

The Babel fish is small, yellow, and leechlike, and probably the oddest thing in the Universe. It feeds on brainwave energy received not from its own carrier but from those around it. It absorbs all unconscious mental frequencies from this brainwave energy to nourish itself with. It then excretes into the mind of its carrier a telepathic matrix formed by combining the conscious thought frequencies with nerve signals picked up from the speech center of the brain which has supplied them. The practical upshot of all this is that if you stick a Babel fish in your ear you can instantly understand anything said to you in any form of language.

-Douglas Adams, *The Hitchhiker's Guide to the Galaxy*

Introduction

Translation, according to scholar, author, and Italian translator Lawrence Venuti, is "the rewriting of an original text" in another language (Venuti, *Invisibility* 1).¹ The methods of rewriting that text – whether to translate literally to preserve the exact words, or to translate the sense of the text to preserve the ideas of the original author, to preserve cultural origins and foreignness of the text or to completely domesticate² it – have been matters of a heated and occasionally deadly debate that began with Cicero in 55 B. C. and continues to the present day. Some theorists, such as Boethius in the sixth century, argue in favor of an excessively literal translation method, others, such as Cicero, Martin Luther, and Ezra Pound, support a freer method of translation. Regarding literary translation, some such as Gregory Rabassa and Margaret Peden wish to preserve style and vocabulary of the original author in the translation, some, like John Dryden, try to improve upon the text, adding their own signature style and ideas to the translated version. Despite the arguments, translators have been and still are attempting to do the same thing: to take ideas originally written in one language and present them in another so that those who do not understand the original may have access to the information and ideas.

¹ In translation studies literature, "translation" is generally held to focus on the written word, while "interpretation" focuses on the spoken word. In order to be consistent with field terminology, this paper defines "translation" as dealing solely with the written word.

² "Domestication" of a text is a term used by Lawrence Venuti to describe the process of rewriting not just the text, but also the cultural references within the text, so that the translation has nothing foreign in it, but contains only references to familiar, or *domestic*, customs. See Venuti 1995.

For as long as humans have been speaking different languages and writing down their thoughts, there has been a need for translation – for someone to take those same ideas and convey them in a different language. Today there are many reasons to study translation. On a purely aesthetic level, translation of literature gives us access to bodies and styles of literature, culture, and ways of thought that might otherwise be unavailable to the monolingual reader. For example, how many high school students cannot understand old English but have read Beowulf? How many cannot understand ancient Babylonian yet have still read The Epic of Gilgamesh? Billions of people around the world do not understand ancient Hebrew and Aramaic but have still read the Bible over the last two thousand years. Millions of readers who do not understand modern English have still read and enjoyed the Harry Potter books and The da Vinci Code. The world is growing increasingly smaller as modern technology grants access to more information, while other cultures have a growing effect on our own. Such works are windows to other cultures that would otherwise remain closed to those who do not speak other languages.

Despite its visibility, literary translation actually accounts for only a minor percentage of the translation done in the U. S. every year. Most translation projects are non-literary in nature: forms and questionnaires, legal documents, contracts, instruction manuals, scientific articles, and medical information (Child, 1992). The increasing number of non-literary projects is caused by increasing immigration rates and businesses that are expanding into international markets. Increasingly, corporations in the United States have international contacts and clients, and these non-English-speaking clients appreciate services in their own language. Immigrants arrive in the United States not knowing English but needing medical and legal services, which creates the demand for medical documents, forms, and questionnaires.

The need for translation services increases every year, and that increase in demand creates problems. It has been the practice to ask bilingual companies or office employees to translate needed information into a form understandable to the foreign-speaking client or patient, or to hire a free-lance translator to do the job. However, because of the number and variety of rare languages now spoken, there are not always bilingual employees that speak them. Freelance translators require payment, and also complain that, because of the monotony and need for a high level of accuracy in certain projects, taking too many of those jobs becomes quite stressful. So, those companies and individuals needing quick, inexpensive translations have begun to look for an alternative to human translators.

