

1. Career motivation predicts self-realization among software translators.
2. Goals/expectations predict self-realization among software translators.
3. Job diagnostics predict self-realization among software translators.

1.4. Relevance of this study

Translators have helped software publishers reach out across continents and conduct business on the international arena. This research study focuses on in-house software translators working for US-based corporations. The localization industry is worth billions of dollars in yearly revenues to software publishers, most of whom obtain equal or more operating profits from their localized versions than from selling their software

applications in their source language, English, the lingua franca of the 21st century. "In 1998, Microsoft revenue from localized product exceeded US$5 billion" (Brooks in Lommel 2007:9). The globalization, internationalization and localization market grew from US$4.2 billion in 2001 to US$8.9 billion in 2006 (van der Meer 2002b:4).

The corporation's entry to global markets is made possible, in large part, due to knowledgeable language professionals who can translate large volumes of data competently and quickly, beating tight deadlines. By selling a competent localized product, which is as linguistically correct as the source language version, software establishments gain a strategic advantage over their competitors. The localized end product helps users all over the world more easily achieve their own personal, business, technological and scientific goals. It also helps users to enjoy the advantages of technological devices and products in their own languages. Interacting with one's computer using our own language is quintessential for us as users and readers. It goes without saying that even the most rudimentary tasks, like buying an item on line, or reading the newspaper can be achieved thanks to computer technology and localizers who bridge the gap between languages and cultures and bring humankind together. Can the software publishing industry survive without them?

Job recruitment and employee retention play a substantial role in any organization today. In-house translators who are happy with their jobs are highly productive employees and can also contribute to improvements in the workflow and in the final products when they are given the opportunity and considered as professionals and not just language-machine operators.

Techno-translators possess not only language skills but also subject-area knowledge. This domain-expertise is not acquired on the fly or through an intense one-month immersion course, but rather through corporate training and a certain number of years of translating the same software product for the same publishing establishment. And, what is more, to find translators with the right skills in Tier I (French, German, Italian, Japanese and Italian), and Tier II language combinations (Brazilian Portuguese, Simplified and Traditional Chinese and Korean), makes this a gargantuan task for corporate recruiters.

It is anticipated that the findings of this research project might be of interest to Translation Studies, and both the language and localization industry in the US. For translation researchers, these findings might add some empirical knowledge about translators within a corporate environment. For corporations, knowledge about causes

that lead to job-satisfaction or job burnout among translators may bring about changes in organizational policies to better serve the specific needs and goals of these employees. For colleges and universities, the findings of this project may shed some light on important areas of language and technical education. In other words, what changes, if any, need to be made in curricula in order to meet the market's demands for sophisticated localizers.

1.5. Structural organization

This paper is organized as follows: In Section 1, we present an introduction to our study: the statement of the problem, the research questions, the hypotheses and the importance of this research project as well as some key term definitions. An overview of the computer, software, and localization industries is presented in Section 2. We highlight the theoretical framework underpinning the study in Section 3. The research methodology is described in Section 4. In Section 5, we review the literature. In Section 6, we present the discussion. Results of our survey questionnaire are covered in Section 7. Conclusions are presented in Section 8. Finally we provide recommendations for future research in Section 9.

1.6. Definition of terms

Some key term definitions have been included in this section for clarification purposes only.

- **In-house software translator:** an employee who provides technical translation as well as editing and testing of applications and on line documentation to a company (a software publisher) on a daily basis in return for financial consideration. Throughout this paper the terms in-house translator, corporate translator, techno- or technical translator, software translator and localizer are used interchangeably.

- **In-sourcing:** the opposite of outsourcing, that is, contracting in. "In-sourcing is a business practice in which work that would otherwise have been contracted out is performed in house. The practice is of special interest to workers and corporations in the United States, where outsourcing is often regarded as an increasing problem" (IT Encyclopedia 2008).

- **Job burnout:** is a "syndrome of emotional exhaustion, depersonalization of others, and a feeling of reduced personal accomplishment" (Lee and Ashforth 1990:743).

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- **Motivation-Hygiene Theory:** developed by Frederick Herzberg, a professor of psychology at Case Western Reserve University in Ohio, US. Herzberg's theory involves a "two-dimensional paradigm of factors affecting people's attitudes about work". These hygiene factors (or dissatisfiers) include: "company policy, supervision, interpersonal relations, working conditions and salary", which are called hygiene factors. Motivator factors (or satisfiers) are: "achievement, recognition, the work itself, responsibility and advancement" (Gawel 1997:1). 'Hygiene' is a medical term and implies the need to do something that is necessary for the patient. For instance, a person diagnosed with cancer needs to undergo surgery to have all or part of a tumor removed.

- **Outsourcing:** contract out to third-party providers. This is a practice used by software publishers mainly to reduce costs. " Outsourcing is an arrangement in which one company provides services for another company that could also be or usually have been provided in-house. Outsourcing is a trend that is becoming more common in information technology and other industries for services that have usually been regarded as intrinsic to managing a business" (IT Encyclopedia 2008).

- **Translation:** "Consists in reproducing in the receptor language the closest natural equivalent of the source-language message, first in terms of meaning and secondly in terms of style" (Nida and Taber in Snell-Hornby 2006:37).

2. Industry overview

This section provides a historical overview of the computer, software and GILT industries in the US.

2.1. Computer and software industry overview

The history of the software industry mirrors the development of the computer industry. It is almost impossible to separate one from the other.

In 2006 the Global Fortune 500 companies localizing their products and services had profits of US$365 billion and revenues of US5.9 trillion. An estimated US$140 billion of their profits were achieved through localization. For these companies "localization is not an option, it is an imperative" since almost 70% of their revenues come from localization (Lommel 2007:8-9).

The ultimate goal of every business corporation is to generate profits. Software publishers are always looking for new ways to increase their revenues. One of their main streams of income is localization. Let's take a look at Microsoft:

> In 1998 more than 60% of Microsoft's revenues came from markets outside of the United States. The majority of these revenues come from non-English speaking markets, and a key component of Microsoft's international strategy has been to lead the industry in the delivery of localized products to these markets. In 1998, Microsoft revenue from localized product exceeded US$5 billion (Brooks in Lommel 2007:9).

Compared to more traditional industries, like pharmaceuticals or manufacturing, the localization industry is relatively young. It started basically in the early 1980s (Campell-Kelly 2003; Esselink 2000; Savourel 2001). The software industry, on the other hand, precedes localization and is closely tied to the computer industry history.

The history of modern computing in the US can be traced back to the 1940s, when the first electronic digital computer was developed at the University of Pennsylvania's Moore School of Electronics, under a project sponsored by the US military. Research centers funded by the government were key for the development of both the computer and the software industries (Abate 2000; Campbell-Kelly 2003). The 150 feet wide ENIAC, short for Electronic Numerical Integrator And Computer, was unveiled in February 1946 (Ceruzzi 2003:7). It weighed 30 tons and covered 1800 square feet. Neither this physically gigantic computer nor its close successors had any stored programs capabilities, that is, no RAM memory, no ROM memory, no internal software, as do our modern computers. The 150-foot wide ENIAC prototype was a landmark because it set the stage for the design and development of modern computers.

In 1957 the first reliable programming computer language was born, FORTRAN, short for Formula Translating system. The development of this software project by IBM's Technical Computing Bureau was another landmark since computers had very small memories, were slow and had primitive operating systems. FORTRAN allowed programmers to build portable programs (Armbruster 2001). From the 1950s onwards thousands of programming languages have been developed, each fulfilling different needs. Programming languages expanded the user base and aided the development of software applications.

During the 1950s some computer manufacturers started selling commercial computers such as the UNIVAC (designed by the inventors of the ENIAC) and the IBM 701 and 650 (the first mass-produced computer). However, commercial acceptance was

still low since the price of each unit was rather high. At the same time other countries became involved in developing computers and applications, especially the United Kingdom (Randell 2002:42).

At the time computer manufacturers would include free software programs every time they sold a computer. Software was not a saleable item. "Bundling", the practice of joining together software packages "that were known to work harmoniously" with the hardware for the purpose of selling them as a single unit, provided IBM with a competitive advantage over its competitors (Campbell-Kelly 2003; Wilson 1997:10).

Until the 1960s software programs were sold by computer manufacturers as a bundle or were written by the users themselves since computers came with primitive programming tools. Also computer users would share programs among themselves (Campbell-Kelly 2003:29).

In the 1960s, many contracting companies flourished commercially and financially by writing software programs for computer manufacturers.

In June 1969 IBM announced its decision to "unbundle" its software packages from the hardware due to a civil antitrust action filed by several computer manufacturers accusing IBM of limiting their entry into the computer industry (Wilson 1997:10). This was also followed by the US Justice Department's antitrust lawsuit against IBM.

Through successive decades, significant improvements in computer speed and storage capacity enabled the development of what is known as "the second generation of computers". Better computer performance and reliability also encouraged entrepreneurs to develop all kinds of software (Randell 2002:42).

Due to the high cost of early computers, only large business corporations, government agencies, universities and similar organizations could afford to buy them. The combination of the microchip and microprocessor technologies in the 1970s aided the development of faster and more economic computers.

The first personal computers appeared in the late 1970s. Apple Computer introduced the Apple II in 1977. Intel and Motorola also introduced new processors and chips technologies, preparing the way for an explosion of the computer market in the 1980s. In 1981 IBM rolled out its first Personal Computer (PC). Due to the PC's open architecture start up companies were able to clone similar devices and lured customers away from IBM (Campbell-Kelly 2003).

In the mid 1990s PCs became the entrance to the Internet and personal email. Millions of people bought PCs for personal use or for business purposes. Today the personal computer is a must-have appliance in most homes. The world's dependency on computers would not have been thought of as possible only 40 years ago (Randell 2002).

2.2. Software publishers

The proliferation of computers in the 1980s and 1990s gave birth to a booming international software industry of which the US is the world leader. Some 95% of localized products originate in the US (Randell 2002; Schäler 2005).

Even though thousands of software firms have been founded around the world in the last three decades only a few of them enjoy a strong international presence. The largest software publishers are headquartered in the US. According to data from the Bureau of Labor Statistics of the US Department of Labor, software publishing "is projected to be the third fastest growing industry in the US over the next decade" (2006:3). Consequently, the demand for highly skilled workers such as computer specialists, programmers, developers and translators will be on the rise. About 10,000 publishing establishments employed 239,000 wage and salary employees in 2004 (US DOL 2007:2).

The clear dominance of US software firms over their European counterparts derives from the funding programs provided by government agencies to firms seeking to develop new software technology during the Cold War era. Since only the government could afford to fund million-dollar projects, in the end, this benefited the civilian sector (Campbell-Kelly 2003:48).

Software publishers fall into two main categories: applications software (database programs, word processors and spreadsheets), and systems software (operating systems, compilers and utilities). The advent of the Internet has created a significant market for the software industry as far as applications and connections are concerned (US DOL 2007:8).

From a historical point of view, Campbell-Kelly divides the software industry into three main sectors: "software contracting, corporate software products and mass-market software products". The rise of each of these sectors is closely linked to the

distribution business strategy (2003:3). They were established in the 1950s, 1960s, and 1970s, respectively.

The history of "software contracting" parallels the development of the corporate mainframe computer. The very first software programs developed in the 1950s were unbelievably expensive, and some sold for up to a million dollars. Software applications were developed by contractors at the request of either corporations or government agencies. As the decade went by people with programming skills were in high-demand, and many of them founded their own companies, offering their services under a contract. Computer Usage Corporation (CUC), founded in 1955 by two former IBM employees, was the first of its kind (Campbell-Kelly 2003:4 and 24).

The launching of IBM's 360 family of computers in the 1960s brought with it a second stage of software development, the creation of customized, one-of-a-kind software for or by individual computer users' demands for more innovative software that took advantage of the new machines' increasing speed and memory capacities. Founded in 1888, IBM came to dominate the computer industry from 1952 through the 1980s. Software products were used by a myriad of users without undergoing any modifications (Campbell-Kelly 2003; Ceruzzi 2003). According to data from the Software History website, by 1967 there were around 2,800 software services firms in the US. The main establishments founded in the 1960s were Informatics, Electronic Data Systems (EDS) and California Analysis Center, Inc. (CACI). Presently EDS is the main systems management and services firm in the US while IBM is number one worldwide.

At that time few executives thought that selling software products would make anyone rich since software was free, it came with the purchase of a computer (Johnson 2002:101). Notwithstanding, some entrepreneurs saw a business opportunity in writing software programs that could be sold "off-the-shelf over and over again to hundreds of customers" (Campbell-Kelly 2003; Johnson 2002:101). A localized product is also sold off the shelf (CD ROM) or over the Internet over and over again to thousands corporations, government and educational institutions as well as to individuals.

The main software programming firms in the 1960s were Advanced Computer Techniques (ACT), Applied Data Research (ADR) and Informatics. In 1965, ADR released a flowchart program known as AUTOFLOW (Campbell-Kelly 2003:101).

By the 1970s most computer users and programmers could no longer afford to write large custom programs due to the impossibility of recovering development costs

(Campbell-Kelly 2004:183). By the end of the 1970s software programs started being sold for mass consumption. Aided by the low cost and widespread adoption of the personal computer in the 1980s, professional software publishers, such as Microsoft, experienced an enormous growth.

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1940s →computer industry
1950s →software industry
1980s → localization industry
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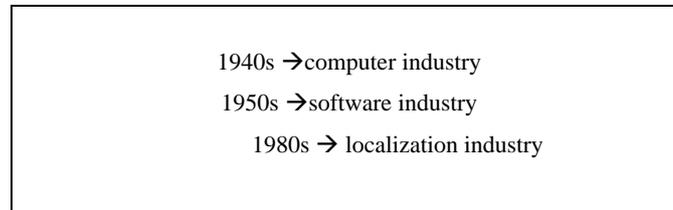
Packaged software ("ready to run") became much cheaper per unit than custom software due to its ease of integration. The rapid growth of this type of software was aided by IBM's unbundling decision as mentioned above (Campbell-Kelly 2004:183). This gave rise to a growing Independent Software Vendor industry (ISV). Consequently, some software firms set up in-house localization departments while others outsourced their work (Esselink 2000:5). US firms started looking for cheaper labor to develop their software products, and they found in India, Ireland and Israel the low costs they were anxiously after (Dossani 2005:11).

As software programs and hardware become increasingly more complex, it was very difficult to manage development. The three main constraints for any software contractor in the 1950s were time, marketing and budget (Campbell-Kelly 2003). If they were able to finish a project on time, and within their budget, they would survive, otherwise, they would go out of business. Without a permanent project supply, and without the right personnel, they would also go bankrupt (ibid.:2003). The key employees for the survival of the software contractors became sales people and managers. Programmers enjoyed less prestige than the former, since they were easily trained. Moreover, there developed an abundant off-shore source of programming manpower in India in the mid 1970s, when Bombay-conglomerates started their overseas expansion by providing US firms with IT programmers or in-sourcing (Dossani 2005:3). Sales people had to close deals all the time while managers had to make sure that the projects were delivered on time, without spending more funds (Campbell-Kelly 2003:67-70). "The great majority of projects were completed within budget and on time. Indeed, it could hardly have been otherwise; the survival of the programming services industry depended on it" (ibid.:67).

The prestige and power enjoyed by managers and sales people can still be seen in any software publishing company today. Many software publishers have their own localization departments staffed with translators, software developers, project managers, software engineers, technical writers and administrative assistants (Esselink 2000:14).

2.2.1. Mergers and acquisitions

The mergers and acquisitions activity within the software industry has been intense in recent years. Just to name a few: PeopleSoft completed the acquisition of J.D. Edwards and Co. in July 2003 for US$ 1.8 billion, thus "creating the world's second larger enterprise application software company" (Parker 2003:1). The following year Oracle bought out PeopleSoft for US$ 10.3 billion, "ending a long-running and bitter battle and creating a major software maker" (Kane and Kawamoto 2005:1). In 2005 SDL, a multinational translation/localization agency acquired Trados Inc., a provider of globalization software and services. "The company is betting that the "full service" solution of software and services is what clients want and need" (Yunker 2005:1). In 2007, German-based Siemens AG acquired product lifecycle management (PLM) American vendor UGS Corporation. "The news of the $3.5 billion deal caught many by surprise, as it was the first major move by an automation company to add PLM (Product Lifecycle Management) technology to its stable" (Neil 2007:1). In February 2008 SDL purchased Idiom Technologies, Inc. for US$ 21.7 million. This acquisition will mainly add more customers to SDL's current customer base and strengthen their position as the main provider of GIM (Global Information Management) solutions (Please refer to the Reference section for their Website).

Some mergers and acquisitions result in the dismantling of the localization departments as happened with JD Edwards in 2004. Almost 90% of the linguists and translators were laid off. Therefore, in-house translators had to start looking for new jobs, or switch back to free-lancing, or simply change careers.

2.3. Defining the GILT industry (Globalization, Internationalization, Localization and Translation)

> For knowledge to be able to go from one place to another and to exercise such tremendous effects, a previous process must have taken place, a process which we seldom think about: knowledge has to be packaged in appropriate ways, it has to be converted into bits and bytes, it has to be coded (Leal and Shipley 2000:139).

In January 2007, Microsoft released Windows Vista in 35 languages, the newest graphical operating system (OS) developed for PCs. It can be downloaded from the MS web site directly into a computer, in the language of the customer's preference (generally speaking, this will be their native tongue), obviously, for a monetary price. Regular customers buying this OS will hardly ever stop and ponder about all the steps that it took Microsoft's development, localization, marketing and legal departments to design, create, develop, translate, localize, internationalize, test and distribute the new operating system in their language; few will think twice about how that "knowledge" was "packaged" or even "coded" (localized + internationalized) to transform it into a special version of Windows Vista.

In *The Moving Text* (2004) Pym outlines all the intricate steps to convert knowledge into digital text. In other words, he explains the translation, localization, internationalization and globalization processes involved 'in moving text' from its source language to its target language or languages and its distribution in two dimensions: time and space. As Leal explains, this is knowledge that did not exist at one point but has to be created. "Knowledge is, or has become, a commodity that travels swiftly and efficiently" (Leal and Shipley 2002:139). Knowledge, or information capital, is as intangible and invisible as some of the people involved in its creation (Campbell-Kelly 2003; Ceruzzi 2003): our techno-translators.

Undoubtedly, localization is a significant phenomenon within Information Technology: vibrant, young and growing at giant steps (Dunne 2006:9). Started around the 1980s in the US, the localization industry branched off from the main computer industry (Esselink 2000; Savourel 2001; Schäler 2005).

Localization involves basically two steps: translation and technical adaptation. During the translation stage, a text is converted from the source language into its target language, and during the localization stage, the text is modified technically and culturally. Some theorists include translation within the localization process. "Thus, when the two fall together in a business model, translation is just a part of localization, since localization encompasses the broader range of processes" (Pym 2004a:4).

Let's travel back in time to the 1940s: the scene is a literary translator sitting at a wooden desk with a typewriter in a large room with walls stuffed with books translating a novel from source language A into target language B. At one point the translator has to change a date from the French format into an American-English date, which is achieved by switching the month and the day. On the next page our translator needs to

convert meters into feet or inches or yards (directionality = French into American English). The language professional uses a slide rule or consults a book of tables to find the right conversion calculation. Two chapters into the novel, the translator has to deal with translating geographical names. On completion of the assignment, the publishing house publishes the translated and localized novel in paperback or hardcover and contacts its distributors both locally and worldwide.