Machine translation, or MT, offers a possible solution to the need for translations generated more quickly and at less expense. Hutchins and Somers define MT as “systems in which translators or other users assist computers in the production of translations, including various combinations of text preparation, on-line interactions, and subsequent revisions of output”(3). Other sources define MT as software or hardware that accepts input in one language, the source language, or SL, and produces a version of the same ideas in the target language, or TL. The French-Armenian George Artsouri and the Russian Petr Smirnov-Troyanskii, working independently of each other, patented the first translation machines in 1933. Despite excitement and high expectations in the 1950s and early 1960s, the dream of fully automatic, high-quality translation, or FAHQT, remains elusive for reasons discussed later. However, due to the development of computers there are many hardware and software systems, some available commercially and others available on-line, capable of translating a variety of information into many languages with varying degrees of success. However, most of them still require human editing before the final draft is complete.

While it does cost money to develop and maintain an MT system, those systems greatly reduce the cost of translation in both money and time. However, language syntax and grammar are so complex that all MT productions need to be edited by a human – either before or after production, or, as in the case of the Météo weather satellites that translate forecasts from English into French for Canada, the dictionaries and capabilities must be severely limited. Météo has a 90% success rate but a vocabulary of only 1500 words and a very limited ability to produce sentences (Hutchins and Somers, 1992). Because of the limited capabilities of current computers and MT systems, we posit that the translation field will continue to need human translators for the foreseeable future. Software can translate more quickly and cheaply than humans, although the final version is currently and for some time will continue to be of a poorer quality. However, this does not mean that MT does not have many practical uses that remove language barriers, such as translating sites on the Internet, or that save the user time and money. Documents produced by machine translation will need some human input until major new developments in MT systems are made, either to edit the document before translation for a simple system, or to proofread the copy after software translation to produce the final version. Despite the drawbacks, MT systems such as computer-aided translations programs prove very useful for translating science or information documents, though not literature, and for providing broad ideas about the concepts contained in foreign texts.

To arrive at a fuller understanding of the difficulties in translation, this study looks at translation in a historical context. The first chapter examines the common problems in translation, as well as the history of translation and the theories and practices used by translators from the first century B. C. to the nineteenth century A. D., and how those translators coped with those difficulties. The second chapter discusses modern theory and practice; how twentieth

century translators such continue to practice translation. The chapter also explains some of the tricks and tools modern translators use, and new theories developed during the twentieth century. The last chapter more fully examines machine translation; the capabilities and disadvantages of the various systems and software programs used in the past as well as those in use or available for purchase today. It includes a short experiment in which on-line software such as the Babel Fish program and Google Translate are used to translate certain passages from Spanish to English or English to Spanish.³ Those results are then compared to results of a human translator for an analysis of which method of translation best captures the meaning, intent, and style of the source text.

³ The author is most familiar with the Spanish language, but the theories discussed in this study and the on-line translation results are equally applicable to any language pair.

Chapter One: The Problems and History of Translation

There are many problems humans and machines must circumvent to produce a viable translation. Although translators have never agreed on the best method of translation, there has been a consensus concerning the difficulties of translation for the last two millennia. Languages are synonymical rather than perfectly identical, and that similarity, rather than perfect translatability causes problems with vocabulary, grammar and syntax, style, rhyme and meter, and cultural baggage (von Humboldt, 1816). For example, some words in one language do not have an equivalent word in another language (Rabassa, 1984). The Japanese say *kaizen*, but the idea they convey with one word requires five in English: “constant and never-ending improvement.” Onomatopoeia and curses are also difficult: in Spanish a dog says *guau-guau*, but in English the same animal says bow-wow. With curses, often the best one can do is to convey the intent of the one cursing (Rabassa, 1984). Vocabulary also has cultural connotations. A perfectly innocuous word in one language may have silly or profane implications when translated to another. The English word “herb” is often used to convey a plant with medicinal properties or one used as a spice, yet *yerba*, the dictionary equivalent in Spanish, is used to make the tea *mate* in Argentina and Paraguay, and in Mexico is slang for marijuana.

Grammar, syntax, and word order are also difficult to replicate exactly. For instance, the Spanish say *tengo hambre*, which means “I’m hungry,” but is literally translated as “I have hunger.” Different languages often structure sentences differently; in Latin the verb is usually at the end of the sentence, but in English or Spanish it follows immediately after the subject and is found in the middle of the sentence. Because of the belief that the scriptures were divinely inspired, these structural variations among languages caused problems during Biblical translations. Translators that changed even a single word in translation, such as St. Jerome when

he edited a new Latin Bible translation, or Martin Luther when he created the German version, or John Wycliffe's English Bible translation, were accused of heresy, which at times had fatal results.

This chapter examines the history of translation theory as a series of trends in roughly chronological order, each with its own followers. The earliest group were Roman scholars who lived just before or during the earliest years of Christianity; the majority of their translation work was from Greek into Latin. Each of them - Cicero, Horace, Seneca, Quintilian, Pliny the Younger, Aulus Gellius - were Roman scholars, and some were authors. Together they laid the foundations of translation theory and the reasons to translate instead of reading the work in the original language. Centuries later, translators such as St. Jerome, John Dryden, and Martin Luther would cite these authorities as support for the methods they used in their own translation projects.

The Earliest Theorists

There were many people in Rome who translated from Greek into Latin. In the process of translating from a developed language to one still developing, a few scholars wrote about how they coped with the ensuing problems, resulting in what are considered to be the first texts of translation theory. The Roman Marcus Tullius Cicero was the first person to write about how he translated, elaborating on the methods he used to convey Greek thoughts into Latin. In 55 B.C., describing his methods of translating a work of Demosthenes, Cicero noted that he “[kept] the same ideas in forms...but in a language that conforms to [Latin] usage.” (Cicero, Translating 9). Cicero faced the problem that all Latin translators of Greek had to cope with: Greek and Latin had quite different forms of grammar and sentence structure. For Cicero, the solution was to

translate the ideas. Greek grammar was different from Latin, so instead of “[rendering] word for word,” he changed the foreign text structure to agree with the style of his native tongue (Cicero, 46 BC 9). He preserved the ideas but modified the structure so that the translated work read correctly in Latin.

Cicero was also of the opinion that translating from Greek would benefit the developing Latin language, where lack of sufficient vocabulary often caused difficulties for translators (Cicero, 55 BC). Lucius Annaeus Seneca was a Roman philosopher, poet and statesman in the time of Emperor Nero who translated a great number of Greek philosophical works into Latin. In a letter to a friend written about 64 A. D., Seneca expressed frustration over the differences between Greek and Latin and the difficulties that distinct grammar styles and the “poverty ...in the manner of [Latin] vocabulary” were causing him (Seneca 17). There were many words in Greek, some of them small and innocuous, that had no Latin equivalent. Seneca’s solution to the problem that sparked the letter was to substitute a Latin verb for the Greek noun that was causing trouble. Though he was dissatisfied with the substitution, the switch did maintain the sense of the passage Seneca was attempting to translate. Like Cicero, whom Seneca cited in the letter, Seneca opted to preserve the sense of the passage at the cost of a verbatim translation.

Quintilian’s contribution to translation theory was to distinguish between *metaphrasis* – literal translation, replacing a word with a word; and *paraphrasis* – sense-for-sense translation, replacing a phrase with a phrase (Robinson, 1997). In the first type of translation, the translation unit – the smallest part of a text translated – was only one word. In the second type, it could consist of several. Many later translators imitated him, and the idea culminated in John Dryden’s 1680 essay that distinguished three types of translation: metaphrase, paraphrase, and imitation.

In addition to descriptions of how they translated, early theorists also wrote about their reasons for translating, especially when their audience was bilingual and perfectly capable of reading the original text. Most upper-class Roman citizens spoke Latin for judicial and political matters and Greek for cultural and educational concerns. Yet the scholars did not translate to inform; Cicero, Pliny the Younger, and Quintilian maintained that translation helped one master the vocabulary and grammar of two languages and helped the weaker language, in this case Latin, by creating new words and expressions. All three believed that a translator needed to be a master of both languages, the source language as well as the target language. Cicero and later Quintilian believed that translating Greek into Latin increased a student's vocabulary. Pliny the Younger took the idea a step further and said that one should translate not only from Greek into Latin, but also from Latin into Greek. All three agreed that translation would "develop...a precision and richness of vocabulary, a wide range of metaphor, and power of exposition...and cultivate perception and critical sense"(Pliny 18). The agreement was that reading to translate was the closest reading one could give a work and that by translating, one became a stronger practitioner of both languages. The second reason to translate was to broaden the Latin language, to improve its versatility and vocabulary. Seneca had complained that Latin had a scarce vocabulary compared to Greek's richness of expression. Through translation of Greek words into Latin, Latin could and did adopt Greek words and phrases, and became a fuller language as Greek ideas enriched Roman culture.