Four decades later, the invention of the computer, software programs and the Internet have widened the scope of translation practice. Most in-house translators work on flat screen monitors in cubicles at a facility owned by a software publisher. We argue that localization has taken its own shape, after many years of incubation in its Translation mother's womb, and with the help of its father, Internationalization, it has been able to embrace more complex steps derived from the new technologies. Another not so close relative, Globalization, which main role is to connect businesses and markets worldwide, has stepped in to find major opportunities for the baby. That side of translation has been exposed, and materialized thanks to political, economic and financial policies. The Globalization, Internationalization, Localization and Translation processes are known as GILT.

Keiran J. Dunne (2006:11) compares the GILT processes with a Russian nesting doll, due to the joint infrastructure "interdependencies". When you open the first "*matryoshka*", you find a series of brightly colored wooden figurines that get gradually smaller, with the largest doll having from 3 to 12 pieces placed one inside the other. Translation is the key core figurine, the last one you see, the smallest one in the eyes of the software producers and informed readers, but the most beautiful and significant of them all. Applications not properly translated can create from business problems, errors in communication to unnecessary costs. Software publishers may lose repeated business patronage while readers/customers can develop a negative perception of a certain brand. All these dolls in one set are related: they share something in common, whether it be their customs, for instance, peasant girls, princesses, or subject-matter, Russian holidays, Christmas, St. Valentine's Day, etc. The same thing happens with Globalization, Internationalization, and Localization, the other "dolls" in the GILT industry – *matryoshka* –. All these figurines are necessary to bring this industry into life. Like the nesting dolls have different sizes, these components of the industry perform different functions, but they all complement each other, they all have to fit each other in order to create our localized products.

We agree with O'Hagans that translation is "key" to localization (in Hietaniemi, 2006:11), though it is just another component in the GILT industry. While translation can stand as a discipline in its own right, software localization only exists through the combination provided by its relatives: translation, internationalization, and globalization.

Several definitions populate the literature regarding the GILT industry components. The Switzerland-based Localisation (sic) Standards Industry Association (LISA) defines localization as "taking a product and making it linguistically and culturally appropriate to a target locale (country/region and language) where it will be used and sold" (in Pym 2004a:29).

Internationalization and localization are key factors in the development cycle of any localized product or service. Internationalization is a software engineering process, which enables and prepares the product for localization (Savourel 2001:9-10). The key to internationalization is "the ability to display the character sets and support local standards of a particular language and country" (Esselink 2000:3).

Globalization is an ampler concept. Within the localization industry, "the term refers to the process of conducting business globally, for example, of selling in international markets" (Dunne 2006:4). From a political point of view, it is a paradigm of the post-Cold War era. Some authors argue that globalization has facilitated the export of high-tech jobs, which dates back to the 1970s. In the late 1990s many jobs in the IT field, in-house translator positions included, were outsourced to places like Latin America and East Asia. Today, more and more software applications are being developed by teams located in places thousands of miles away from the US.

2.4. Localization departments and language vendors

Localization has become a billion dollar industry and it is expected to grow in the coming years in spite of the present US weak economy. US software companies are doing "just fine" in spite of the financial problems affecting this nation and the constant fear of a recession (Barnett 2008).

Esselink explains that "the international expansion of software and hardware developers automatically triggered the need to localize the products for international markets" (2003:22). As early as the 1980s US software publishers had created large and sometimes - unsustainable - localization departments staffed with translators, linguists,

engineers, desktop publishers and project managers to meet the demands for localization of their products into a myriad of languages (Esselink 2000:5-6; Lommel 2007:31).

Those establishments that lacked the appropriate human and production resources simply outsourced their localization projects to free-lance translators and/or language vendors both in the United States and abroad.

"Despite significant improvements in translation technology and standards in recent years, most US companies that localize their products do not do it all themselves. For help they turn to the estimated 450 localization service providers" (Downey 2004:1). Since software applications involve processing millions of words annually (English and its target-language versions), some publishers also contract with LSPs to translate some components of the software (e.g., technical support documentation or online help, which, in the past, was referred to as the "books", because they were actual hard-copy publications) that cannot be handled by their in-house translators.

Throughout the 1990s language vendors grew at a tremendous speed since the work volumes were extremely large in the software industry. In their quest to clearly differentiate themselves from the old "translation agencies", these new start-ups re-branded themselves as localization companies (Esselink 2003:25, van der Meer 2003b:2).

The 1980s industry's concern with quality gave way to the "time-to-market" race a decade later (Witter 2006:1). The early-centralized business model was soon replaced by partnerships with Language Service Providers in the late 1990s (Lommel 2006:32; Witter 2006:1). "Translation is the most frequently outsourced globalization skill". And "outsourcing levels" have been rising since 2000 (Lommel 2007:32). Tempted by cheap labor in foreign lands, many software publishers switched to the outsourcing model in the late 1990s. "Large organizations requiring huge volumes of translation have come to the conclusion that they are not in the translation business and have consequently decided to shut down their in-house translation departments and outsource their translations" (Goudac 2007:304). In other words, some software publishers do not consider localization as part of their core competence.

In the early 2000s the industry's concern went from "simship" (simultaneous release of the product in all the localized versions) back to quality and consistency with localized versions. This forced some software publishers to switch back to the old centralized translation model, that is, localization professionals. When the number of

translators cannot handle all their translation needs, management resorts to LSPs thus regaining some kind of dependence and protecting data.

> About 1996 or so as a lot of the companies that did in-house translation realized that that model wasn't suitable for their needs. I think the big driver was that in-house translation, while it is probably the best model for quality, is not scalable at all (i.e., if you have one translator but need one and a half for three weeks you're just out of luck), while MLVs aggregate work out. That and the fact that few companies seemed to see localization as a core function largely eliminated most of the old in-house programs by about 2001 or so. I do not know of anything written on this subject (Lommel 2008:1).

Large companies are always looking for ways to keep translation costs down and even to reduce them. In other words, they go from one business model to another: from full in-sourcing to full outsourcing, or the other way around, and the options in between (Yunker 2004:1). Outsourcing is a business model or strategy that has become very popular in the last decades. Companies seeking to streamline their processes have been subcontracting some of their business functions with external service providers based in the US and, more recently, these corporations have been using off-shore external organizations (Clifton 2004:2).

The reasons why some software publishers choose one translation pool model over another can be summed up as follows:

- Total cost of the service (provider cost + internal costs)
- Availability of resources (particularly at peak times)
- Quality of service (Bergman 2007:5)

The self-contained centralized model department (full in-sourcing) is staffed with in-house translators or localizers (X number of translators per language combinations), terminologists, engineers, desktop publishers and project managers. Software publishers with constant stream of translation work use this model (Bergman 2007:4). The number of translators employed ranges from one to as many as six or eight per language. Some of these departments might also be staffed with terminologists, generally one per language combination.

Full outsourcing occurs when a company does not maintain a localization department but has one or two project managers who outsource the translating, editing, testing, and verification jobs to large translation agencies or LSPs (Bergman 2007:8). The third is a hybrid model that includes a smaller number of translators, perhaps one to

three per language, who do the bulk of the activities mentioned above. Overflow and/or secondary-market languages are outsourced to either large- or medium-sized translation agencies or vendors. Most localization departments that use either the full in-sourcing model or a variant of the full outsourcing and in-sourcing model, include a Quality Assurance group that performs quality checks on the localized components in order to solve "bugs" or technical problems (Esselink 2000:15).

Translation vendors will argue that outsourcing is the best model, while in-house translators will argue just the opposite (Yunker 2004:1). "There has been a clear tendency towards outsourcing (translation work) over the last 20 years", declares Muegge (2005:10). However, "today, this outsourcing approach is being questioned as global organizations start to recognize that documentation and communication with their clients are actually a core competence as important as product and process know-how" (ibid.:10). Software publishers are now recognizing that their multilingual assets are a key component for the success of their localized versions. Muegge (2005:12) points to the following reasons for the in-sourcing trend in software localization:

- Independence from service providers
- Critical data in house, cost control and transparency
- Use of data for authoring and terminology work
- Multilingual documentation as a competitive advantage, and therefore core competence
- Intellectual capital and knowledge management.

Quality, cost and intellectual capital play a big role in deciding which translation model to adopt. Fixing problems arising out of poor translation is time-consuming and costly. Sometimes, outsourcing documentation translation might result in hidden management costs which double from the original estimate (Esselink 2000). Loosing critical information and data is a possibility that has to be factored in the final cost when outsourcing. And intellectual capital is a valuable asset that gives software publishers a competitive advantage over their competitors (ibid.:2000).

In the Global Business Practices Survey carried out in 2006 by LISA (please see URL in our Reference section) in collaboration with the Monterey Institute of International Studies and the World Bank, it was concluded that "although in-house translation departments are supposed to be a thing of the past, content producers still

tend to use two business models to meet their translation needs: (1) total outsourcing and (2) heavy use of in-house translators" (2006:1).

Another key role in any localization department is that of project managers. Some localization translators team up with in-country reviewers for the final review and testing of the software products.

2.4.1. Project managers

"For a software contractor, the ability to complete a programming project on time and within budget was the most critical competence" Campbell–Kelly 2003:67). Profitability was dependent upon the bid and the margin of profit (8 to 15%) (ibid.:67).

Managing projects in the 1960s was something new, or a "black art", since it lacked a real methodology (ibid.:67). Project management evolved into a system at the end of this decade. Campbell-Kelly explains that the origins of project management can be traced back to the SAGE (Semi-Automatic Ground Environment) project, a nationwide defense network. This system would emphasize the interaction between computers and man: "computers would perform high-speed data processing while humans would be responsible for high-level information processing" (ibid.:37). In 1955 there were in between 300 and 400 programmers working on this project. Borrowing techniques from engineering management, John E. Jacobs, head of programming, divided the project into a sequence of consecutive tasks – machine specifications, operational specifications, program specifications, and coding specifications (ibid.:68).

The SAGE method was the first project management technique and was soon followed by others (Campbell-Kelly 2003:67-68). In the latter half of the 20th century the term 'project management' became popular although "projects had been undertaken for millennia" (Weaver 2007:1).

Localization project managers serve as the hub for all those involved with a project. In general terms, their responsibilities include:
- Scheduling and monitoring all project components
- Creating quotes and proposals for new projects
- Coordinating project setup
- Planning and monitoring project finances
- Managing resources and quality assurance steps (Esselink 2000:427).

2.4.2. In-country reviewers

Some software publishers rely on in-country reviewers (ICRs), working in their local offices, to perform reviewing and testing of localized versions of their software applications before the release date (Esselink 2002:15). This is important to assure higher-industry standards in the final product. Quite frequently ICRs are sales professionals, engineers, country managers or distributors. Some are paid for their extra time while some others are not. Fees and work arrangements between the publisher and the staff in the target country will definitely vary from company to company.

"In-country reviewers must focus on technical consistency, completeness, and adherence to agreed terminology and language standards" (ibid.:15). Ideally ICRs should have product knowledge, linguistic background and review experience. Their feedback to translators is important to the success of the localized version.

3. Theoretical framework

In this section we will present a short overview of Translation Studies and the main theories and concepts supporting our current research project.

The key role that translation has played throughout the centuries in the development of culture, commerce, literature and science is unquestionable. Translation is, among other things, "an intercultural discourse". Speaking *grosso modo*, we can state that translation is as old as writing. "With writing, history was born and so was translation" (Delisle and Woodsworth 1995:7). Translation as a practice can be traced back to the days of Cicero, Horace and St. Jerome. However, it was not until the early 1970s that Translation Studies (TS) emerged as an independent academic discipline thanks to the efforts of many translators and researchers working in Europe, Israel and South America (Munday 2001:7, Snell-Hornby 2006:47). Still growing at an unparallel speed TS is diverse and extremely rich, encompassing a wide range of spheres and extending well into other disciplines.

TS has come a long way from the 1960s changing paradigms or "turns", from pragmatic to cultural to globalization (Snell-Hornby 2006:47-57) and localization. The 1980s witnessed a shift in the focus of Translation Studies, from text-oriented to cultural-oriented studies, or from linguistic and literary approaches to culture (Chesterman 2006:20, House 2002:92, Pym 2006:2, Snell-Hornby 2006:47).

Research studies within this "cultural turn" were based on the poly-system theories developed by the Israeli scholar Itamar Even-Zohar (Chesterman 2006:10). The cultural component was added to TS in the 1970s to reflect the close relationship between language and culture. In order to understand the meaning of any word and translate it this must have a cultural reference or context (Snell-Hornby 2006:47). The culture becomes the key element in translation practice. "Lefevere and Bassnett envisaged that "neither the word, nor the text, but the culture becomes the operational 'unit' of translation" (Pettersson 1999:1). This shift also changed linguistic practices from prescriptive to descriptive, which laid the foundation for a more empirically oriented descriptive approach to this discipline, or Descriptive Translation Studies (DTS).

Hietaniemi uses Hoft's the "iceberg model of culture" to state that the language of the localized manual represents the explicit part of a culture, that is, the visible part, whereas the "unconscious and unspoken rules that affect the structure of a manual" represent the implicit part of a culture (2006:14-15). Software applications (source language) and their localized versions (target language) are the products of a culture, that is, the visible tip of the iceberg. They are made tangible to both customers and readers through the Internet. "We have changed the way we exchange information, from reading manuals that came with software through retrieving information when we need it" (van der Meer 2002a:1-2). The localized version can be understood through the drivers behind them: a translator's ideology, beliefs, values and attitudes that lie hidden in the invisible part of the iceberg. The translator's habitus and the social field lie in the inner portion of the iceberg.

Breakthrough developments in computer and information technology, globalization and internationalization processes added a new turn to DTS. The birth of the localization industry in the early 1980s shook the peaceful and stable discipline that had become independent of its sister linguistics in the last decades of the twentieth century (Essenlink 2000, van der Meer 2002a). Not only did localization turn around the language industry but, added a new component to the discipline. Scholars and translators alike found an immensely rich field for research ranging from CAT tools, through content management to a new breed of workers, techno-translators or localizers, as well as new language agencies (Snell-Hornby 2006:115).

According to Bassnett, "Translation Studies has come of age and, as actively involved in global problems, now challenges the paradigms of cognate academic

disciplines: the concerns are multilingual, mass and multimedia communication" (in Snell-Hornby 2006:48).

The growth of Translation Studies as a discipline, coupled with the expansion of localization programs, mirrors the boom in the language industry in the last decade. DePalma and Beninato claim that "this industry generated an estimated US$8.8 billion in worldwide revenue in 2006 and is expected to reach US$12 billion by 2010" (in Singh 2008:30).

From a training point of view localization draws on a range of disciplines: -translation, computer science, cultural studies, and management. Localization has become a very important field of study worldwide. However, in the US only three universities (California State University, Monterey Institute of International Business and Kent State University) offer localization related programs (Singh 2008:30). The need for qualified professionals is rising with the globalization of the economy and the information age.

A search on the Internet shows that sixteen US universities offer some kind of general translation training programs. These range from certificate to graduate programs involving a wider set of languages than the traditional English-Spanish combination. It is a well-known fact that Spanish is spoken throughout the US. With about 27 million US residents from Spanish-speaking countries, Hispanics, a term coined by the US federal government in the 1970s, will soon become the largest minority group. Compared to more traditional academic disciplines, the number of translation programs is neither large nor appealing, but it is quite a start.

Perhaps there is a double irony in the limited number of translation training programs: the fact that schools have ignored translation curricula almost until the 21st century in a nation that boasts of its cultural diversity; and, secondly, the scarcity of localization training programs in a country which has given birth to the computer and software industry. Notwithstanding reality, as they say in the legal profession, wherever there is a tort there is a remedy to redress it. In the last few years there has been a noteworthy collaborative effort between some educational institutions and representatives from the software publishing industry in order to add CAT tools and localization training into some of their non-degree translation courses. We are specifically referring here to the University College of Denver University in Colorado, US, which has been offering basic CAT tools training workshops for the last three

years. (For more information, please see the Denver University College - Translation Workshops link in the Reference section).

Why is it that the US, where translation has been more of an occupation than a profession, is not a leader in translation training programs compared to European or Latin American countries? After all "the US could rely on its immigrant population to do much of its translating" (Lindberg Hammond 1992:142). It is certain that any individual in the US can work as a translator without having undertaken some kind of linguistic training. In fact, no universal form of certification is required of translators and interpreters in the US, according to the US Department of Labor. However, as shown above, this situation is changing as more educational institutions introduce formal translation training. "The discipline nevertheless remains seriously underdeveloped in the United States, where there is little translator training and where debates about translation more often concern literary studies" (Pym 2004b:1).

3.1. Sociology of translators

As mentioned earlier, Descriptive Translation Studies has extended its boundaries beyond the scope of literary texts into more socially and culturally oriented research in the last thirty years. Sociological studies concern people and their observable behavior. Toury also describes translation as both a cultural and social activity where the translator "plays a social role" with a special emphasis on social norms (Toury 1995:54).

Our research project analyses translation practitioners or mediators as a social group or self-contained entity. Even though some traditional TS authors have focused on translators themselves, the Sociology of translators is not recognized as a sub-branch. "Yet none of those initiatives has yet formed any orthodoxy that might be called a Sociology of translators" (Pym 2006:3).

We will focus on the professional dispositions (*habitus*) embedded in software translators (social agents), their skills and status (capital) as compared to that of their colleagues and their possibility for mobility or lack thereof within a business organization environment (field or the arena for competition).
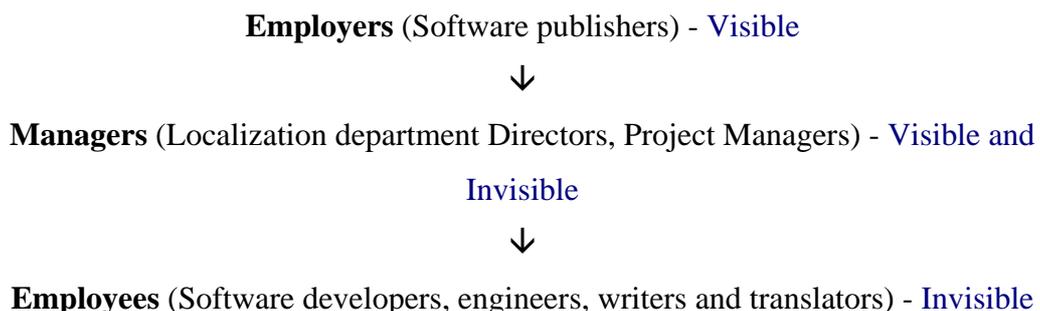
3.2. Social theory

In society we play different roles. We work, study, play an instrument, play a sport, interact, communicate with friends, family and strangers, belong to an organization, raise a family, volunteer, attend concerts, etc.. In a business organization some employees take care of accounting while others hire employees, others sell software applications, technical support members take care of end-users' requests, a group of workers clean the facility at night while most other employees have already left, and a very small group develops the strategies, policies and goals of the corporation. In simple terms, this is division of labor, which sustains any organized firm (Mintzberg 1989:98-99). According to the theory of the division of labor, if one job is divided among more employees, much more will be accomplished. If one person is responsible for sewing a bridal-gown, it will take X number of hours for this employee to finish the outfit. If one person sews the gown skirt and under slip, another one the gown bodice, a third one the drape and train, and another one the veil and the headdress, four employees will sew more gowns in the same amount of time one individual employee takes to sew one full bridal-gown.