Another characteristic of early translations was that practitioners in that era saw no harm in what today is considered plagiarism. It was common practice then to rewrite well-known stories to give them a personal touch. Horace first suggested rewriting, and Quintilian developed the idea further by suggesting that the translators "be in open competition with the original

author” to not only imitate, but to try to improve the original work, to “find something better” than what was originally said (20). Terence, who wrote and translated works for the Roman theater in the second century B. C., “often...combined translated passages from several Greek originals”(Kelly 496). This practice of “improving” the original through translation would continue in Western tradition until the beginning of the nineteenth century.

Early Scripture Translation

The next movement overlapped the later Classical translators but had a different focus, that of scripture. The first scripture translation into a European language was that of the original Hebrew holy book from Hebrew to Greek. The Greek translation was known as the Septuagint, and was later translated from Greek to Latin as the Old Testament of the Bible. Later, translators produced bibles in Latin from the original Greek. The earliest stories of translation scripture concern the process of translating the Hebrew scriptures into Greek. The Letter of Aristeas (~130 B. C.) maintained that the translation was ordered by King Ptolemy II of Egypt because of the large number of Jews living in his country. Jews living at his court had lost the ability to read Hebrew and understand Jewish law. To correct that deficiency, Ptolemy sent to Israel for scholars of Greek, seventy-two of whom came to the Egyptian court and met and conferred every day for seventy-two days. The only reference that Aristeas’ letter makes to divine intervention in the translation process is to claim that when people translated wrongly, they were struck dumb or deranged. After the scholars desisted in mistranslating, their powers of speech and sanity were restored.

One hundred years later, Philo Judaeus gave a different account. He claimed that the seventy-two scholars translated in isolation from one another and conferred only after the

seventy-two days were over and their individual versions were completed. Upon conferring, they discovered that they had all produced exactly the same version, and Judaeus viewed those identical translations as a sign that the translators, and thus the translations, had been divinely inspired.

Ancient Hebrews and later Christians believed that the Torah and the Bible were the literal word of God, which He Himself wrote. In fact, the Jewish Torah is said to be untranslatable because facets of God's nature are present even in something so simple as the order of the words on the page. The idea of divine inspiration may have been to give legitimacy to the Greek version of the Septuagint that it would have otherwise lacked, being only a translation of the original Hebrew text.

That belief changed with the beginnings of Christianity and the teachings of Paul of Tarsus, a convert to Christianity and an apostle of Jesus Christ. Paul reacted against the Jewish belief that the scriptures and religious teachings were meant to be read or heard only in Hebrew. His first letter to the church at Corinth tells us that Paul "would like every one of [them] to speak in tongues, but [he] would rather have them prophesy," because "he who prophesies is greater than one who speaks in tongues, unless he interprets, so that the church may be edified"(1 Corinthians 14). Paul believed that when a few believers spoke in tongues among themselves it meant that the Lord was with them, a positive and hopeful sign. When they were surrounded by nonbelievers curious about conversion, however, the few speaking in tongues would seem strange and frightening to those not yet converted. This speaking in tongues closed the new religion to all but a select few. Paul wanted as many converts to Christianity as possible so he preferred that those already converted to Christianity speak in a manner nonbelievers could understand, in hopes of convincing them to convert. If Christians felt they must speak in

tongues, Paul asked them to translate for the nonbelievers so they would feel included in the new religion. The teachings of Judaism and the deepest understanding of the nature of God were open only to a select few. Paul wanted a religion that was open to all.

Earlier desires to know Jewish law (even in its translated and therefore imperfect form), coupled with Paul's insistence in opening the mysteries of religion to all those who wished to learn elicited for the need for more Bible translations. Most Christian translators agreed that the Bible should be translated to give more people access to Jesus' teachings. However, the Jewish tradition of divinely inspired scripture influenced the Christian Bible. Translators were reluctant to change what they saw as the written word of God, so most Bible translations were very literal, word-for-word works that were difficult to comprehend. However, those few who were accused of rendering an imperfect translation and thus changing the word of God could be accused of heresy and burned at the stake. It made others rather reluctant to experiment.

In 384 A. D. something seemingly innocuous happened that would later become quite important. Pope Damasus, irritated by the plethora of incomprehensible Bible translations, commissioned the scholar Jerome to prepare a new one. Educated in Rome, where he had been exposed to the teachings of Cicero, Jerome advocated preserving the sense of translations at the cost of word-for-word literalness. However, Jerome's Bible, translated from Greek and Hebrew into the Latin Vulgate and released in 395 A. D., endeavored to preserve both the word order and the sense. He defended his style in a letter to his friend Pammachius, written the same year. He explained that "except in the case of Holy scripture," where he translated as closely as possible, "[he] rendered not word for word but sense for sense"(Jerome 25). That is, he translated the Bible as literally as possible, but in everything else attempted to preserve only the sense of what was written. However, some of Cicero's teachings apparently influenced Jerome's Vulgate,

because it caused an enormous controversy over his methods which lasted the rest of his life.⁴ Despite objections, Jerome's edition was adopted by the Papacy and became the Latin standard until the Reformation in the sixteenth century, and, ironically, Jerome was later canonized and became the patron saint of translators.

Augustine, scholar, Christian, and saint whose theories were very important during the Middle Ages, also wrote extensively about the methods and uses of translation. He agreed with St. Jerome that texts should be translated for their sense, and not merely the strings of words they contained. Augustine's theory went a step further than St. Jerome's in two ways. He admitted that literal translations had merit "not because they sufficed, but because by means of them we may test the truth or falsity of those who have sought to translate meanings as well as words"(Augustinus 33). Jerome never suggested that literal translation had any value except in the case of scripture; he was interested only in the preservation of the text's sense. Augustine also suggested that, should the reader not be able to puzzle out the text, even with both free and literal translations at his disposal, he should reread the original version. While Jerome consulted the original Biblical texts in the process of translating his Bible, he never suggested that others do so as well.

Pope Gregory I, also known as Gregory the Great, was another supporter of Cicero and St. Jerome's freer translation methods. He asked in a 591 letter to a friend that "should you receive a lengthy letter of mine, translate, I pray you, not word for word, but so as to give the sense"(Gregory 36). Gregory's adherence to non-literal translation methods for his words was because "usually, when close rendering of the words is attended to, the force of the ideas is

⁴ Modern scholars do not agree on how literal a translator Jerome was. Several, such as Child, say he was a free translator in the manner of Cicero; others, including himself in his letter to Pammachius, say he was free in all things except the Bible. Nine hundred years later, Burgundio of Pisa, a staunch proponent of literal translation, cites Jerome's method as an example of how NOT to translate (Robinson, 1997).

lost”(Gregory 36). Gregory did not care if translators changed a word or two in the process of translating what he had written. Rather than try vainly to preserve the exact word order and be left with lines of gibberish, Gregory preferred that others preserve his *ideas*; what he said rather than how he said it.

However, not everyone agreed with Jerome, Augustine and Gregory’s translation methods. Boethius was a contemporary of Jerome and Augustine, a Roman scholar and statesman who was also a Christian. He was a proponent of literal translation methods, because “in the writings in which knowledge of the subject matter is sought, it is not the charm of limpid speech but the unsullied truth that has to be expressed”(Boethius 35). Boethius believed that literal translation was the best way to preserve the unsullied truth and so felt he had translated better if instead of sense for sense, “not a single syllable of the Greek [was] found to be missing”(Boethius 35). Just as proponents of free translation often cited Cicero and Jerome, scholars seeking support for literal translations cited Boethius.⁵

Translation Theory in the Middle Ages: 600 – 1500.