As Mintzberg states, "Every organized human society activity – from the making of pottery to the placing of a man on the moon – gives rise to two fundamental and opposing requirements: *the division of labor* into various tasks to be performed and the *coordination* of those tasks to accomplish the activity" (1989:100).

Employers give orders that employees are supposed to obey based on a contractual relationship, which is a condition for the latter to keep their jobs. Managers coordinate the activities of different employees so that they perform their tasks while making the most use of both human and financial resources.

The following is certainly not an organizational chart but a simplified version of a business organization for purposes of this study only.

Employers (Software publishers) - Visible

↓

Managers (Localization department Directors, Project Managers) - Visible and

Invisible

↓

Employees (Software developers, engineers, writers and translators) - Invisible

Employers lie in the visible part of a culture. Corporations like Microsoft, Adobe, for instance, and their products are very well known all over the world. Some of their main executives might be also well known in certain spheres, like trade organizations. However, software developers, engineers, writers and translators remain in the invisible part of the iceberg. Translation is an intellectual activity, therefore, it is not visible to the eye. The materialization of this activity, that is, the localized version of a software application is seen mainly by the customer/reader, who generally lives outside the US.

Modern organizations are structurally based on the division of labor concept, a term coined by Adam Smith in his book *The Wealth of Nations* written in 1776, that is, at the beginning of the Industrial Revolution. In every society we play roles depending on our age, sex, skills, knowledge and expertise. The splitting of a manufacturing or any other production process across several workers, each one of them performing one specific task will result in greater productivity and financial gains for the employer. In the end not only will employees benefit from perfecting a particular set of skills (capital), but also the manufacturer or corporation will increase its capacity to create wealth. Therefore, this system provides both an individual and collective advantage.

Smith stresses, however, "…the labor can neither be so much subdivided, nor reduced to so great a simplicity of operation" (1976:9). Allocating one single repetitive task to one employee, or overspecialization, can have as many disastrous mental and psychological consequences as delegating too many functions upon one employee. Integration and coordination of activities among the different groups in our modern organizations is of vital importance so that they can carry out specialized tasks. Without an integration approach many jobs can become boring and lead employees to job burnout or quitting.

Max Weber defines power as a social relationship, that is, "the probability that one actor in a social relationship will be in a position to carry out his will despite resistance, regardless of the basis on which this probability rests" (1997:152). In-house translators (actors) make decisions all the time, choosing translation strategies and words. They acquire power when they are able to impose their linguistic preferences over the resistance of reviewers, for instance. Power was at the core of the social stratification in society resulting from three well-defined dimensions: class, status and party. Economic power gave rise to class in society, while social power derived from

status and prestige and parties gained power through politics. In modern corporations, translators, managers and software engineers belong to different classes, and enjoy different kind of prestige. However, members of these classes may seek power through joining the different parties within an organization.

For Weber power relations are central for the maintenance of "law and order" in a society. Any kind of power relations involves subordination, an example being the relation engendered between employers and their employees. Power will also give rise to conflicts. These fill business corporations because individuals have different beliefs and values, which are "irreconcilable" (1997).

Societies are regulated by economic institutions (government, non-profit); political organizations (political parties, unions), public and private organizations (corporations), educational institutions, the family and the church. Regulation is any principle or rule emanating from these institutions for the purpose of controlling. On the other hand, moral regulation encompasses a set of moral or ethical standards stemming from power groups within a society. The moral regulation of a society translates as "social responsibility" in the case of corporate organizations. Every decision they take, whether to introduce a new line of products or to outsource some jobs, will necessarily have social and economic consequences (Mintzberg 1989:318).

Emile Durkheim's primary concern was that of integrity and "social cohesion", that is, how to keep the different components in a society bound together. He strongly believed in solidarity as the force that united different groups, individuals and institutions. He explains "social cohesion" through the concepts of "mechanical and organic solidarity". Primitive or traditional societies were representative of mechanical solidarity, where the common systems of beliefs and values of their members formed the basis for "the bonding and staying together". The "conscience collective" is above the "conscience individuelle". Differentiation between individuals is practically non-existent. The Industrial Revolution, and the emergence of the division of labor gave rise to organic solidarity. "The former type [mechanical] is only possible in so far as the individual personality is absorbed into the collective personality; the latter [organic] is only possible if each one of us has a sphere of action that is peculiarly our own, and consequently a personality" (Durkheim 1997:85).

Modern societies are characterized by increased individualism, which is the result of the division of labor. However, different jobs, specializations and functions keep members of a society or of an organization "dependent upon one another", and this

creates solidarity. Durkheim claims that the division of labor is a moral issue because it concerns the relationships among individuals in a society. Social order is not derived from individual contracts but from a moral regulation. "The contract is not sufficient by itself, but is only possible because of the regulation of contracts, which is of social origin" (1997:162).

Durkheim's moral regulation is necessary for maintaining order in a society. However, the conceptual apparatus of the majority is imposed on the minority for domination purposes. In lower societies, moral regulation is circumscribed to local situations whereas in more complex societies those rules become more general, stating what people should do instead of how they should do it.

Any society can avoid chaos and disruption through the ethics in professions and through the division of labor (Durkheim 1997; Leal and Shipley 2002). Many professional organizations develop their own codes of ethics for the purpose of advancing the careers of their fellow practitioners and setting up standards of conduct. The American Translators Association (ATA) is a professional association of translators and interpreters which represents translators, translation and government agencies. Its code of ethics provides written rules, standards and guidelines that govern the business transactions between translators and/or interpreters and businesses. Violations of the code of ethics are grounds for disciplinary action, such as loss of membership in the organization or monetary fines. Business corporations also develop their own ethics policies or programs that promote ethical behavior and deter wrongdoing. In-house translators as well as any other employees are bound by these codes of ethics. Non-compliance might lead to termination.

From the classical philosophical approaches succinctly mentioned above, we will move on to the main theoretical concepts developed by Bourdieu and described in the next section. Bourdieu's social concepts provide a significant insight into the translator's work within a corporate culture: the practice of translation itself in localization departments, how translators are perceived in a corporate work environment, their actions and relationship with other employees, their roles, constraints, their possibilities of moving into other positions.

3.3. Bourdieusian conceptual tools

In this section we will describe four key Bourdieusian concepts, which lay down the foundation of the social theory used in this paper: habitus, *illusio*, field, and capital. Pierre Bourdieu, a French philosopher and sociologist (1932-2002), was an academic with an active participation in politics.

3.3.1. Habitus

Bourdieu defines the concept of "habitus" as "the system of durable, transposable dispositions, their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them" (1990:53).

Habitus refers to a set of practices that are both subjective and social. They materialize through the agents' actions (subjective) and interactions (social) with other participants or social agents in a modern capitalist society. For purposes of this study our translators' habitus will contextualize when they interact with coworkers within the social sphere of the software publisher's organization. Our cultural structures and internalized dispositions are embedded in our bodies and minds and set into motion when we are born and thereon reinforced permanently through our daily activities. In other words, habitus is partly acquired by upbringing and education. As we leave our family field, our habitus extends to other fields through its capacity to "learn and function" and adapt to new situations. It is through our habitus apparatus that we construct our values, beliefs, perceptions, tastes, manners, world-view, social experiences, native tongue, etc., that format the "rules of the game". Habitus is a "socialized objectivity" because some parts are biologically determined, like sex, gender, etc., while some other aspects are acquired during our lifetime, which makes habitus "durable". Habitus materializes and operates within a field (ibid.:53-57).

Each translator's habitus is unique as is any other human being's. To quote Bourdieu, habitus is "the genetic capital", or the GUI (global unique identifier) of each individual. Habitus also refers to the characteristics of a certain group or a given class, or the Global Class Identifier (GCI). The habitus of translators as a professional corporate group shares some characteristics that differentiate them from others: they are fluent in at least two languages; they have excellent writing skills; they translate mainly from a foreign language (source language) into their mother tongues (target language); they have invested time and money in their education to acquire translation skills as

well as computing skills; they are "good at networking", and "well-versed in one or more specialist fields" (Gouadec 2007:87). These shared characteristics also determine the position of the group or class in a society.

3.3.2. Illusio

One of the most important conceptual tools in Bourdieu's critical thinking is *illusio*. This word comes from the Latin "ludus", which means game. We will use the concept of *illusio* to refer to our jobs or corporate game. Some people invest heavily in order to obtain a university degree, acquiring debt through student loans with the purpose of landing a well-paid job. However, earning a college degree does not guarantee "a lifelong job tenure in one's chosen field" (Gini 2000:25). But it is not only the pecuniary benefit that is sought in a job; it is also the realization of doing something meaningful. Some would agree that meaningful work is necessary to the human spirit. "Work is a burden and a necessity. At its best, work can be an act of personal freedom and self-realization. But either way, work is a necessary and defining ingredient in our lives" (ibid.:12).

Bourdieu states that "*illusio* is the fact of being caught up in and by the game, of believing the game is worth the candle, or, more simply, that playing is worth the effort. [It is] to recognize the game and to recognize its stakes" (1998:76-77). Most of us have an interest in our jobs, we recognize the importance it has for us and for the organization we work for. Most of us strive to excel, to achieve status or recognition, whether it is beating a deadline, looking for the right translation for a newly coined word, or finding a software bug. But only the persons involved in the game understand the rules, play by the rules and accept the rules. Those outside of it, do not. "Games that matter to you are important and interesting because they have been imposed and introduced in your mind, in your body, in a form called the feel for the game" (ibid.:77).

Bourdieu distinguishes *illusio* from the concept of *ataraxia* developed by the Greek Stoics. *Ataraxia* is "the soul's indifference, tranquility or detachment" (ibid.:77). It is the state of being undisturbed and unperturbed. And *illusio* is the opposite. A person entering the corporate field will develop a relationship with the field called *illusio*. If the game we enter is important, if we have the feel for it, we are ready to make our voices heard.

3.3.3. Social Field

Field is another significant concept in Bourdieu's social theory. Not only does field refer to the position occupied by a social agent (translator) but to the interactions between the agent's habitus, the agent's games (job), and the forces of the field (corporation). Bourdieu argues that "…the field is understood as the system of objective relations between these agents or institutions and as the site of the struggles for the monopoly of the power to consecrate, in which the value of works of art and belief are continuously generated (objects)" (1993:78).

A social field is a system of relations between the dominant and the subordinate classes, who fight for something that has value. This is basically a struggle for power. In the corporate world all the employees or players generally struggle to achieve a higher position within the corporate ladder, for the purpose of obtaining higher remunerations and benefits, like year-end bonuses or longer vacation days, and corporate prestige. In another field or battleground, the corporation also struggles to dominate the global market. A field can also be seen, metaphorically, as the arena where players (translators) who have expertise and linguistic knowledge (cultural capital) are willing to produce a valuable piece of art (localized software applications). By extension the field is ample: economic, religious, social, cultural, etc. And each field is composed of different resources or capitals.

3.3.4. Capital

Another key analytical tool developed by Bourdieu is the notion of capital. Capital is whatever you have (assets) and its impact on other social agents. Capital provides you the means to achieve power. For Bourdieu, capital takes many forms, which are distributed among social classes. In every capitalist society there are several kinds of capital. We will briefly refer to the following ones: economic, social, cultural, academic, linguistic, and symbolic capitals.

Economic capital comprises a social agent's assets: money, material possessions, income, stocks, real estate, etc. It can be compared to the *Forbes 400* magazine, which lists the net worth of the wealthiest people in the US in a certain year.

Bourdieu defines social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition (1986:248). Social capital involves the agent's family, friends, and acquaintances, that is, the agent's social

network. "The folk wisdom that more people get their jobs from whom they know, rather than what they know, turns out to be true" (Sander 2002:213). Having the right contacts will help you land the right job with the right company, for instance. Portes defines social capital from a community point of view as "*los recursos colectivos de los que pueden disponer éstas [las comunidades] en virtud de la existencia de redes y estructuras sociales mayores*" (2004:19). The social capital of translators is manifested through translator associations, translation conferences, and study groups. To quote Portes "*un sentimiento de ser nosotros*", or a feeling to become oneself (ibid.:19).

Cultural capital is the agent's cultural goods, values, artistic knowledge and qualifications; as Bourdieu points out "… it is measured by qualifications" (2002:13). Portes defines Bourdieu's cultural capital as "*el repertorio de conocimientos de los que pueden disponer comunidades específicas para adaptarse a su entorno físico y social y lograr sus metas*" (2004:20). In other words, the set of cultural abilities possessed by translators that will allow them to adapt to the dominant corporate values environment (corporate culture) and perform their jobs.

Academic capital includes an agent's formal education, diplomas and degrees. Many software translators have academic degrees in linguistics, translation, computer science, literature and/or other areas of specialization. It can be argued that localizers will perform the job more quickly and efficiently than someone having only linguistic skills, for instance. A deep knowledge of the localization process is important to localize software applications.

Linguistic capital refers to an agent's ability to speak at least two or more languages fluently, or as. Many translators can speak two or more languages, but the difference lies in how well they make themselves understood in the target language and how well they understand their target audience (software application patrons), that is, how well they can speak the language of the software industry.

Another well-known form of capital is symbolic capital, which is synonymous with power. It derives from social position, and provides prestige and honor to both individuals (agents) and institutions (corporations) to gain domination and to reproduce themselves (Bourdieu 1991:72-76). In-house translators have different educational backgrounds. Some professionals, who have earned a degree in translation (academic capital), whether at an undergraduate or graduate level, do seek to elevate their trade status to that of a semi- or professional group in the US. Those who have earned

academic degrees other than in translation, seek protection within their own fields of specialization that offers them more symbolic power than that of a translator's.

The field allows the different forms of capitals to materialize and transform themselves into other forms, that is, to merge and interrelate. A student pays school tuition (economic capital) in order to earn a translator's degree (academic capital). The translator then graduates from school and is later on hired by a publishing company as a software translator. The economic capital invested and the academic capital earned will be converted back into the agent's economic capital due to the interchangeability function of the capitals (Bourdieu 2005:36-38).

Symbolic capital, in general, entails something valuable, a worthwhile possession, something that you cannot buy with money only. It is a combination of capitals. Examples: a university degree, a truly-well paid job (like that of a CEO's), an influential position in politics, the fame of a glamorous Hollywood star, being a Nobel-prize recipient, authoring a software application, translating a software product.

3.4. Conceptualization and rationalization

Measuring the different kinds of capitals described in the previous section may give rise to an extensive debate and controversy since most of them are abstract and vague concepts (Durlau 2002; Falk and Harrison 1998). In order to rationalize and operationalize Bourdieu's capitals for the study of software localizers and their corporate environments, we have used some constructs or inventories drawn from management theories. Below we will briefly review these constructs.

We present a practical model based on the following multidimensional constructs: Job Satisfaction Inventory (JIS) (Herzberg 1987); Job Burnout Inventory (JBI); and Self-realization Inventory (Barrick 1989; Leal and Shipley 2002; Platsidou 2007).

Job Satisfaction Inventory (JSI) + Job Burnout Inventory (JBI) + Self-realization Inventory (SRI)

These inventories will be used to test our hypotheses.

3.4.1. Job Satisfaction Inventory (JSI)

The motivation-hygiene theory, also known as the two-factor theory, is a motivational theory. It was developed by Frederick Herzberg, a clinical psychologist, in the late 1950s for the purpose of determining what causes satisfaction and dissatisfaction in an employee's work environment (1987). Herzberg' studies are based on Maslow's theory of motivation.

Traditional work views state that employees are only satisfied or dissatisfied with their jobs. Herzberg defined two sets of factors that affect employee's attitudes and motivation. "Company policy, supervision, interpersonal relations, working conditions and salary" are hygiene factors. The second set is comprised of job motivators such as "achievement, recognition, the work itself, responsibility and advancement" (Herzberg 1987). When employees are satisfied, they feel happy about their jobs, but when they are dissatisfied, they are not content with their work environment. Some of these dimensions are examined through use of a questionnaire. Please refer to subsection 4.7 under Research techniques to see how we have organized the variables for measurement.

(Hygiene factors + Motivator factors = Job satisfaction)

3.4.2. Job Burnout Inventory (JBI)

Three factors leading to job burnout have been identified following the model described by Barrick (1989), Maslach (1997), and Leal and Shipley (2002).

(Role extension and ambiguity + Conflicts of interest and of value + Workload = Job burnout)

Job burnout is not a new phenomenon. In the 1970s US psychiatrists and social psychologists wrote articles on workers - in the human and health care services and education - experiencing job burnout. In 1961, American writer Graham Green wrote a novel called *A Burn-Out Case*, which describes an architect's disillusion with his job and his later resignation and withdrawal into the African jungle (Maslach et al. 2001: 397-398). "Burnout research initially utilized a grass-roots approach derived from

people's workplace experiences". The term 'burnout' passed from pop psychology to academic research in the mid-1970s (ibid.:397-398).

Maslach and Leiter explain that job burnout "represents a major setback on the road toward a better work life" (1997:1). The Industrial Revolution was based on the exploitation of nature's raw materials and human labor. Workers migrated from farms to urban areas and provided the labor-force needed for the new industries (Deane 1979). Workers "were seen as cogs in machines, easily replaced. They worked themselves into early graves" (Maslach and Leiter 1997:1). Or as Morin explains "they were an extension of the machine and expendable spare parts" (2004:1).

Mechanization (increasing use of machines to complement or replace human labor) made possible the division of labor. Jobs have evolved since the Industrial Revolution. The mid 20th century witnessed a significant change – from the oppression on workers to jobs that had some ideal of community (Maslach and Leither 1997:1-2; Morin 2004:2).

Jobs have evolved since the Industrial Revolution. Globalization together with in-sourcing and outsourcing strategies have added more complexity to our information-age organizations (Morin 2004:2). Ciulla states that "if workers of the modern times were overworked, those of the post modern times are not only overworked but also over managed, employers appearing eager to try the "flavor of the day" in order to increase the financial performance of their companies" (in Morin 2004:2).

The three components of job burnout will be analyzed in the Literature Review section.

3.4.3. Self-realization Inventory (SRI)

Charles Wright Mills wrote that "the gospel of work has been central to the historic tradition of America, to its image of itself, and to the images the rest of the world have of America" (in Gini 2000:23). The early settlers had a reverence for hard work, determination and personal responsibility. Their moral values were generally associated with the Protestant work ethic, a term coined by Weber (ibid.:24). In his book *The Protestant Ethic and the Spirit of Capitalism*, Weber argues that modern capitalism was born from Puritan ethics and ideas (1992:47-50). And, as a matter of fact, American Protestantism has been the force driving the industrious US since the 18th century.

> The work ethic is an essential part of the actualized self; it offers the workplace as a privileged
> site where such self-actualizing work can be done; and-- as a component of "reformed" social

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welfare policy--it offers a set of techniques whereby the habitually "non-working self" can be transformed into a productive citizen (Davis 2007-).

Leal and Shipley argue that we live in a "polarized world" where employment offers only two choices: the good jobs and the "junk jobs". The latter are "poorly paid, mechanical and externally paced, routine-like, boring, unqualified jobs", mainly held by "women" and "young people" and immigrants. Many of these jobs abound in our "modern electronic offices" today. Based on these authors' theories, these jobs are the result of the globalization or "Mcdonaldization" of the world. The junk jobholder is an instrument to perform the job, which has no intrinsic creativity or skill. This lack of power mirrors the community the holder belongs to (2002:147-150). These authors define the good jobs as "challenging, creative, varied, for ever changing, self-paced, exciting, qualified and even highly-qualified" (ibid.:149). Teachers, engineers, translators, academics are some examples of good jobholders.