As in earlier centuries, information on translation theory during the Middle Ages comes from letters and the prefaces of copied works, often included to explain or defend the translator’s choice of methodology. Such comment still focused on practical advice and definitions, i.e. – how the translator arrived at that particular translation. The debate between literal and nonliteral translation begun centuries earlier continued throughout the Middle Ages and Jerome, Augustine, and Cicero remained the favorite authorities to cite to lend credibility to the

⁵ It has been noted that Boethius’ method of literal translation was actually the more accepted of the two. Possibly, justification for the non-literal method of translation appears more often in records because it was not accepted, and so people who used it justified their choice of methodology by claiming they were following the noted Cicero’s or the holy Jerome’s example. Those who followed the literal method were adhering to the accepted practice of the day, and thus had no need to explain their methods.

translator's argument. It was still accepted practice of translators to mine foreign works for ideas to appropriate, and they still viewed translation as a method they could use to enrich language.

Despite the seeming sameness, new developments occurred during those centuries. The decline of the Roman Empire meant that, although Latin retained its supremacy in educated circles, the spoken vernacular rose in popularity with the laity. Alfred the Great, the scholar Aelfric, Notker the German, and others began to translate the now-confusing Latin into English, and German for everyday usage. In fact, the poet Dante wrote some of his most famous works, such as The Divine Comedy, not in scholarly Latin but in his native Italian. There was also a change in the type of material translated. In addition to religious and philosophical works and the classical Greek and Roman tomes, stories began to appear in written form. For the first time, women ventured to translate and to share their work.

Translation in the Middle Ages was quite different from today's academic insistence on "translator invisibility" (Venuti, 1995). Like the Roman methods of centuries past, appropriation of foreign literary texts was an accepted medieval practice. Cicero, Horace, and Quintilian had set the standard of competition between the translator and the original author, and medieval translators freely borrowed and improved upon commonly known literary works and popular stories. The method popular at the time concentrated more on *what* the work said than on *how* it was presented, a practice that gave the translator the freedom to choose the best stylistic methods to use. At roughly the turn of the fifteenth century this practice began to change. Translators began to give credit to the original, if only in passing. They began to present stories "as told to me, as I heard it, as I read somewhere," instead of as original works (Amos 26).

During the Middle Ages, although the method remained the same, the purpose of translation changed. Cicero's time contemporaries spoke both Latin and Greek, but one of

Cicero's reasons for translating was to enrich the Latin language. Nine hundred years later the educated still understood Latin, but for the average layperson education was rare, and the scriptures had become a mystery. Alfred the Great, King of Wessex, gave that reason. He saw an alarming decline of education throughout the British Isles as incentive to translate "certain books which are necessary for all men to know" into the Anglo-Saxon vernacular; works by Augustine, Boethius, and St. Gregory among them. (Alfred 37). The preface of one of his works and his correspondence with a bishop concerning another continue the argument between strict literalism and those in favor of freer translation. Alfred wrote "sometimes...word by word, and sometime meaning of meaning," or "sometimes word for word and sometime paraphrase," though scholars suspect he favored the nonliteral method because there is very little literal translation in his works (Alfred 37).

The English abbot Aelfric, writing a century after King Alfred, translated certain works into English for many of the same reasons, to give people access to religious works and essential knowledge available only in Latin at the time. Like Alfred, Aelfric favored meaning-based translation. He also took care to "[use] no difficult words, but only plain English" to instruct the souls of those who "[could] not be taught in any other tongue than to that which they were born"(Aelfric, Ordinary Speech 39, Idiomatic English 39). While not the first to suggest meaning-based translation, Aelfric was the first known translator to insist on idiomatic translation in the language of the common speaker, which he claimed would facilitate their pace of learning.

The English were not the only people to translate important works into the vernacular. Notker Labeo, also known as Notker the German, was a German monk and contemporary of Aelfric. His reasons for translating Latin texts into Old High German parallel those of Alfred

and Aelfric. A teacher whose students did not have a strong command of Latin, Notker “ventured to translate [important works] into our language,” which was the German tongue of the day (Labeo 40). His list of translated works included Cicero, Boethius, Virgil, Aristotle and parts of the Bible. Notker was also unique in that, instead of presenting the local bishop with the works as a gift for all to use, he mentioned the cost of producing them. Parchment, ink, and scribes’ services were expensive, and Notker asked the bishop to reimburse him for the cost.