Professor Hill explains that Industrial age jobs were "typically low-discretion, required little decision-making, and were analyzed and broken into simple tasks which required very little thinking or judgment on the part of workers" (1996:10). These jobs would be the equivalent to our modern "junk jobs". However, the Information age also offers jobs that "are high-discretion and required considerable thinking and decision-making on the part of workers" (ibid.:10). These are the good jobs as explained by Leal and Shipley.

Information age jobs provide workers with opportunities for greater self-realization, and self-fulfillment (Miller 1986). In more affluent societies people find "self-expression" and "self-realization" through their jobs. People are what they are through their careers. "Self-worth and self-satisfaction are the direct results of having a worthy task to perform" (Gini 2000:44).

The three components of the Self-realization inventory will be analyzed in subsections 5.3.1. through 5.3.3. under Literature review.

(Career motivation + Goals/Expectations + Job diagnostics)

4. Research techniques

An online survey questionnaire has been included as the basis for the empirical and statistical data collection on the issues related to corporate translators' job satisfaction,

job burnout and self-realization. The survey questionnaire was launched on March 15, 2007. However, for purposes of our pilot study, our cutoff day was June 5, 2007. The URL address (www.ilovelocalization.com) was emailed to various translators groups and software publishers in the US inviting them to participate. Localization project managers working for large software publishers were also contacted by phone requesting them to circulate the web address among their in-house translators and vendors. Several Language Service Providers were contacted as well as three universities that provide translation and localization training in the US.

The survey was composed in English since the majority of corporate translators translate from English into multiple target languages.

The recipients of the online survey are professional translators working in localization departments of software publishers and LSPs physically located in the US.

4.1. Survey goals

This survey aims at finding out primarily how satisfied in-house translators are with their jobs. Which job variables contribute to job satisfaction among in-house translators?

Secondarily, the survey aims at finding out if professional translators feel burnt out two or three years into their jobs. Which job variables contribute to job burnout among in-house translators?

The third goal is to find which job variables contribute to self-realization among in-house translators.

The survey includes questions about how these professionals see themselves within the corporate structure as compared to other employees in the organization such as: project managers, software developers and engineers, and technical writers. This survey will shed some light on the reasons why our respondents work as translators, and what drives them to translate? We also hope to discover whether respondents are satisfied in their current positions or if they are just stepping-stones to more lucrative corporate positions. The survey also aims to shed some light on job security in a very volatile industry such as the localization industry.

4.2. Importance of survey

As Robinson explains, we need "new knowledge" about translators and translations (1998:3). Primary research conducted by translator scholars has concentrated on the product or commodity, that is, the translated text, while translators were simply the vehicle for achieving "the best kind of translation" (ibid.:3). Sociological approaches have been non-existent for some time. "Theorists of Bible translation are committed to the written Word; sociolinguists aim first to describe language use; and much of DTS came from literary studies were the text remains the thing" (Pym 2006:2). Our project focuses on translators, the social agent, rather than translations. We have collected data as to what states do translators live and work, as well as their educational background, and how many of them have had any translation training before working as in-house localizers. Until recently very few US software publishers would request a translation degree as an imperative hiring condition for translators. Our target population is a culturally diverse group, most of them representing different ethnicities. These immigrant translators have been the basic supply of translators in the US. On the other hand, many software developers, programmers and engineers, working for US employers, are also foreign born. All this information is not only important for future research but also for the future careers of these language professionals. It might help provide some information on how to design future translation and localization programs in the US.

4.3. US Demographics

The US constitution mandates that a census of its population be conducted every ten years. The last one took place in 2000. The information collected from this census includes statistics on total population, as well as population by age, gender, race and ethnic group. (For additional information, please see the US Census Bureau link in the Reference section). The following figures have been extracted from "The Population Profile of the United States: 2000 Internet Release":

1. Between 1990 and 2000, thirty-three million people were added to the U.S. population, the largest increase ever. The population growth was 13 % compared to 10% in the previous decade.

2. The total population was recorded at 281,421,906. However, the present population is estimated at almost 304 million.

3. Between 1999 and 2000, 1.7 million people moved into the US from abroad, two-thirds of whom were foreign-born. It is estimated that 10% of the US population is foreign-born.

4. Thirty-nine percent of the foreign-born entered the US in 1990 or later and 28 % in the 1980s. More than one third of the foreign-born in the US had become a naturalized citizen.

5. The race category includes racial and national-origin groups. The classification is not scientific or anthropological but rather social: A. White (211,460,626); B. Black or African American (34,658,190); C. American Indian and Alaska Native (2,475,956); D. Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and other Asian) (10,242,998); E. Native Hawaiian and Other Pacific Islander (Native Hawaiian, Guamanian or Chamorro, Samoan and Other Pacific Islander) (398,835); F. Hispanic or Latino (Mexican, Cuban, Puerto Rican and other Hispanic or Latino or Not Hispanic or Latino) (35,305,818). All others are summed up under the category: Some Other Race (15,359,073).

There is no question that the US is a culturally diverse country. According to data from the Census Bureau "the foreign-born population in the US grew from 10 million in 1970 to 12 million in 1980, and 20 million in 2000". By March 2000, the estimated foreign-born population was 28 million with the largest immigration coming from Latin America and Asia (Current Population Survey 2000:1). Camarota elevates this figure to 37.9 million in the same year, 2007, which accounts for both legal and illegal immigrant population (2007:1).

Many foreign-born students who come to the US in order to complete a graduate course of studies work as translators either on a free-lance basis or do contract work for non-profit organizations. Most of them are fluent in at least two languages, English and their native tongues. The Justice Information Center, a non-profit organization funded by the US government, provides legal services to immigrants through different outlets throughout the nation. This legal resource recruits its interpreters and translators from the foreign student population that arrives in the US each year.

The US government allots a certain number of applications each year to foreign civilian translators and their families working for the US armed forces, and who wish to

gain admission to this country and later acquire permanent residency or US citizenship. They have to comply with certain legal requirements in order to obtain special immigrant status (US Census Bureau).

The Diversity Visa Program is also a popular way for people all over the world to obtain immigrant status. This is a congressionally mandated program administered once a year. "Section 203(c) of the 1952 INA (Immigration and Nationalization Act) provides a maximum of up to 55,000 Diversity Visas (DVs) each fiscal year to be made available to persons from countries with low rates of immigration to the United States" (Please see US Department of State link in the Reference section). The process is based on a computer-generated lottery drawing.

US employers are allowed to file H1-B petitions with the US Citizenship and Immigration Services to employ foreign workers. Congress has set a limit of 65,000 H-1B visas for fiscal year 2009.

As far as the formal education level of immigrants, Camarota claims that "historically, immigrants enjoyed a significant advantage in terms of having a college education". In the 1970s a larger number of immigrants had higher education levels than do recent immigrants (2007:22).

From the information stated above it could be argued that US immigration policies generate an automatic pool of bilingual individuals who are then recruited by non-profit organizations and corporations to fill their translation and interpretation needs. Some of these immigrant workers/students have earned their translation degrees abroad. This also reinforces Lindberg Hammond's statement about where the US obtains its translators. No wonder why there are fewer universities offering translation programs in comparison to other countries.

Could this also help explain why translation is not seen as a real profession in the US?

4.4. US translators population

We will try to determine an approximate figure representing the current in-house translation population in the US. Our paper deals with hired in-house translators as opposed to contract translators. Interestingly, the US Department of Labor lists interpreters and translators under the same category "because they share some common

traits: In addition to fluency in a language, many interpreters and translators need a college degree" (US DOL Occupational Outlook Handbook 2007:1).

The American Translators Association (ATA) has approximately 10,000 translator members in over 80 countries. So these figures are not very handy for determining our population size.

According to the US DOL "Interpreters and translators held about 41,193 jobs in 2006" (ibid.:4). Since many of them "work in the occupation only sporadically" this figure is probably higher now. Could we say then that even though translation and/or interpreting jobs offer permanent positions, it is very common for translators and interpreters to change careers or jobs or to work only part-time?

Let's take a look at how these 41,193 translator and interpreters jobs are distributed: About 33% of translators and interpreters (13,523) work in public and private schools, colleges and universities. Another 12% (5002) work in health care and social assistance. About 10% (4290) work in other areas, such as federal, state and county courts. "Others" (45% or 18,536) work for publishing companies, telephone companies, airlines and translation agencies. Of the total, 22% are self-employed and many freelancers work only part time.

Table 1 shows totals and projections for translators and interpreters employment in the Information Industry. For a full version of this table, please see Appendix E.

Employment by Industry	Number (2006)	Projected Number 2016	Numeric Change
Wage and salary emp.	32,314	40,600	8,286
Information	1,038	1,136	98
- Publishing (except Internet)	413	453	40
- Newspaper, periodical, book and directory publishers	319	320	1
- Newspaper publishers	213	200	-12
- Software publishers	93	132	39
- Telecommunications	178	187	9
- Wired telecom. carriers	85	74	-12
Others			
Total emp., all workers	41,293	50,916	9,722

Table 1. National Employment Matrix. Source: US DOL. NEM. 27-3091 Interpreters and Translators (pp. 1-2)

The above table shows that 93 translators worked for software publishers in 2006. If the projected figure for 2016 shows an increase of 42% translators in 10 years, we have a 4.2% increase per year, that is, 3.9 translators. In two years the total number would double to almost 8. So we could say that 101 translators worked for software publishers in 2008. We think that this figure does not reflect reality. In 2004, the JD Edwards localization department was staffed with at least 50 in-house translators and seven full-time terminologists. If, according to the US Department of Labor statistics, about 10,000 publishing establishments employed 239,000 wage and salary employees in 2004, why does the same government agency list only 93 translators and interpreters were employed by this industry in 2006 (US DOL 2007:2). Just for clarification purposes, software publishers employ translators as opposed to interpreters. Yet we would have expected a higher number of translators to be employed by these organizations. Our estimated guess is that the in-house translation population working for software publishers is around 2,390, that is, if we consider that out of the 239,000 employees one percent are translators.

Several translation agencies or Language Service Providers employ in-house translators, while some contract out with translators or use a combination model. Evans et al. (2004:15) sets the number of translation agencies in the US at 1,587 with 8,390 paid employees for the year 2002. Assuming that half of these employees are translators, the number of in-house translators would be 4,195. Once again, this is simply a guess. Therefore, we have 193 translators employed by software publishers as per the US DOL statistics, and an estimated 4,195 salaried translators working for translation agencies, that is, 50% of the total salaried employees working for translation agencies as per the United States Department of Commerce (US DOC) figures. Adding the figures from these two sources, we would have 4,388 in-house translators.

Consequently, if we add the above figures: 193 in-house translators (US DOL) our assumed 2,390 translators (a one percent of the total salaried employees working for software publishers); and 4,195 translators (50% of the salaried employees working for translation agencies), we would have a total of 6,778 translators. Once again, this is an assumed figure and the statistics we were able to find are figures from the years 2000 and 2002.

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4.5. Survey design

At the moment there are four types of Internet research methods: email and web-based surveys, focus groups and online interviewing (Ellis 2002).

The tool used for our quantitative data collection is a web-based survey questionnaire. This is a research strategy focusing on a contemporary event (Yin 1994:6). Our target population, as indicated earlier, is in-house translators presently working in the US. An approximate number of in-house translators is impossible to determine, our best guest is between 500 and 1,000. Again, we could be totally wrong. The items on the questionnaire have been grouped into 19 sections, each covering a specific topic with a total of 48 questions. The complete questionnaire can be seen in Appendix A in a separate file. Included in the survey is a brief overview of its purpose. The internet questionnaire is completely anonymous since we cannot identify who the respondents are, except that they claim to work as in-house translators whether as employees or as contractors.

Online surveys are very appealing and cost less than traditional survey methods. Though easy to handle and very helpful in "time-sensitive studies", this type of Internet research methods has its pitfalls as well (Bauman and Airey 2001 in Ellis 2002:3). One of them is the response rate. Many researchers have concluded that this type of survey generates a lower response rate than paper surveys (Shaefer and Dillman 1998 in Ellis 2002:7). Another drawback to online surveys involves technical issues regarding computer skills on the respondent's part, but this is not the case with our population. All members of our target group have computing skills and are Internet users.

Using incentives is one way to attract participants to filling out questionnaires (Iarossi 2006). Most respondents like to be compensated for their time. However, we can only offer a non-monetary incentive, the promise to offer the results of the survey on request.

A time frame for completing the online survey was also provided. This is a courteous way of informing potential participants of the estimated amount of time they would need to fill out the survey (Ellis 2002; Iarossi 2006).

4.5.1. Question wording and types

We followed the criteria mentioned by Iarossi (2006:30) as to the wording of the questions asked in our questionnaire. It must be "brief, objective, simple, and specific". Leading and ambiguous questions as well as sensitive issues were avoided.

The questions included in the survey are of the following type: open- and closed-ended questions; single and multiple responses, and rated responses.

Open-ended or infinite-response questions require a more specific response from the respondent. They also take more time to fill out. We included a text area where respondents could elaborate on a response, for instance, in Section XII, question no. 3 reads as follows: "If you have selected "none of the above" what would you like to be doing?"

Closed-ended or dichotomous type questions solicit a 'yes' or a 'no' response or just a few words. Example: in Section IX, question no. 5 reads as follows: "Do you keep ahead of what is going on in the translation world?" Yes or No. This type of question is not-time consuming.

Single and multiple response questions or tick-box questions have a predetermined set of answers (Iarossi 2006:71). While the single choice answer type allows the respondent to select only one response from a predetermined set of answers, the multiple choice answer type allows any or all answers to be selected. The following is an example of a multiple response question: Section X, number 1: "What are your job responsibilities (all that apply) and percentage of time devoted to each one of these tasks on a weekly OR monthly basis?"

The rated type question allows the respondent to assign a value to each response. Section XIV, question number 1 reads as follows: "On a scale from 6 (Strongly Agree) to 1 (Strongly Disagree) how would you rate the following statements about your present job?"

The survey questionnaire flows from more general questions to more specific ones.

4.5.2. Rating scales

Rating scales are mainly used to elicit subjective answers (Iarossi 2006:60). These scales are very popular in surveys as they are varied. The respondent is asked to choose from a set of answers arranged "in hierarchical order". The survey questionnaire

includes interval scales, that is, "scales in which the respondents perceive equal-sized gradations between the points on the scale" (Friedman 1999:115).

We have used six descriptors in each of the rating scales most commonly used in survey questionnaires. The reason for choosing six descriptors as opposed to five is that they provide a balanced scale: three favorable choices and three unfavorable ones (ibid.:119). Researchers have also found that the direction of the scale is important, this is why we have started with the positive ratings first (ibid.:121).

1. Descriptors: Excellent – Very Good – Good – Fair – Poor – Very Poor

2. Descriptors: Extremely Satisfied – Moderately Satisfied – Slightly Satisfied - Slightly Unsatisfied – Moderately Unsatisfied –Extremely Unsatisfied

3. Descriptors: Strongly Agree – Moderately Agree – Slightly Agree – Slightly Disagree – Moderately Disagree – Strongly Disagree.

4.5.3. Sampling method

Statistical figures regarding the number of in-house translators working in the US provided by the Bureau of Statistics of the US Department of Labor, indicate 93. Again, we do not agree with this figure. It is highly impossible to determine an approximate number. We are dealing with an invisible population, as it were. We have chosen a snowball sampling method for our survey questionnaire. This is a non-probability method used when it is difficult to locate respondents either because of the cost or the difficulty in locating the population. Through the snowball method users refer others to the survey.

One of the issues raised with Internet questionnaires is the fact that they might affect sampling. Respondents have been drawn to our online survey by email postings, email notices and phone contacts. Some respondents find their way to the online survey "through self-discovery", which constitutes a non-validated sample. Others are directed to the web site by an email notification, which is a validated sample (Ellis 2002:7).

4.6. Survey questions

Below is a summary of the main topics developed in each section:

I. General Information (5 questions): covers demographic data of respondents such as age range and sex; country of origin; and language combination. It also covers information pertaining to the geographical location of software publishers.

II. Education (2 questions): covers the respondent's educational background and translator certification (educational capital).

III. Company and Administrative Policies (3 questions): covers questions related to familiarity with and participation in setting company policies.

IV. Pay-Related Issues (2 questions): covers employee's perception of their salaries compared to other co-workers and company policies on salaries, raises and bonuses.

V. Work Experience (2 questions): covers questions on work experience in the Information Technology field.

VI. Career Choice (1 question): covers the respondent's reasons for working as a translator.

VII. Technical and Work-Domain Expertise (1 question): covers the translator's experience both in the subject area and in the use of CAT tools.

VIII. Professional Development (3 questions): covers questions regarding the respondent's attendance and participation in translation events, or conferences; types of conferences; and whether expenses are paid by the translator, the employer or by a third party.

IX. Professional Activities (5 questions): covers questions on membership in translator associations, subscription to translation magazines, engagement in teaching activities and whether expenses are paid by the translator, the employer or by a third party.

X. Job Responsibilities (2 questions): covers questions on the main tasks performed by the translator as well as percentage of time devoted to each one of those tasks on a weekly basis or monthly basis.

XI. Workload (3 questions): covers questions on translation and proofreading metrics.

XII. Career Goals/Expectations (4 questions): covers questions on the translator's long-term professional expectations.

XIII. Attitudes towards Job (3 questions): covers direct questions on the translator's job satisfaction.

XIV. Job Diagnostics (1 question): covers a different question on job satisfaction ranking.

XV. Work Conditions (1 question): covers the translator's job satisfaction related to salary compensation, corporate benefits, workload, building facility, relationship with supervisors and peers, and career opportunities.

XVI. Management Supervision (1 question): covers their supervisor's managerial skills.

XVII. Corporate Position (3 questions): covers questions related to the translator's corporate position compared to that of other employees in the localization department.

XVIII. Final Product (2 questions): covers questions related to the translator's satisfaction with the end product.

XIX. Organizational Commitment (4 questions): covers questions on job security, commitment and morale among in-house translators.

4.7. Operationalization of theoretical constructs

Can job satisfaction, job burnout and self-realization be truly measured? Opinions vary on this issue. What is important in a job for my neighbor might not be as important to me. Some people experience burnout two or three years into their jobs. Others spend their whole lives working in the same profession and still love it. Some people discover themselves through their careers. Some fail at this. There are innumerable causes that might affect one's job performance.

Data collection through a survey questionnaire will be used to test the hypotheses:

A. Which job variables contribute to job satisfaction among in-house translators?

B. Which job variables contribute to job burnout among in-house translators?

C. Which job variables contribute to self-realization among in-house translators?

In our larger project a survey interview will be used to collect information and retest our hypotheses and other additional ones. For a full text of the interview questionnaire, please refer to Appendix B in a separate file.

We have selected only those variables that we consider important for testing our hypotheses. However, there are might be other factors that affect job satisfaction, burnout and self-realization. One of the disadvantages of operationalization is the role played by our own interpretation.

Definitions of key concepts are included in subsection 1.6 under Introduction. Herzberg's two-factor theory has been used to measure job satisfaction among in-house software translators. As indicated earlier, some of the variables have been adapted to fit our study.

JOB SATISFACTION INVENTORY	
(17 items)	
Hygiene Factors	**Questions**
Company and Administrative Policies	1. On a scale from 6 (Excellent) to 1 (Poor) how would you rate your knowledge of your company policies, like Dress Code, Harassment, Internet usage, Confidentiality, Absenteeism, Drugs, Intellectual property? 2. Do you think the policies are fair and apply equally to all employees? 3. Do you have any input?
Management Supervision	1. On a scale from 6 (Strongly agree) to 1 (Strongly disagree), how would you rate your boss or supervisor's skills? A. Good leadership skills B. Good managerial skills C. Recognizes and values my skills, and hard work D. Cares about his/her employees E. Good communicator F. Easy to work with
Work Conditions	1. On a scale from 6 (Strongly agree) to 1 (Strongly disagree), how would you rate your satisfaction or dissatisfaction with the following items? A. Salary B. Benefits C. Frequency and amount of bonuses D. Workload E. Job responsibilities F. Work schedule G. Physical environment (building facility, amenities, etc.) H. Opportunity for advancement I. Opportunity to use new technologies J. Training provided by your company K. Your overall relationship with your supervisor L. Your overall relationship with your peers. M. Job recognition
Pay-related Issues	1. How would you compare your salary to these other workers in your

	company? 2. Does your company have clear policies regarding salaries, raises and bonuses?
Motivator Factors	**Questions**
Professional Development	1. In the last three years, have you attended any translation events, seminars or workshops? 2. Who paid for those expenses? 3. If you have attended any translation event, could you please indicate what type of training or seminar it was?
Professional Activities	1. Are you a member of any translators' association and who pays for the annual membership dues? 2. Do you network with other colleagues outside of your work environment? 3. Do you mentor? 4. Are you subscribed to any translation magazines and who pays for the subscription? 5. Do you keep ahead of what is going on in the translation world?
Job Responsibilities	1. What are your job responsibilities (all that apply) and percentage of time devoted to each one of these tasks on a weekly basis OR monthly basis? A. Translation B. Proofreading C. Editing D. Terminology Research and Management E. Software Testing (Linguistic, Functionality and/or Cosmetic) F. Language Guidelines Authoring and Updating G. Quality Assurance Processes Authoring and Updating H. Project Coordination I. Staff Meetings and General Communications J. Other 2. On a scale from 6 (Extremely Satisfied) to 1 (Extremely Unsatisfied), how would you rate your satisfaction level with your tasks?
Advancement and Growth	Included in Work Conditions

Table 2: JSI – Questions from our Internet Survey (Appendix A)

In the following subsection we will describe the operationalization of the Job Burnout Inventory as per the model previously mentioned.

JOB BURNOUT INVENTORY (13 items)	
Role Extension, Ambiguity and Conflicts	1. Where do you see yourself in the social ladder in comparison with Project Managers, Software Engineers, Software Developers and Technical Writers? A. Decision-making power B. Corporate prestige C. Balance between efforts and wages D. Possibilities for upward mobility 2. If you have answered Same or Below to any of the above, where would you like to be in relation to Project Managers, Software Engineers, Software Developers and Technical Writers, assuming you had the power and authority to make changes in your organization? A. Decision-making power B. Corporate prestige C. Balance between efforts and wages D. Possibilities for upward mobility

	3. If you have answered question no. 2, could you please provide a brief explanation?
Organizational Commitment	1. How sure do you feel with your position? Do you think your company will be outsourcing your job in the next two to four years? 2. Would you accept a job with another company for the same salary you are making now? 3. Would you accept a job with another company for a higher salary? 4. Management acts with integrity. 5. Please feel free to tell us anything else about your job that you would like to share with us.
Workload	1. Are your deadlines reasonable? 2. How many words are you expected to translate, proofread and/or edit on a daily basis? 3. Do you feel overworked?
Final Product	1. How satisfied are you with the overall quality of the final product (software translated or reviewed by you)? 2. Independently of your response to question 1 above, could the following reasons be part of your satisfaction or dissatisfaction with the end product?

Table 3: JBI – Questions from our Internet survey (Appendix A)

The operationalization of the Self-realization Inventory will be described as follows:

SELF-REALIZATION INVENTORY (6 items)	
Career motivation	1. Why are you working as a translator?
Goals/Expectations	1. Where do you see yourself, professionally, in one to three years from now? 2. If you have selected A or C above, please go to the next section. 3. If you have selected B or D above, what kind of job would you like to be doing? 4. If you have selected E above, "None of the above", what would you like to be doing?
Job diagnostics	1. On a scale from 6 (Strongly agree) to 1 (Strongly disagree) how would you rate the following statements about your present job?

Table 4: SRI – Questions from our Internet Survey (Appendix A)

5. Literature Review

"Without work, all life goes rotten. But when work is soulless, life stifles and dies".

Albert Camus (in Potter 1998:7)

This section reviews the main literature relevant to this study. The main topics are: Job Satisfaction, Job Burnout and Self-realization. Despite the highly extensive literature on these work issues by other professionals, little attention has been paid to in-house translators.

5.1. Job satisfaction inventory

Wood describes job satisfaction as "the condition of contentment with one's work and environment denoting a positive attitude" (in Cano and Miller 1992:9). Balzer et al. define job satisfaction as "the feelings a worker has about his or her job experiences in relation to previous experiences, current expectations, or available alternatives" (1997:10).

Job satisfaction is important because every work experience has an impact on one's life and on the community (Lawler in Cano and Miller 1992:9). Our jobs affect our lives, the society in which we live and the organizations we work for. Also, most individuals spend approximately 86,000 hours of their lives working, according to motivational speaker Chad Foster.

Job satisfaction has an economic component. Job burnout, absenteeism and turnover are attributed to low job satisfaction (Davis and Newstrom 1989; Lawler 1977; Newcomb, Betts and Cano 1987; Porter and Steers 1977 in Cano and Miller 1992:9). "Managers, supervisors, human resource specialists, employees, and citizens in general are concerned with ways of improving job satisfaction" (Cranny, Smith and Stone in Castillo and Cano 2004:65). Many factors can influence job satisfaction or dissatisfaction in our work environment. Management theories are beginning to recognize that satisfied employees are more productive and, in the end, improve the company's bottom line (Farrant 1990; Ostroff 1992 in Raphael 2004:1).

Herzberg's two-factor theory is "one of the most widely used frameworks for examining job satisfaction" (Doré 2004:23). In the late 1950s, Herzberg interviewed groups of accountants and engineers to discover the reasons for employees' satisfaction or dissatisfaction with their jobs. This psychologist developed his theory based on two questions he asked of his respondents:

1. "Think of a time when you felt especially good about your job. Why did you feel that way?"

2. "Think of a time when you felt especially bad about your job. Why did you feel that way?" (Syptak 1999:1).

Herzberg concluded that job satisfaction results from good experiences, which are derived from 'motivators' or 'satisfiers', such as "achievement, recognition (for achievement), the work itself, responsibility, advancement and growth" (Syptak 1999:1). A second group of factors, which he called 'hygiene-factors' or 'dissatisfiers',

are determinants of dissatisfaction, such as, "company policies, supervision, work conditions, salary and relationship with peers" (Syptak 1999:1).

Dissatisfiers (job context)	Satisfiers (job content)
Company policies (corporate habitus)	Achievement (symbolic capital)
Supervision (field of power)	Recognition (symbolic capital)
Relationship with boss (unequal agency)	Work (illusio)
Work conditions (corporate habitus)	Responsibility (symbolic capital)
Salary (economic capital)	Advancement (symbolic capital)
Relationship with peers (equal agency)	Growth (symbolic and educational capitals)

Table 5: Herzberg's two-factor theory. Source: Syptak 1991:1. (Blue text added)

According to Herzberg, satisfaction and dissatisfaction are not opposite concepts. The absence of one does not necessarily mean the presence of the other. The opposite of satisfaction is 'no satisfaction'. Hence, the opposite of dissatisfaction is 'no dissatisfaction' (1987:110). Both satisfiers and dissatisfiers arise from different factors: job content, and job context. We agree that these terms might be a bit misleading.

Some supervisors do not allow localizers to contact developers directly on the ground of company policies. On many occasions, localizers need to find out what a certain abbreviation means, or what a particular word in a user interface string means. Now suppose they have unsuccessfully used all the research possibilities they have (on line research, glossaries, technical support documentation, etc.), and yet, they have not been able to come up with the right answer. Their last hope is to contact the developer or author who wrote that particular string. It is true that sometimes this can be an impossible task for the following reasons: the developer is no longer working for the company, or, tracing the developer might take more time than the allotted time for the translation project, or, that specific string of characters was written by a customer. As a result, the translator has to guess what the developer intended to say. This company policy might affect the localized string, and consequently, any translator's work. This translator is not satisfied with this specific company policy but does not experience dissatisfaction.

Satisfiers are associated "with long-term positive effects in job performance while dissatisfiers produce only short-term changes in job attitudes and performance" (Gawel 1997:20). They describe the relationship between an employee and the tasks he

or she performs, that is, job content. Dissatisfiers, on the other hand, describe the relationship between the employee and his/her work environment, in other words, job context. "The satisfiers relate to what a person does while the dissatisfiers relate to the situation in which the person does what he or she does" (ibid.:20).

Job satisfaction is closely related to job retention. It is important for software publishers to retain their in-house translators since absenteeism and/or turnover due to job dissatisfaction may negatively affect their bottom-line. It is a well-known fact that happy employees are much more productive than those who feel trapped in their jobs (Doré 2004; Raphael 2004; Syptak 1999).

The literature on job satisfaction is quite extensive and comes from multiple disciplines: law, medicine, engineering, accounting, agriculture, sociology, education, psychology, and so forth. Thousands of articles and studies have been written on job satisfaction measures and job attitudes. However, writings on job satisfaction among in-house translators in the US do not abound. Some studies have been conducted on job satisfaction among conference interpreters, for instance: Kurz in 1983, and Rojas in 1987 (Gile 2000:96). Kurz has written extensively on the work conditions of interpreters. Again, the literature on job satisfaction among localizers in the US is scarce.

There are some articles dealing with the translation profession in the US that date back to the 1990s. Deanna Lindberg Hammond's 1990 article titled "The Translation Profession in the United States Today" was first published in *The Annals of the American Academy of Political and Social Science*. This article provides a general account of the translation profession in the US.

Milton conducted two surveys in 1999 and 2001 in order to analyze the situation of professional translators in Brazil, mainly, the relationship between academia and the world of practitioners (Milton 2004:169). He concluded that there are "two separate domains" in the translation world: the professional translator domain and the academic translation domain. The first group includes professional translators who work mainly in technical areas, and "who have had little contact with the university". The second group encompasses "translation undergraduate, diploma and postgraduate courses, the production of M.A. and Ph. D. theses, and publications and conferences" (ibid.:176).

Writings on business experience by translators and trainers in different countries can be traced back to as early as the 1950s. Unfortunately, those studies lack the necessary research approach (Lambert 2006:149-150).

In 1990 Lambert himself conducted a study to analyze the translation job market in Belgium, focusing mainly on job satisfaction among business translators. Lambert wanted to find out "why was job satisfaction among translators in business environments as low as it seems to be" (ibid.:150). For this purpose he interviewed translators engaged in "technical or business translation" and working in local, international and multinational companies located in that country. According to Lambert, some groups within Translation Studies seem to show very little or no interest at all on translation outside the literary world perhaps because it is a question of classification within our discipline. "The inevitable and rather paradoxical consequence is that 'technical translation' or 'business translation' is not easy to locate in the discipline" (2006:149).

Lambert indicates that his findings on the work conditions of translators "although specific to the Belgium market" could be relevant to other cultures. He also points out that those work conditions may not necessarily indicate job satisfaction or dissatisfaction (2006:151-155).

5.1.1 Lambert's conclusions

Below please find some of Lambert's conclusions regarding translators' work conditions (ibid.:155):

- Translators have no clear legal status. No diploma or test is required to work.
- Translation is still a black market. "Secretaries and friends of managers continue to produce business texts" (ibid.:155). When managers need a translator, they would have their secretaries or friends do it, and pay them for the work, rather than hire a professional translator. Translation is not considered a serious business. Therefore, "outsiders can take care of it" (ibid.:155).
- "Intense underground activity". Many employers working part-time and for different agencies (ibid.:155).
- Translation rates are lower than in the surrounding countries.

Lambert's conclusions regarding attitudes towards work are as follows (ibid.:155):

- Languages can be treated in the language department. It is not part of the organization.

- In-house translators do not feel fully at home since they are considered "as lower-category employees" (ibid.:156).

- Though their salaries might be descent, "translators are not really part of the overall management" (ibid.:156).

- Translation project deadlines are unreasonable or non-existent (Lambert 2006:157).

- Communication is unidirectional: little or no feedback before, during and after the project has been completed (ibid.:157).

- The speed and quality of the task is "mechanical", which implies that even though the company has hired an expert, he or she cannot establish her own strategies or rules (ibid.:157).

Below please find Lambert's conclusions as far as the translation process itself is concerned:

- The translation process is planned without the intervention of any language expert (ibid.:157).

- The evaluation or feedback on the employer's behalf is rare. It is generally initiated by an external complaint (customer).

- Instruction sheets are more common but still exceptional in certain fields, like in television (ibid.:157).

Feedback on the translation is rare between the commissioner and the translator (ibid.:157)5.1.2. Satisfiers and dissatisfiers

In this section we will define the satisfiers and dissatisfiers as explained in Herzberg's two-factor theory. Both satisfiers and dissatisfiers affect individuals' attitudes about their jobs. Satisfiers or motivators are important factors because they enrich a person's job (Gawel 1997:4).

Herzberg's five satisfiers or motivators are: achievement, recognition, the work itself, responsibility and advancement. According to Herzberg, achievement is the strongest motivator, followed by recognition.

Achievement is the most frequent motivator that leads to job satisfaction (Herzberg et al. 1992:44-46). An example of achievement among localizers is to successfully meet translation and quality assurance (QA) testing deadlines. Major software publishers release up to 50 localized versions of the same product at the same time as the original language version, also known as simultaneous shipment in the

software industry. Solving problems related to terminology and finding bugs during testing of applications are also examples of achievement.

Herzberg explains that the source of recognition can be almost anyone: supervisor, project manager, co-worker, patron, etc. (1992:45). Software publishers roll out country-specific versions so that their clients can use them in their own native languages. Customers are very sensitive to the use of the right technical translation in those localized versions. Delivery of a first-rate localized software application will increase the publisher's profits. Localization supervisors are very much aware of the time and effort that translators put into their jobs. Recognition for localizers' performance sometimes translates as a pay increase in the employee's performance evaluation, especially in organizations with performance-based cultures.

> They [corporations] acknowledge that their success is contingent upon the successful performance of their employees. They recognize that the ability of the organization to carry out its mission and achieve results is dependent on the competence, innovation, and productivity of its work force (Graham 2004:4).

The job itself implies all the specified duties and tasks involved in a localizer's position. "These aspects are related to the nature of their work and are rewarding in themselves with or without specific achievement or recognition" (Herzberg et al. 1992:61). Some tasks can be more creative than others, some can be more repetitive or mechanical, some overly easy or overly difficult (ibid.:48). Some in-house translators might be more content and happy doing translations or editing documentation than testing software applications, or the other way around. And there are others who might enjoy every task they are assigned.

Advancement or the possibility of growth may increase or decrease in any given corporation. If a localizer is promoted to a leading role, he or she may be able to rise in the company. Localizers can also advance both their skills or in their professions. Lack of advancement is one of the factors for staff turnover (Herzberg et al. 1992:45-47). When localizers do not see any room for personal or career work, they look for other positions either within the company or outside.

Employees derive satisfaction from the responsibilities that come with their jobs. There are some employees who derive satisfaction when they are given new responsibilities (ibid.:44-46). Lack of responsibility can also lead to job dissatisfaction. Some localizers create more responsibilities for themselves so as to improve the quality

of their work. When translators work with in-country reviewers, they need to establish a work methodology between the two teams. Sharing glossaries and discussing terms contribute to a better job relationship and therefore, to a higher quality localized version. Also, translation issues caught during the quality-assurance period will decrease the number of problem reports submitted by in-country reviewers and customers.

Dissatisfaction occurs when hygiene factors are not present in a job. Herzberg uses the word "hygiene because these factors are preventive in nature – they will not produce motivation but they can prevent motivation from occurring" (Allen 1998:14). Herzberg's hygiene factors are: company policies, supervision, relationship with boss, work conditions and salary.

Company or corporate policies: refer to the general guidelines, goals, strategic planning and operations of a company. It is a written document formulated by the board of directors. They form the corporate habitus anchored in the organization for creating corporate order. "Company policy and administration is the single most important factor determining bad feelings about a job" (Herzberg et al. 1992:71). The negative elements involve company ineffectiveness, waste, duplication of effort, or a struggle for power. There can exist situations where the lines of communication between in-house translators and UI developers are subject to a very strict control process. Localizers have to go through the lead translator, or through a project manager to reach a developer when terminology issues arise. This process may take longer than the time allotted to the project deadline. Consequently, the developer's answer may arrive after the translator has already submitted the project.

Direct supervision is a coordinating mechanism "achieved by having one person issue orders or instructions to several others whose work interrelates" (Mintzberg 1989:101). It refers to how managers oversee performance of one person or a team. For instance, what kind of supervision do in-house translators receive? Are managers willing or unwilling to grant additional authority and freedom to localizers? Do they introduce new or more difficult tasks? Are managers competent or incompetent? Are they fair or unfair? (Herzberg et al. 1992: 47).

It takes time and effort to build a strong relationship with your manager. Gabarro and Kotter (2008) consider the manager-employee relationship as one of mutual dependence. Both manager and employee need to know what the other's

strengths, weaknesses and needs are. Healthy manager-employee relationships lead to higher productivity and a stronger commitment to the organization.

Work conditions refer to the physical conditions of the work, the amount of work or the facilities of the work (Herzberg et al. 1992:48). The adequacy or inadequacy of tools, such as translation memory tools, and unrealistic deadlines combined with excessive workloads can lead to job turnover among in-house translators.

"Salary or wage work represents money paid for time given" (Handy 1989:184). Gouadec writes "salaried translators have a duty to make sure that their work will enable the company to operate profitably and pay their salaries" (2007:95). Salary is an important motivator for any worker, and an unrealized salary increase might also lead to turnover (Herzberg et al. 1992:46). However, it does not mean that salary is the most important factor when deciding whether to stay or quit. Some professionals are interested in a "sane work environment and some semblance of balance between life and work" (Branham 2005:167).

The combination of both hygiene and motivation factors can result in four scenarios (Herzberg et al. 1992:43):

- High Hygiene + High Motivation: This is the ideal situation where employees are highly motivated and have few complaints.
- High Hygiene + Low Motivation: Employees have few complaints but are not highly motivated. "The job is a paycheck" situation.
- Low Hygiene + High Motivation: Employees are motivated but have a lot of complaints. The job is exciting and challenging but salaries and work conditions are not up to par.
- Low Hygiene + Low Motivation: The worst situation. Unmotivated employees with lots of complaints.

These scenarios will be dealt with in the Conclusions section.

5.2. Job burnout inventory

There is a wide literature on stress and burnout among conference interpreters including works by Cooper et al. in 1997; Moser-Mercer in 1996; Riccardi et al. in 1998; Vidal in 1997, among others. There is also an extensive research study published by the *Association Internationale des Interprèetes de Conférence*.

Simultaneous interpreters suffer from job burnout. Conference interpretation is a very stressful profession. "A simultaneous interpreter works for 30 minutes and is then relieved by a colleague" (Riccardi 1998:95). This is strongly associated with the quality of the interpretation. After 30 minutes the quality of the interpretation will decline due to the interpreter's fatigue caused by mental overload (Vidal 1997).

Independently of their work environment, factory, office, school, hospital, airport, most employees experience some kind of job burnout at some point in their careers. The burnout syndrome affects workers from a wide range of professions, especially those who work "under 'demanding time schedules' such as journalists, air-traffic controllers, etc., or those involved in 'repetitive detailed work' such as proof-readers", translators, writers, etc. Also "managers, team leaders and those who work with people are at high risk", not to mention those professions involving life and death decisions (Barrick 1989; Potter 1998:1).

Translation is one of the most complex intellectual activities. Gouadec explains "the translator knows that good translations are the outcome of a very demanding and ever more complex technical activity" (2007:3). In-house translators perform their duties under tight schedules and their work requires much concentration and attention to detail. Burnout is a critical work phenomenon that affects an employee's productivity and poses a challenge for the employer (Doré 2004; Potter 1998).

According to Maslach and Leiter (1997:81), burnout can start at either the individual level or the organizational level. If initiated by the employee, this crisis might affect his colleagues sooner or later. "Burned out employees are more frequently absent or late for work than their non-burned out colleagues" (Farber in Barrick 1989:35). If management does not take the necessary actions to deal with the burnout syndrome, it will turn into a crisis, with employees withdrawing or quitting. In many situations, upper management takes preventive measures in order to contain the problem and avoid its negative consequences (Maslach and Leiter 1997:81).

Job burnout has been defined in different ways. Roberts' *Dictionary of Industrial Relations* defines it as: "the state of emotional exhaustion resulting from job-related stress, a condition which may provoke health problems, and reduce performance, or lead the employee to quit the job" (1994:740).

Merriam-Webster's online dictionary explains this construct in a similar way, as the "exhaustion of physical or emotional strength or motivation usually as a result of prolonged stress or frustration". Job burnout is conceptualized here as lack of

motivation derived from non-fulfillment or a disruptive condition extending over a long time.

Potter argues that "burnout has both physical and psychological effects but it is neither a physical ailment nor a neurosis. Burnout is a loss of will. Motivation is damaged, resulting in an increasing inability to mobilize interest and capabilities" (1998:17). Here, too, the concept of job burnout centers on motivation.

One of the factors in Herzberg's theory, mentioned in the previous section, is precisely, "motivators", that is, what motivates employees to be satisfied with their jobs and to be productive. Herzberg points out that "hygiene is not enough" (1992:132). Hygiene factors are external rewards that remain outside the context of the work itself On the other hand, workers' contributions should be recognized and workers should be provided with opportunities for growth and job enrichment. And at the same time, Herzberg states that every job has to match the worker's skills to increase motivation (ibid.:132). This is a key issue in any in-house translator's position, since they are required to have not only excellent oral and written communication skills in a given language combination but to possess subject-area knowledge as well as software engineering and testing skills.

Empirical research has shown that job burnout causes absenteeism, loss of productivity and increases turnover intentions (Doré 2004; Maslach and Jackson in Cordes 1993).

The most important measure of job burnout is the Maslach Burnout Inventory (MBI) introduced in 1981. The MBI is designed to assess emotional exhaustion, depersonalization and reduced personal accomplishment (Doré 2004).

There are many factors and conditions that cause job burnout or job depression, as it is sometimes referred to. Based on empirical research, Maslach and Leiter contend that job burnout has its roots in the work environment as opposed to the individual. Depersonalization of work is another cause leading to job burnout (1997:18). Morin explains that depersonalization "is derived from the exclusive valorization of productivity and financial results" (2004:1). Employees are treated as resources, and upper management overvalues productivity over human work.

However, Cordes and Dougherty state that at an individual level, "high expectations in terms of work challenge, rewards and recognition, and career advancement . . .can create intrinsic demand stress" (1993:642).

Based on the Maslach Burnout Inventory and Leal and Shipley's conflict of values (2002), we have defined three crucial factors of job burnout: role extension and ambiguity, conflicts of interests and values, and work overload (Barrick 1989; Platsidou 2007). These components of job burnout will be explained in the next subsection.

5.2.1. Role extension and ambiguity

Undoubtedly, workers face many challenges in our modern organizations. Social, financial, economic and cultural changes affect our jobs and role expectations change accordingly. One problem associated with the burnout syndrome is role extension and ambiguity (Barrick 1989; Handy 1989).

A role is a set of responsibilities associated with a position. Some positions can be complex involving a long list of tasks. However, roles and positions are not the same, one position may include several roles (Katz 1998). Role extension is closely related to the complexity of the job. Ambiguity may arise from lack of clarity regarding duties, responsibilities and/or authority (Potter 1997:32). For example, an in-house translator has other roles in addition to the basic activities (translation, editing), such as technical testing and verification, terminology database keeping and updating, authoring style guidelines, and managing projects. In other words, translators are performing tasks that have been traditionally associated with engineers and managers.

Typical roles of translators include:

Translating, proofreading, and editing user interfaces, technical documentation, and training manuals from English into the target language. They are responsible for ensuring that translations comply with linguistic, cultural and industry norms. Translators will: *Localize software strings in various file formats using proprietary and industry-standard software translation memory tools; *Prepare translated documents and files for publication or on-line presentation, including screen capture and placement, running scripts, and using common production and conversion tools; *Utilize translation tools (such as Déjà vu X) and maintain translation memory; *Participate in creating, updating, and maintaining in-house technical glossaries, terminology databases and style guidelines; *Perform linguistic quality assurance for localized products. *Fix linguistic software defects in the target-language software. Responsibilities may also include providing technical and linguistic support to partner companies and freelance translators, assuring the quality of their translations (from LISA website).

5.2.2. Conflicts of interests and values

For Bourdieu, conflicts are "at the core of human activity" (Inghilleri 2005:136). Leal and Shipley distinguish between conflicts of interests and conflicts of values (2002:144). In a conflict of interest the parties vie for the same value or object - whether this is "money", "prestige" or even for a job. For instance, when a corporation runs an ad for the purpose of hiring a localizer, there will be a pool of interested parties applying for the same position. When a corporation awards financial bonuses to their executives, they will all vie to obtain the largest "package". All applicants share the same interest – being hired by the company. All executives share the same interest – obtaining the highest monetary award. Some conflicts of interest can be solved through negotiations (Leal and Shipley 2002).

Conflicts of values are different in the sense that, more often than not, they cannot be negotiated away. The conflicting parties compete for different values (Leal and Shipley 2002). When corporations decide to downsize or outsource some of their jobs, many workers will lose their livelihoods. Corporations try to make money at whatever cost, and sometimes forgetting social responsibility. "Their considerable economic and political clout eclipses anything that might be happening within a community" (Maslach and Leiter 1997:3). Corporations are supposed to evaluate the impact of their actions on their customers, communities and the environment. When Idiom Technologies Inc. was bought out by SDL in February 2008, many employees lost their jobs. In the 21st century employees work to make a living and make accomplishments, while corporations' intent is to generate cash flow to please the board of directors and to service their debts (ibid.:2). "Customers are regarded as economic agents whose sole function is to purchase the goods or services offered by the organization" (Morin 2004:2).

Some in-house translators work with in-country reviewers who, generally, happen to work in the country where the application packages are sold, that is, outside the US. These reviewers are engineers or sales people who have a deep technical knowledge of the applications translated by localizers. They have a good command of English. It could be said that very few reviewers are professional translators. Their task is to make sure that the localized version shows the right technical terminology. In some cases, there is a conflict of values between the translators and the reviewers. Some reviewers, besides rewriting translations, use a foreignizing review approach, while

some in-house translators prefer a domesticating translation strategy. In the case of Spanish, French, English or any other language that is spoken in different countries, there are regional variations as well that might add to this conflict. Some reviewers do not take into account these differences, and conclude that some words are incorrect when, actually, the word might sound foreign or strange only because the reviewer is not used to hearing or reading it. In other words, this is a perfect example of a conflict of values.

Within the corporation itself there are different groups with their own interests and values, both as individuals and subgroups (accountants, sales people, writers, developers, etc.). The ethical value of the corporation is to satisfy its customers and obtain their loyalty. Their interest is very clear: profit making and growth, reaching more customers while competing with other companies (for the same interest). More often than not interests and values will overlap in real life (Leal and Shipley 2002:145).

The division of labor was the basis for moral order in an industrial society, as we have seen in Durkheim's sociology. The division of labor creates groups and groups create roles in a society. Work roles can create conflicts. Conflict comes as a natural component in the long process of development as professionals through our jobs.

5.2.3. Workload (metrics)

Empirical research among simultaneous interpreters shows that the "fatigue factor during extended turns" contributes to a significant meaning error increase during conference interpreting.

> The increase in the number of meaning errors combined with the interpreters' lack of awareness of this drastic decrease in quality shed some light on the validity of interpreters' judgment of their own output quality…This lack of judgment appears to be the result of cognitive overload. (Moser-Mercer in Vidal 1997:1).

An interpreter working in the simultaneous mode for over an hour will be making more mistakes than they did during the first thirty minutes of oral rendering.

Mental stress can lead to job burnout and affect the worker's productivity and the organization's performance. "Job burnout can lead to substantial financial and productivity loss, and anyone who is unaware of this basic fact has been in denial for quite some time" (Maslach and Leiter 1997:65).

When there were no computers but only typewrites, the number of words that translators could translate on a daily basis was limited. With the help of translation

memory systems and terminology databases, techno-translators can translate thousands of words daily. Translation productivity has increased thanks to new technology, which has helped decrease translation costs while increasing the quality of the translation output. Greater productivity is a side effect of the division of labor (Durkheim 1997:217). Or, to quote Smith "…and lastly, to the investment in a great number of machines which facilitate and abridge labor, and enable one man to do the work of many" (in Gini 2000:61).

Work overload implies that the amount is more than the normal share, too much work. A red light then turns on. As Maslach and Leiter (1997:10-11) warn: "too much in too little time". Work overload seems to be on the rise. "Work overload is increasing as the tempo of work increases. The faster pace hurts quality…kills innovation and brings on burnout". Work overload can cause mental stress, that is, continual mental attention and concentration on a particular task, especially when facing tight deadlines. Overloaded people are supposed to accomplish many tasks while being behind, they are always fighting unrealistic deadlines (Potter 1998:51). It could also trigger another cause. "Work overload is perhaps the most obvious indication of a mismatch between the person and the job" (1997:10).

Workload is generally associated with the amount of translation work assigned to or expected of a translator in an eight-hour day. Translators' output is generally measured in words. In their judgment in-house translators can leave their cubicles and take a break whenever they feel their brain is no longer "functioning". Generally, federal and state laws regulate the length and number of rest breaks that an employee must be given in any work shift. "Federal law does not require lunch or coffee breaks. However, when employers do offer short breaks (usually lasting about 5 to 20 minutes), federal law considers the breaks work-time that must be paid" (US DOL – Work Hours 2007:1). By industry standards, in-house translators are required to translate around 2000 – 2500 words daily (considering a normal 8-hour workday). This figure is not set in stone. The number of translated words required by companies varies with the publisher, workload and release dates. During testing periods and software releases, the workload will definitely increase. Accordingly, translators perform other daily activities besides the core translation ones, as explained above. In-house software translators edit, review, and test applications, besides managing their projects, attending meetings, training courses, designing and authoring guidelines, updating glossaries and dealing with reviewers.

5.3. Self-realization Inventory

Self-realization is a process whereby a human being realizes his real self. Mead explains that there are two phases to the 'self' process – the inner "I", which is creative and subjective, and the "Me", which is more social and determined and connects to the wider society. The "Me" part is "how people see themselves through others" (Mead in Gordon 1998:589). Some individuals realize themselves through holding jobs within the society, for example, working for a business corporation, or belonging to a professional association or a non-profit organization (Leal and Shipley 2002:149).

Jobs are essential for the development of any human being (Leal and Shipley 2002, Van Ekeren, 2001). It could be argued that we are who we are through our jobs or professions. Jobs play an important role in our lives. Most people between the ages of 22 and 65 earn a living through their jobs.

Long-term unemployment is a form of social exclusion. This is why finding a job is "satisfying in terms not only of 'finding a place'" but of creating oneself (Toshi 2002:216). "We have made the 'job' so essential to a man's concept of himself, and now to many a woman's, that the loss of it, often through no fault of their own, can shatter a sense of identity, of personal worth, of self-esteem, for a while at least" (Handy 1989:73).

For Morin, work is an instinct, that is, an inborn pattern of behavior or tendency.

> The work instinct would be an innate and powerful tendency to exert one's mental and physical powers, one's sills and talents, in order to achieve something, to reach a goal, to create, to express one's self, etc. Working is vital for human beings; it is a critical activity for the preservation of personal health (2004:3).

Self-actualization or self-realization is the last level in Maslow's hierarchy of needs (five levels from a traditional perspective). An individual worker's self-realization is also important for the business organization.

Some dictionaries treat jobs and careers as synonyms. A job is generally a position created by an organization, whereas a career is an individual's choice. In some situations, the roles overlap.

> A job is something you do for money but a career is something you do because you must do it. You want to do it, you love doing it, you are excited when you do it. And you'd do it even if you were paid nothing beyond food and basics. You do it because it is your life (Van Ekeren 2001:6).

One way to attain self-actualization is through job involvement and job enrichment. Job involvement allows employees to set their own work goals, participate in decision-making, whether at individual or group level, and achieve personal development. Various studies have concluded that job satisfaction also increases with job enrichment (Gini 2000:45). Many localization supervisors establish open-door policies so that technical problems, workload and workflow issues that translators encounter on their jobs can be discussed directly in site meetings.

Enriched jobs encourage workers to go beyond their share and do more than their job descriptions. They also encourage workers to experiment, innovate and increase the potential of work (Katz 1978; Morin and Zoghi 2006). Some localization departments provide leading roles to those translators who devote more time and attention to their roles, and to those who increase their job challenges and responsibilities.

Jobs or careers are necessary for self-realization, that is, for developing or fulfilling our potentials as workers or professionals and as collaborative members of a society. For this to happen, jobs must offer not only money but meaning, dignity, connectivity between "the workers and their lives" (Gini 2000:59). As German philosopher Martin Heidegger once said "You are your projects" (in Gini 2000:5).

The three components of the Self-realization Inventory will be briefly explained below.

5.3.1. Career motivation

The term career has been defined as a chosen pursuit, a profession or occupation. A profession or an occupation requires intense training and is regarded as a long-term pursuit.

Motivation is the psychological feature that arouses the behavior of an individual towards accomplishment of certain pre-defined goals" ( ).

People choose a career for different reasons – they are interested in a specific field of work, they have financial aspirations, they want to see other cultures, or they have the desire to make a difference in the world. Some individuals are good at science, others at arts or at the humanities. They are good at what they do and enjoy doing their work (Maslach and Leiter 1997:47).

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5.3.2. Career goals or expectations

Career planning is an individual's responsibility. However, within a corporate environment, it is the manager who guides the new hire on how to develop his/her skills, achieve learning and career goals and to build confidence and self-awareness towards corporate development and effectiveness (Goleman 2002:327). Career planning is a dynamic process involving a constant evaluation of the goals set by the individual and the company.

Through career planning, employees set achievable goals in their field or occupation. Consequently, people are motivated to accomplish what they desire and to be more productive.

If employees feel that there is not much room for career advancement, that is, when their jobs are low-ceiling jobs, productivity will be affected. And this may also lead to turnover. Employee retention is likely to happen in a work environment that fosters innovation and challenge, while providing opportunities for employees to acquire new skills (Dore 2004:8).

5.3.3. Job Diagnostics

Hackman and Oldham developed an instrument for evaluating jobs, which is called the Job Diagnostic Survey. Job design affects work motivation. Employee's low motivation and low productivity are an indication that the job needs to be redesigned (1975:61-63).

Meaningfulness of the job ranks is the most important dimension in this instrument. How significant and important is the job to the individual? Job meaningfulness is measured through three dimensions: skill variety (activities that are varied and challenging); task identity (doing the job from the beginning to the end); and task significance (the impact that the job has on other people's lives).

6. Discussion

In this section we will discuss the following issues: the role of the in-house translator in a new work environment, techno-translators' capitals, opportunities for advancement, and their roles.

For clarification purposes, the researcher has been working as an in-house translator for six years now and for three different US software publishers. Therefore, some of the issues discussed below are based on direct evidence.

6.1. A new kid on the block

Human capital is key for the success of any corporation, even in the case of a one-man organization or even an oil company. Human resources create a competitive advantage allowing corporations to maintain and increase their market share.

Human resources, when pertaining to localization departments, can be defined as a mix of different human capitals: software engineers, desktop publishers, translators, testers, terminologists, and project managers.

The timely delivery to market of high-quality software applications and their localized versions depends, to a great extent, on the skills, knowledge, expertise and motivation of the localization department staff. Proper management of human resources is also critical to achieve strategic business objectives.

The creation of localization departments back in the 1980s required the organizational structure of application software publishers to accommodate its most recent hires. A new role and a new identity were introduced into corporate America - the techno-translator or localizer.

The addition of this new character has had a direct effect on the role of other members of the organization as well –project managers, technical writers and developers.

Project managers are facilitators - they have the authority to select and apply the pertinent organizational sources that are necessary for timely completion of project activities. They need to be sensible, flexible and do whatever it takes to make sure that localizers can do their jobs properly in terms of resources and technical support. Project managers have enjoyed a prestigious role within the corporation throughout the adoption of localization. As a matter of fact, management is intrinsically prestigious. Programmers, software engineers and technical writers enjoy prestige as well.

Localization departments base their operations on project management due to the origins of this industry, as explained in subsection 2.4.1. The concept of managers is far more widespread than that of software translators, who are a relatively new acquired component, as we indicated earlier. In the event that upper management decides to outsource, they will more certainly see translation and/or localization positions as the perfect candidates for off-shoring, rather than managerial ones. If upper management decides to outsource translation and localization activities, some project managers can still serve as the central communication point between language vendors and

development departments. Dunne explains that management, in general, "tends to see localization as back-office spending rather than as a wise investment, and thus tries to minimize localization –related-out-lays, at all costs" (2006:2).

As Bourdieu states "conflict and competition are central to the corporate game" (in Inghilleri 2005:136). The translator's position is very weak in a corporation environment, especially when some software publishers do not see localization as part of their core business (conflict). Their positions can be outsourced at any time, depending on the business strategy adopted by upper management. Company mergers, globalization, downsizing, new business strategies are always mentioned as the "culprits" for job elimination or shuffling. Once out in the real world, translators have to search for new jobs or new careers (competition).

From its very inception the localization effort was separated from development (Esselink 2003:22). This created a gap between translators and developers. When translators encounter questions about the source text, they have to resort to project managers for answers. When managers do not have the right answer, they contact the developers, if they are available. Sometimes it is extremely difficult to track the developer who originated the UI in question since some UIs might have been written by developers who have already left the company. Consequently, some of the questions are answered in an untimely fashion while others go unanswered.

"Players enter the playing field from different positions of power in the form of varying types and degrees of capital" (Inghilleri 2005:136). As Milton explains "many translators enter the profession through other professions, particularly in technical areas" (2001:172). The field has seen the emergence of a new professional: localizers who vie for some kind of recognition, for sharing the prestige held by project managers and software engineers (symbolic capital). The entrance of the new players into localization departments affected other team members in different ways. Project managers had to set out the job description for these new players. They had to create a new identity and change the corporate structure and workflow. Developers and technical writers had to create a more controlled text, externalize translatable text, modify the pre- and post-processing of the source content in order to assure accurate and efficient translation, localization and internationalization.

Localizers also do some software engineering and testing in the localized versions, taking on some of the roles that formerly belonged to the software engineer, and shifting part of the symbolic capital away from them. Consequently, a localizer has

become a language translator who also has computing and technical skills, which are key for survival in the IT world. Or, in Esselink's words, localizers are semi-engineers.

In general terms, in-house technical writers and developers are not aware of the problems translators have to deal with when translating business software applications. Best states that "authors and developers often lack expertise and knowledge of foreign languages and cultures, and consequently, may fail to grasp the financial ramifications of culturally-bound decisions and practices (in Dunne 2006:2). They have to tackle complex language problems while facing tight deadlines for the purpose of cutting time to market. Inconsistent and unedited source content, typos, segmentation problems, acronyms lacking their constituent words, untranslatable phrases, newly coined words, inadequate terminology management, are some examples.

However, software developers do have the technical knowledge to produce a wide spectrum of applications (Dunne 2006:2). On the other hand, translators and linguists possess the linguistic and cultural capital necessary to convert the source material content into the corresponding target language, once the problems mentioned above have been solved.

Nonetheless, both of these groups of participants working in an enterprise software corporation share something in common: "their lack of business acumen and knowledge of the market forces that can drive a corporation to either success or failure" (Dunne 2006:2-3). This is where upper management, legal counsels, sales and "marketing warriors" come into the picture. These stakeholders' brains combined do have, in some cases, the business capital and expertise for the corporation to successfully compete in the international market.

6.2. Opportunities for advancement

"Localization really wasn't very exciting (imagine two months of translating on-line help files) and not always well paid" (Esselink 2003:24). Imagine two or four years of translating UIs and on-line help files for a medium-range salary? After two or four years into their jobs, some localizers seek a way out. They end up applying for other positions within the organization or moving out of the IT industry for a career change.

Opportunities for career advancement in the localization field do not abound. Sometimes language professionals obtain a promotion from junior to senior translator level with no significant salary increase. If, on the other hand, they display outstanding

analytical and problem-solving skills, which are compatible with translators, they are trained to coordinate small projects early in their careers. Simply stated, the software industry remains a manager's and a developer's place while only a handful of these two groups can rise up the corporate ladder. As long as translators remain intangible, and invisible, they will remain at the very bottom of the corporate hierarchy.

6.3. Translators' capitals

The general public is unaware of the language skills and subject-area knowledge necessary for corporate localizers to do their jobs; skills, which in most cases, go well beyond core translation tasks and involve software engineering and testing. Some skills are difficult to recognize (Leal and Shipley 2002:150), especially language skills.

Translation jobs demand a high level of concentration as well as physical and mental endurance. Localizers work long hours to meet tight deadlines and carry excessive workload. Some might take work home and continue to work on their own personal computers or laptops.

Corporate translators who work for US software publishers have a special mix of educational capital, symbolic capital, and cultural capital. These language workers have very specialized jobs. Job specialization contains two elements: "the number of tasks in a given job and the worker's control over those tasks". A job is "horizontally specialized" when it "encompasses a few narrowly defined tasks." On the other hand, a job is "vertically specialized" when the worker lacks control over the tasks. Unskilled jobs are "highly specialized in both dimensions." However, professional jobs are usually "specialized horizontally but not vertically" (Mintzberg 1989:103).

Undoubtedly, techno-translators' jobs are professional jobs. They are highly horizontally specialized since they involve a set of well-defined tasks: core activities, such as translation, editing, proofreading, vocabulary research, content management development and maintenance, plus additional tasks, such as localization testing, whether this is cosmetic, linguistic or functionality testing. Some in-house translators might also be required to write very detailed translation style guidelines as well as process reviews for reviewers and LSPs.

Following Mintzberg's line of thought, localizers' jobs are not vertically specialized because they have little control over some of those tasks. For instance, software localizers do not have a lot of freedom when translating an application's

menus, alerts and dialog boxes. Space is controlled, in some environments strings have a length restriction of 255 characters, the work process is also controlled, and translators have to abide by the rules (Esselink 2000:67). Terminology content and language styles are also controlled. "Both texts [target and source] may also be in part or entirely construed of previous material digitally archived and administered by electronic translation memories" (Koskinen 2003:21).

We agree with Koskinen that translators are not seen as authors but as processors. "Rather than a creator, the translator is a compiler, putting together text fragments to construct a textual *bricolage"* (2003:21). They sometimes resemble assembly line workers. This is a production method requiring workers (localizers) to perform a repetitive task (translate and retranslate) on a product (UIs and help files) as it moves along on a conveyor belt or track (file processing).

> This new trend towards doing business according to standardized, rigid production models explains why translation companies often try to replicate assembly-line manufacturing methodologies, as if translation was a mechanized task, where lean production is valued, time-to-market is privileged and working routines are automatized in order to improve the final-end product that is offered in terms of quality, coherence, consistency, speed and layout (Ferreira-Alves 2006:12).

To be productive, translators are required to translate a certain number of words within a set time period so that the publisher can simultaneously release the English version as well as the localized versions. "The product must be released on time even it is has a few flaws [bugs] (Milton in Koskinen 2003:22). The researcher has worked for some software publishers where the English and localized versions were released once they passed 95% of the testing.

While the software publisher's aim is to produce a localized version in the fastest time possible, using the minimum amount of resources, the translator's ethical role is to create a high-quality deliverable. But cost-control pervades the industry. These language workers are nearly "invisible" in the IT industry. However, when users, readers or reviewers criticize the quality of a deliverable, the first culprit they point to is the invisible translator. Yes, translators are absolutely accountable for their work but outsiders forget that translators do have not much control over their tasks. Without sounding apologetic for them, there are many reasons for this. In some situations translators work with language vendors, and are not given enough time for editing their external peers' work. Their translations are reviewed by in-country reviewers, who are

neither translators nor language specialists, but do have a deep knowledge of all the functions of each software application. More often than not, in-country reviewers make language decisions that might interfere with the translator's job. So, even though a translator's role is to translate, other agents, with some language skills, can perform this role as well.

As we mentioned in the introduction, new technologies and the globalized marketplace have eroded free-lancers' fees. "The rate for importing pre-translated fully matching segments is usually at least 50% of the standard rate and, in the case of 'fuzzy' or part matches, it is up to the translator to try to negotiate the best possible rate, generally thought to be at least 80% of the standard rate" (Gouadec 2007:208). Free-lance translators are paid for translating new text, but they are not paid for making changes in the legacy memory. So, why should they spend their time editing strings for which they are not being paid?

6.4. A passive role

In-house translators play a very passive role within a software publishing company. "The translator's role is more passive and isolated" (Risku 2004:190). As Simeoni observes, "translators have always occupied subservient positions among the dominant professions of the cultural sphere" (1998:7). This is an issue of reproduction of subservience, especially in those societies that tend to see traditional professions as more glamorous and important than that of the translator who "…commits mistakes, misunderstands obvious references, alters the true meaning by the author" (ibid.:7)

In the view of other employees within the corporation, software translators are considered computer language operators, and therefore, replaceable. Their social *habitus* is not very well positioned within the corporate world. In order to enter the corporate field you do not need "translatorial capital" (Simeoni 1998:19). Some localizers do not have a degree in translation. We recognize that our survey is not large. However, it shows that four respondents have a localization degree or a translation degree out of a total of twelve, that is, 33% does have a translation degree.

We would say there are two reasons for this lack of professionalization: the lack of mandatory accreditation in the US market, and secondly, the lack of communication between industry and academia. Here universities are often two decades behind the localization curve. Some colleges have only recently started to offer courses on CAT

tools (some examples were given under section 3, Theoretical framework). Entry into the translation market has been practically unlimited, since no form of translation certification is required by law, as shown in this paragraph extracted from the DOL Occupational Outlook Handbook on Translators and Interpreters:

> There is currently no universal form of certification required of interpreters and translators in the United States, but there are a variety of different tests that workers can take to demonstrate proficiency. The American Translators Association provides certification in more than 24 language combinations for its members; other options include a certification program offered by The Translators and Interpreters Guild (2007:3).

7. Results from Internet survey

This survey aims at finding out primarily how satisfied in-house translators are with their jobs. Unfortunately, the response to the online survey from translators fell short of our expectations. Only twelve respondents had filled out the questionnaire. This figure is not high enough to draw final conclusions on techno-translators' job satisfaction, job burnout, and self-realization. Our goal of obtaining between in between 80 and 100 fully completed questionnaires has not been accomplished.

So, why did we have such a poor response rate? Several answers might help explain the lack of success: a) the length of the survey instrument (the survey included too many questions); b) motivation (people are motivated by different reasons); c) the mode of initial contact (phone calls, email notifications, postings on translators' lists); d) the topic (not appealing to translators or too sensitive).

Notwithstanding this low rate we have included below the answers from our twelve returned questionnaires. Obviously, a broader sample of techno-translators is needed in order to draw final conclusions.

For clarification purposes, a very low percentage of responses are blank.

Number of respondents: 12 (twelve)

7. Internet survey results

I. GENERAL INFORMATION

1. US State

Alabama: 3

California: 1

Colorado: 2

Florida: 1

Massachusetts: 1

Ohio: 2

New York: 1

No response: 1

Comments: Respondents work mainly on the East coast, West coast and in the Central region.

2. Age group

Less than 20: 0

21 - 29: 3

30 - 39: 3

40 - 49: 4

50 - 59: 2

60 and over: 0

Comments: Respondents in their twenties or forties made the largest group.

3. Gender

Female: 7

Male: 4

No response: 1

Comments: A slightly larger number of female localizers.

4. Country of birth

Argentina: 1

Brazil: 1

Egypt: 2

Germany: 3

Italy: 2

Spain: 2

US: 1

Comments: Mostly foreign-born.

5. Language combination(s)

English-Arabic: 2

English-Brazilian Portuguese: 1

English-French: 1

English-German: 3

English-Iberian Spanish: 2

English-Italian: 2

English-Latin American Spanish: 1

Comments: Most target their native language.

II. EDUCATION

1. Highest level of education

High-school diploma: 2

College: 6

Master: 2

PhD: 2

Comments: 50% of respondents have college degrees, while 16.6% have master degrees and 16.6% have doctoral degrees.

2. Major field of study

Economics: 1

Engineering: 3

Law: 1

Literature: 2

Localization: 2

Translation: 1

Organizational Management: 1

Technical translations: 1

Comments: Respondents mainly with a varied background – Humanities, Engineering and Economics. Three of them have an educational background in Translation and one in Technical translations. And two respondents have an educational background in Localization.

2. Translation and/or interpretation diploma or certification (non-degree programs or courses)

Yes: 6

No: 3

No response: 3

Comments: 50% of our respondents have a translation certification or translation diploma.

III. COMPANY AND ADMINISTRATIVE POLICIES

1. Knowledge of company policies (Dress Code, Harassment, Internet usage, Confidentiality, Absenteeism, Drugs, Intellectual property)

6. Excellent: 0

5. Very good: 4

4. Good: 5

3. Fair: 3

2. Poor: 0

1. Very poor: 0

Comments: 75% of respondents feel that their knowledge of company policies is in between good and very good. 25% of them have rated their knowledge as fair.

2. Fair and equal policies

Yes: 8

No: 4

Comments: About 60% of the respondents feel that their company policies are equal and fair.

3. Involvement in setting policy

Yes: 2

No: 9

No response: 1

Comments: Only 16% of respondents participate in policy setting.

IV. PAY-RELATED ISSUES

1. Salary comparison with other workers in the same company.

Project Managers: 8 (less); 4 (much less)

Software Developers: 7 (less); 5 (much less)

Software Engineers: 1 (same); 4 (less); 6 (much less)

Technical Writers: 1 (more); 2 (same); 7 (less); 2 (much less)

Comments: In general, respondents feel they make less money than their coworkers. 66.6% of respondents feel they make less money than project managers. 58.3% think they make less than software developers. 8.3% of respondents think their salaries are comparable to those of software engineers'. 8.3% of respondents think they make the same money as are some who consider that technical writers and software engineers might make technical writers.

2. Clear policies regarding salaries, raises and bonuses

Yes: 6

No: 5

No response: 1

Comments: 50% of respondents feel that their companies have clear policies. However, 41.6% of respondents disagree.

V. WORK EXPERIENCE

1. Seniority in the Information Technology field

Years: 1(3); 3; 4; 5(3); 6(2); 7(1); 10

Comments: It ranges from 6 months to 10 years

2. Seniority with present company

Years: 5 months; 1(2); 2(3); 4; 5(4); 6; 10

Comments: It ranges from 6 months to 10 years with the same company

VI. CAREER DIAGNOSTICS

1. Reasons for working as a translator:

Career choice: 6

Lifetime vocation: 1

Looking to expand my knowledge and experience: 2

Cannot find a job in my own profession: 0

Other: 2

Comments: 50% of respondents have indicated that translation is their career of choice. 8.3% of respondents have indicated that translation is their lifetime vocation. 16.6% of respondents would like to expand their knowledge and experience in the translation field and 16.6% of respondents have a different reason, which has not been stated.

VII. TECHNICAL EXPERTISE AND WORK-DOMAIN EXPERTISE

1. Rating of technical skills

	Excellent (6)	Very Good (5)	Good (4)	Fair (3)	Poor (2)	Very Poor (1)
1. Translation Memory Tools	3	7	2			
2. Desktop Publishing		6	2	1	3	
3. Subject-area Competence	2	6	4			
4. Web Site Localization	2	2	4	2	1	
5. Markup Languages	1	2	2	3	2	1

No response: 1 each in Web site localization and markup languages.

Comments: Most respondents feel they are proficient with CAT tools. Some of them have very good desktop publishing skills as well as subject-area competence. The

respondents' competence regarding web site localization and markup language skills varies.

VIII. PROFESSIONAL DEVELOPMENT

1. Attendance at translation events, seminars or workshops

Yes: 5

No: 7

Comments: Almost half of respondents attend events, half do not.

2. Party paying for expenses

Company: 1

Translator: 4

Both: 0

Others: 0

Comments: 33.3% of respondents pay for expenses related to translation events. Only one company pays for said expenses.

3. Type of event

Language: 4

Management: 0

CAT tools: 0

IT: 0

Other: 3

Comments: 33.3% of respondents who attend conferences, are more likely to attend conferences that are related to translation than those that are related to other fields.

IX. PROFESSIONAL ACTIVITIES

1. Participation in translators' associations

Yes: 2

No: 8

No response: 2

Comments: 16.6% of respondents are members of translators' associations. One reason could be the expense itself or lack of interest in associations. Do they see any benefit in membership? This question could be included in either the interview questionnaire or in the new Internet survey questionnaire.

B. Party paying for the expenses

Company: 1

Translator: 7

Both: 0

Comments: Only one company (8.3%) pays for its translator's association membership. 58/3 of respondents pay for the expenses themselves.

2. Networking outside work environment (Do you network with other colleagues outside of your work environment?)

Yes: 8

No: 3

No response: 1

Comments: 66% of respondents are engaged in networking.

3. Mentoring activities

Yes: 3

No: 7

No response: 2

Comments: Only 25% of respondents are engaged in mentoring activities.

4. A. Translation magazines subscriptions

Yes: 2

No: 10

Comment: 83% of respondents are not subscribed to translation magazines.

4. B. Party paying for the expenses

Translator: 1

Company: 0

Both: 0

Comments: Not very many translators (8.3%) subscribe to translation magazines. One reason could be subscription cost. Some companies are subscribed to industry associations, like LISA, and in-house translators have access to the association Web site where they can read electronic format articles.

5. Keeping ahead of what is going on in the translation world

Yes: 4

No: 8

Comments: Only 33% of respondents keep ahead of the news in the translation world.

X. JOB RESPONSIBILITIES

1. Job responsibilities (40 hours per week)

1. Translation: 30; 28(4); 25(4)

2. Proofreading: 1; 2(7); 3(2); 5(2)

3. Editing: 2(4); 3(2); 4(3); 5(3)

4. Terminology research and management: 0(4); 1(3); 2(1); 3(2); 4

5. Software testing: 1(3); 2(4); 3; 5

6. Language guidelines authoring and updating: 0; 1(2); 2

7. QA processes authoring and updating: 0(4); 1; 4

8. Staff meetings and communications: 1(5); 2

9. Other: 0

Note: The numbers in parentheses refer to the number of occurrences.

Comments: Some respondents have not fully answered all the questions. It could very well be that not all translators perform the same additional activities, like testing or QA. The average for translation activities in any given 40-hour-week is 28 hours. For proofreading: 3.125. For editing: 3.2. For Terminology: 1.66. For software testing: 2.66. Language guidelines: 1. For QA: 0.83 (less than one hour). For meetings: 0.5.

2. Rating of activities

	Ext. S (6)	Mod. S (5)	Slightly S (4)	Slightly U (3)	Mod. U (2)	Ext. U (1)
1. Translation	6	5	1			
2. Proofreading	4	3	2	2		
3. Editing	4	2	2	1		
4. Terminology Research and Management	3	6	1		1	1
5. Software Testing (Linguistic, Functionality and/or Cosmetic)	1	5	2			2
6. Language Guidelines Authoring and Updating		5	2	1	2	1
7. Quality Assurance Processes Authoring and Updating	1	3	1	2	1	2
8. Staff Meetings and General Communications		2	1	1	1	3
9. Other			1			

Comments: 41.6% of respondents do not enjoy staff meetings. Motives might vary. Perhaps they feel they are not integrated into the company, or that some issues discussed at staff meetings are not related to translation.

One of our respondents wrote: "My current position varies a lot: localization, content manager of the site, editor, building codes, etc. It's not pure translation. This is why I am not bored yet!"

XI. WORKLOAD

1. Overtime required to meet deadlines

Most of the time: 3

Sometimes: 6

Never: 3

Comments: Respondents often need to work longer hours to comply with their deadlines. Working overtime is common for 25% of respondents. 50% of respondents

have indicated that overtime is an occasional event while 25% of respondents have indicated that they never have to work overtime.

2. Metrics (number of words translated, proofread and/or edited in an 8-hour workday

A. Translation:
1000-2000 words: 5
3000-4000 words: 6
4000-5000 words: 1

Comments: The 4000 – 5000 words-a-day range seems a bit high as per the industry standards. But each company has its own rules.

B. Proofreading and/or editing:
2000 – 3000: 1
3000 – 4000: 3
4000 – 5000: 0
5000 – 6000: 5
6000 – 8000: 1
No response: 2

Comments: The industry standard is about 5000 - 6000 words a day. But, obviously, each company has its own rules.

3. Rewards for working longer hours
Yes: 5
No: 6
No response: 1

Comments: 42% of respondents are rewarded for working longer hours. Generally, this reward translates into a salary increase, but again, this might vary from company to company.

XII. CAREER GOALS/EXPECTATIONS
1. Where respondents see themselves, professionally, one to three years from now

A. Same company and same job: 5

B. Same company but different type of job: 0

C. Different company and similar job: 2

D. Different company but different type of job: 3

E. None of the above: 1

Comments: 4.16% of respondents think they will be working for the same company as translators in the next one to three years from now. 16.6% of respondents think they will be similar work but for a different company. 25% of respondents think they will be involved in a different activity.

One of our respondents wrote the following: "I would like to go on translating because I like it, but I know that this is very difficult to do, therefore, anything related to working with language on a creative basis would be nice."

2. If "None of the above", what respondent would like to be doing

A. Freelancing as a translator: 1

B. Going back to school

C. Changing careers

D. Starting my own business: 1

E. Retiring

F. Other

Comments: In general, respondents have indicated that they would like to go on working as translators or in a similar position whether for the same company or for another one. One has indicated that he/she would like to work as a free-lance translator and another has indicated that he/she would like to start his/her own business.

XIII. ATTITUDES TOWARDS JOB

1. Feelings about current job situation

A. I like both the company and my job: 7

B. I like my job but not the company: 3

C. I like the company but not my job: 2

D. My job is terrible and so is the company: 0

Comments: 58.3% of respondents like the company and their jobs, except for 16.6% of respondents who like the company but not the job. Some of the respondents have entered the profession from a different field. As per the survey, one has studied Law. 25% of respondents like the job but not the company.

2. How much do you enjoy your job?

A. Cannot wait to get to my office every day: 2

B. Pays my bills: 5

C. Boring: 0

D. It is just a job: 1

E. I am looking for another job: 1

Comments: 41.6% of the respondents have indicated that working as a translator is just another job that allows them to pay their bills. However, none of them has found this job boring.

3. Are you stressed out on your job?

A. Not at all: 1

B. A little bit: 2

C. Sometimes: 6

D. I need to do something else: 3

Comments: 50% of respondents are stressed out on their jobs only sometimes.

4. If you translate a document and someone else reviews it, who makes the final decision regarding changes or modifications in the document?

A. Reviewer: 5

B. Translator: 4

C. Both: 2

No response: 1

Comments: 42% of the respondents have indicated that the reviewer has the final word on the changes. 16.6% of respondents have indicated that decisions on changes or modifications in the document are made jointly.

One of our respondents wrote the following: "Of course, if she/he is right."

A second respondent wrote: "I have to edit my own work, which is terrible."

XIV. JOB DIAGNOSTICS

1. Rating of statements about present job

Descriptors: Strongly Agree – Moderately Agree – Slightly Agree – Slightly Disagree – Moderately Disagree – Strongly Disagree.

	Strongly A (6)	Moderately A (5)	Slightly A (4)	Slightly D (3)	Moderately D (2)	Strongly D (1)
1. My job is creative.	6	3	1	1		
2. My tasks are varied.	3	2	4	2		
3. My job allows me to increase my knowledge as a translator.	4	2	2	1		
4. My job is meaningful and worthwhile.	5	4	1	1		
5. I keep busy 40 hours a week.	6	3	1	1		

No response: 1

Comments: Most translators feel their job is rather creative but their tasks are not that varied. However, they feel their job is meaningful and worthwhile and keeps them busy 40 hours a week.

XV. JOB SATISFACTION

1. Rating of different hygiene factors

Descriptors: Strongly Agree – Moderately Agree – Slightly Agree – Slightly Disagree – Moderately Disagree – Strongly Disagree.

	SA (6)	MA (5)	SA (4)	SD (3)	MD (2)	SD (1)
1. Salary	3	3	2		3	1
2. Benefits	1	2	5		2	1

3. Frequency and amount of bonuses		2	1	2	1	2
4. Security and administration of your 401(k) plans, pension plans, stock option plans or other.	1	1	2	3		1
5. Workload	1	1	2	3	2	1
6. Job responsibilities		2	3	2	2	
7. Work schedule		4	2	1	2	
8. Physical environment (building facility, amenities, etc.)	1	2	3	3	2	1
9. Opportunity for advancement	1	2	3	2	2	1
10. Opportunity to use new technologies	1	5		2	1	1
11. Training provided by your company	1	3	4		3	
12. Your overall relationship with your supervisor	2	1	2	3		
13. Your overall relationship with your peers	4	1			3	1
14. Job recognition	1	1	2	1		1

Security and administration: zero (when it does not apply).

Comments: Responses vary along the spectrum. Most respondents are moderately satisfied with most of these items, except for frequency and amount of bonuses, and workload. Feelings about their relationship with their fellow translators are mixed.

XVI. MANAGEMENT SUPERVISION

1. On a scale from 6 (Strongly agree) to 1 (Strongly disagree), how would you rate your boss or supervisor's skills?

Descriptors: Strongly Agree – Moderately Agree – Slightly Agree – Slightly Disagree – Moderately Disagree – Strongly Disagree.

	SA (6)	MA (5)	SA (4)	SD (3)	MD (2)	SD (1)
1. Good leadership skills	2	3	3	2		1
2. Good managerial skills	1	4	1	2		1
3. Recognizes and values my skills, and hard work	1	3	3	1	2	
4. Cares about his/her employees	2	5	4	1		1
5. Good communicator	2		3	2	1	1
6. Easy to work with	2	4	3	2		1

Comments: A high percentage of respondents are satisfied with their supervisor's managerial skills.

XVII. CORPORATE POSITION

1. Where do you see yourself in the social ladder in comparison with Project Managers, Software Engineers, Software Developers and Technical Writers?

Compared to	Project Managers	Software Engineers	Software Developers	Technical Writers
1. Decision-making power	Above (0) Same (2) Below (8)	Above (1) Same (3) Below (7)	Above (0) Same (2) Below (9)	Above (2) Same (4) Below (1)
2. Corporate prestige	Above (0) Same (0) Below (9)	Above (0) Same (3) Below (8)	Above (0) Same (0) Below (9)	Above (2) Same (6) Below (3)
3. Balance between efforts and wages	Above (0) Same (5) Below (6)	Above (0) Same (4) Below (6)	Above (0) Same (5) Below (7)	Above (0) Same (5) Below (6)
4. Possibilities for upward mobility	Above (2) Same (3) Below (6)	Above (0) Same (2) Below (5)	Above (0) Same (3) Below (7)	Above (0) Same (7) Below (4)

Comments: Most respondents feel they are at the same level as technical writers regarding decision-making. Most respondents feel below project managers', software engineers', and software developers' level as far as prestige is concerned. Respondents show mixed feelings regarding prestige in comparison with technical writers. Regarding balance between efforts and wages, respondents feel they are below software engineers. Respondents feel their possibilities for upward mobility is below their coworkers'.

2. If you have answered Same or Below to any of the above, where would you like to be in relation to Project Managers, Software Engineers, Software Developers and Technical Writers, assuming you had the power and authority to make changes in your organization?

Compared to	Project Managers	Software Engineers	Software Developers	Technical Writers
1. Decision-making power	Above (3) Same (7) Below (0)	Above (3) Same (4) Below (0)	Above (0) Same (8) Below (0)	Above (3) Same (4) Below (0)
2. Corporate prestige	Above (3) Same (4) Below (0)	Above (2) Same (4) Below (0)	Above (0) Same (3) Below (0)	Above (2) Same (4) Below (0)
3. Balance between efforts and wages	Above (1) Same (4) Below (0)	Above (3) Same (2) Below (0)	Above (0) Same (5) Below (0)	Above (2) Same (5) Below (0)
4. Possibilities for upward mobility	Above (2) Same (4) Below (0)	Above (3) Same (2) Below (0)	Above (1) Same (4) Below (0)	Above (2) Same (3) Below (0)

Comments: In general, translators want to achieve the same status as their coworkers regarding the four issues indicated above.

3. If you have answered question no. 2, could you please provide a brief explanation?

Respondents' comments:

1. "Most of the time I do what PMs and SEs do and even more."

2. "From my point of view, PMs have too much power in our company. The in-house translators are more or less slaves that have to be greatful that the PMs are establishing the contacts and saving our work for us. Therefore, we have to accept every job to every condition they agreed upon with the client. This is very unnerving and unfair because it is not as if we did not do anything for our salary."

XVIII. FINAL PRODUCT

1. How satisfied are you with the overall quality of the final product (software translated or reviewed by you)?

Strongly satisfied (6)	Moderately satisfied (5)	Slightly satisfied (4)	Slightly unsatisfied (3)	Moderately unsatisfied (2)	Strongly unsatisfied (1)
2	6	3	1		

Comments: 50% of respondents are moderately satisfied with the end product. 8.3% of respondents are slightly unsatisfied.

One of our respondents wrote: "Is not clear to me. I am totally satisfied with the end product. All those could be the reasons to produce an dissatisfactory work."

2. Independently of your response to question 1 above, could the following reasons be part of your satisfaction or dissatisfaction with the end product?

Descriptors: Strongly Agree – Moderately Agree – Slightly Agree – Slightly Disagree – Moderately Disagree – Strongly Disagree.

Regarding	SA (6)	MA (5)	SA (4)	SD (3)	MD (2)	SD (1)
1. Translation errors	4	1	1	2	1	2
2. Typos	2	2	1	2	1	2
3. Industry convention you do not agree with	1	2	1		3	1

4. Inconsistent translations due to lack of coordination (translation vendors, reviewers, etc.)	2	3	3		2	2
5. Too many untranslatable words in the localized version	2	2	4		2	1
6. Unclear source text	2	4	1	1	2	1
Other, please specify						

Comments: Almost most respondents agree that problems with the localized version are: translation errors, typos and too many untranslatable words.

XIX. Organizational Commitment

1. On a scale from 6 (Extremely Secure) to 1 (Extremely Insecure), how secure do you feel about keeping your position in the Localization Industry?

Extremely Secure	Moderately Secure	Slightly Secure	Slightly Insecure	Moderately Insecure	Extremely Insecure
	3	4	3	1	1

Comments: 58.3% of respondents are moderately to slightly secure about their positions in the localization industry. 8.3% of respondents are extremely insecure.

2. Would you accept a job with another company for the same salary you are making now?

Yes: 1
No: 7

Comments: 58.3% of respondents prefer staying with their present companies than moving to another company for the same salary.

3. Would you accept a job with another company for a higher salary?

Yes: 9
No: 0

Comments: 75% of respondents will definitely accept a better-paying job with another company. A higher salary is a great financial motivation for workers to quit their jobs. However, some workers have to consider to factor in the following before making a decision: moving to a different state or country, family obligations, job security in the new company, type of work contract, company benefits, etc.

One of our respondents wrote: "I could accept a job with another company for a higher salary but not far from home. I hate long commutes. They are a big waste of time and very tiring".

4. Does management act with integrity?

Yes: 9

No: 3

Comments: 75% of respondents agree that management acts with integrity.

8. Conclusions

Following the analysis of job satisfaction, job burnout and self-realization among software translators in corporate America in previous sections, below we will sum up our conclusions based on our empirical research. We consider our conclusions to be partial given the number of complete surveys received.

8.1. Job satisfaction

Research question A: Which job variables contribute to job satisfaction among in-house translators?

1. Company and administrative policies predict job satisfaction among in-house software translators.

- Knowledge of company and administrative policies
- Company policy ratings
- Involvement in policy setting

Based on the Internet survey responses presented in section 7, we can conclude that a good knowledge of the company and administrative policies as well as a favorable rating of said policies contribute to job satisfaction. Not participating in policy setting does not predict job satisfaction.

2. Management supervision predicts job satisfaction among in-house software translators.

- Good leadership skills
- Good managerial skills
- Recognizes and values my skills, and hard work
- Cares about his/her employees
- Good communicator
- Easy to work with

We can conclude that having a supervisor with good managerial and leadership skills, who recognizes and values the skills of his/her workers, who is a good communicator and easy to work with predicts job satisfaction.

3. Work conditions predict job satisfaction among in-house translators.

- Salary
- Benefits
- Frequency and amount of bonuses
- Security and administration of 301(k) plans, pension plans, etc.
- Workload
- Job responsibilities
- Work schedule
- Physical environment
- Opportunity for advancement
- Opportunity to use new technologies
- Training provided by the company
- Relationship with supervisor
- Relationship with peers
- Job recognition

We can conclude that the following items show a higher response of "disagree" than "agree": frequency and amount of bonuses, and workload. Security and administration of plans, and physical environment show an even number of disagree and agree responses, including the three variations.

4. Pay-related issues predict job satisfaction among in-house translators.

- Salary comparison with coworker
- Clear policies regarding salaries, raises and bonuses

We can conclude that, in general, respondents feel they make less money than their coworkers. However, their rating of the policies regarding salaries are mixed.

5. Professional development predicts job satisfaction among in-house translators.

- Attendance at translation events, seminars or workshops
- Party paying for expenses

We can conclude that attendance to language conference events is not high. We could assume that this is a financial issue, and in most cases, companies do not pay for those events.

6. Professional activities predict job satisfaction among in-house translators.
- Participation in translators' associations
- Party paying for expenses
- Networking outside work environment
- Mentoring activities
- Translation magazines subscriptions
- Keeping ahead of what is going on in the translation industry

We can conclude that the rate of professional activities outside work is low. Again, this could be related to the cost magazine subscriptions or associations membership.

7. Job responsibilities predict job satisfaction among in-house translators.
- Translation
- Proofreading
- Editing
- Terminology research and management
- Software testing
- Language guidelines authoring and updating
- Quality assurance processes authoring and updating
- Project coordination
- Staff meetings and general communications

We can conclude that there is some mixed feelings regarding quality assurance and testing tasks among respondents. Attending staff meetings is not very popular among respondents.

As explained in subsection 5.1.2. Satisfiers and dissatisfiers, the combination of both hygiene and motivation factors can result in four scenarios (Herzberg et al. 1992:43):

- High Hygiene + High Motivation: This is the ideal situation where employees are highly motivated and have few complaints.

- High Hygiene + Low Motivation: Employees have few complaints but are not highly motivated. "The job is a paycheck" situation.

- Low Hygiene + High Motivation: Employees are motivated but have a lot of complaints. The job is exciting and challenging but salaries and work conditions are not up to par.

- Low Hygiene + Low Motivation: The worst situation. Unmotivated employees with lots of complaints.

Hygiene factors (dissatisfiers) are necessary to assure that employees do not become dissatisfied: "company policy, supervision, interpersonal relations, working conditions and salary". Motivator factors (or satisfiers) are necessary to motivate employees for higher performance: "achievement, recognition, the work itself, responsibility and advancement"

Response to question A: the survey responses indicate that we are dealing with scenario number 2: high hygiene + low motivation. Employees have few complaints but are not highly motivated. Respondents have complaints about the following dissatisfiers: workload, not participating in company policy settings, and salary. Respondents have complaints about te following motivators or satisfiers: opportunities for advancement and low job recognition.

8.2. Job burnout

Research question B: Which job variables contribute to job burnout among in-house translators?

1. Role extension and ambiguity and conflicts predict job burnout among in-house software translators.

- Decision-making power

- Corporate prestige

- Balance between efforts and wages

- Possibilities for upward mobility

We can conclude that a high majority of respondents see they do not have much decision-making power, that they have low corporate prestige and possibilities of upward mobility are very low.

2. Organizational commitment predicts job burnout among in-house software translators.
- Job security
- Management integrity

We can conclude that job security is a slight concern for in-house translators since they are slightly secure about security in corporate America.

3. Workload predicts job burnout among in-house translators.
- Overtime
- Metrics

We can conclude that daily high volumes of work, working overtime predict job burnout among in-house translators.

4. Final product predicts job burnout among in-house translators.
- Satisfaction with final product
- Reasons for satisfaction or dissatisfaction

We can conclude that since most of our respondents are moderately satisfied with the end product, this variable does not predict job burnout.

Response to question B: decision-making power, corporate prestige, possibilities for upward movement, job security, and work overload predict job burnout among in-house translators.

8.3. Self-realization

Research question C: Which job variables contribute to self-realization among in-house translators?

1. Career motivation predicts self-realization among software translators.

- Reasons for working as a translator

Since 50% of respondents have indicated that translation is their career choice, we can conclude that career motivation predicts self-realization among software translators.

2. Goals/expectations predict self-realization among software translators.

- Future goals

Since 50% of translators feel they will be working as translators in the near future, we can conclude that goals predict self-realization among software translators.

3. Job diagnostics predict self-realization among software translators.

- Statements about present job

According to the survey, 58.7% of respondents like their jobs. However, they see it as an economic means to achieve financial results.

Response to question C: the variables that predict self-realization among translators are career choice, and future goals.

In general we can conclude that there is some job satisfaction and dissatisfaction as well as job burnout among software translators in corporate America.

9. Questions for future research

We have divided our questions for future research into four areas: work situation of techno-translators in the US; foreign investment; historical and comparative research; and curricula.

Techno-translators in the US: How many professional translators work for US software publishers at a given period of time as employees and as contractors? How

many work for SLPs? How many work in a free-lance situation? Are these numbers increasing or decreasing? If so, how are they shifting? Are software publishers relying more on outsourcing for their translation and localization needs? Besides cost issues, what other reasons are driving this shift from hiring internal translators to contracting out? Does off-shoring software localization affect the quality of translations? Do the savings go directly to the corporate bottom-line, or are there hidden cost from outsourcing? How will machine translation affect the work conditions and numbers of language professionals in the localization industry?

Research on in-house translators working in the US could help guide future professionals in planning their career choices. What are the job opportunities and work conditions they can expect? What chances do they have of attaining power and leadership within a business corporation?

Foreign investment is also an important issue relevant to job security and opportunity in today's software publishing industry. Some interest groups within the industry fiercely oppose acquisition of US companies by foreign counterparts based on the fear that buyouts could reduce wages, benefits and even cut down on jobs. What changes have been brought about in companies acquired by foreign interests? In particular, what have been the consequences for corporate translators?

The history of software localization in the US offers ample opportunities for further research. How did the industry develop? What have been the job descriptions? What were the work conditions of those language pioneers like? What has improved and what has not? Is turnover a problem in Localization Departments? Is it high, average or low compared to other workers in the industry? Is it getting better, or worse? How has the US localization industry developed, compared to its counterparts in other parts of the world where translation has played a historically more prominent role in business?

Curricula: Do current university translation programs at both graduate and post-graduate levels meet the needs of software publishers? If employers are trying to keep down localization costs by reducing the numbers of in-house translators, outsourcing their jobs, and investing in more machine translation, how should colleges and universities change their language, translation and localization programs?

Effects of localization on languages and cultures: How is the dominance of English in IT affecting other languages and cultures? The invasive spread and use of English terms in other languages is not only changing the way people talk, but changing

their cultural patterns. What about a "reverse invasion"? For instance, as the Spanish-speaking population explodes in the US, commercials in English-language media have resorted to an increase in the use of Spanish words, songs and images. How will America's "minority majority" affect its language and its culture?

New technologies and events developing throughout the Localization world will keep researchers busy for a long time.

> There has never been a better time to study translations. From being a marginal activity outside of linguistics, at the edges of literary studies …translation is now being reconsidered, and its fundamental importance in intercultural transfer process is becoming more apparent (Bassnett in Dimitriu, 1996:1).

For those of us who have a passion for translation, no matter the work obstacles we might encounter now and then, we echo Bassnett's words that "there has never been a better time to" work as a translator in the US software publishing industry.

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E-mail messages

Lommel, Arle. (arle.lommel.lisa@gmail.com), 14 February 2008. RE: Localization
Departments. E-mail from Graciela Mick.

APPENDICES (in separate files)