It is not coincidental that English and German were the first two languages into which Latin was translated. The other major European languages, Castilian Spanish, Italian, and French, are Romance languages derived from Vulgar Latin. As such, it took longer for them to be recognized as languages separate from the Vulgar Latin dialects (Salama-Carr, 1998). The first French translation theorist did not appear until the late thirteenth century; Jean de Meun(g) finished the work *Roman de la Rose* begun by Guillaume de Lorris about the year 1240. The king himself commissioned the work, telling de Meun to “plainly render the sense of the author, without following the words too closely”(de Meun 47). The king’s request suggested a rise in the popularity of vernacular languages as opposed to Latin. Additionally, de Meun finished the work in a style more flattering to the rising bourgeois classes than to the aristocrats. *Roman* advanced French as an independent and viable language, and it also influenced foreign authors such as Geoffrey Chaucer.

Writing and Latin were both the province of the educated during the Middle Ages. Nearly everything in the early centuries was written in Latin and only later translated to vernacular languages. That tradition changed in the late thirteenth century when the author and translator Dante Alighieri wrote his three major works in Italian instead of Latin. Their

popularity “not only cleared the way for the artistic and intellectual use of Italian in Italy but made Italian all Europe’s *lingua franca* for the next several centuries”(Robinson 48).

The early Roman translators established the uses and purpose of translation, but the first person to explain the necessary skills wrote over a millennium later. Leonardo Bruni wrote that to translate, one needed a thorough knowledge of both the language being translated and the language one was translating into, a familiarity that was “wide, idiomatic, detailed, and acquired from a long reading of the philosophers and orators and poets and all other writers”(Bruni 49). Ironically, Bruni’s advice echoed the classical authors’ suggestions that the best way to acquire the broad and idiomatic knowledge of both languages was to practice translation. In addition to essential linguistic skills, Bruni also noted that one needed a sharp ear, able to follow the sounds and rhythms of the source language and reproduce them as closely as possible in the target language.⁶

Bruni’s advice was expounded upon several years later by Duarte, the king of Portugal. Duarte proposed five things every translator should do: know the sentence and not attempt to alter the meaning in any way, write wholly in the vernacular, not mistranslate the meaning of difficult words or synonyms, not use offensive language, and follow the guidelines of good grammar and punctuation as in any other writing project (Duarte 60).

The kings of England, France, Portugal, and other European powers were not the only rulers to commission translations or to translate during the Middle Ages. The Abbasid Caliphate, headquartered in Baghdad and enduring from 750-1258, fostered a period when translation and learning of every kind flourished in the Arab Muslim world (Baker, 1998). In fact, “the Arabs are credited with initiating the first organized, large-scale translation activity in history”(Baker

⁶ As an Italian Humanist, a proponent of the movement that later led to the Italian renaissance, Bruni also advocated translating “invisibly,” to restore the works to their original glory and quality, as Cicero and others truly wrote them (Baker: 1997).

318). Translation flourished especially in Spain in the ninth and tenth centuries, due to the confluence of Jewish, Christian, and Arab influences and the Greek which the Jews and Christians introduced. The Koran, the holy book of the Muslims, admonished its followers to acquire knowledge anywhere they might find it. As a result, Arabs were interested in nearly everything: science, classical literature, astronomy, medicine, and mathematics. During the first several centuries, most works were translated into Arabic; Muslim culture absorbed the knowledge of several others and became increasingly learned. Later, the texts were translated from Arabic to other European languages on their way northward. Like the Europeans, Arab translators argued whether literal or free translation was the better method, and proponents of the non-literal method won out in the thirteenth century.⁷

The centuries of the Middle Ages witnessed a continuation of the argument between proponents of strict and free translation. Two scholars, Roger Bacon and the other writing anonymously, added their own unique twists. As seen, Alfred, Aelfric, Notker, and others had been among those who favored free translation. The first attempt was made in the twelfth century by an anonymous scholar to reconcile the two sides. The document actually proposed three types of translation. The first was “substance,” the second was “substance and sense of the words,” and the third was “substance and sense and a word-for-word translation”(Anonymous 43). The second twist came from the English scholar Roger Bacon. He was convinced of the unreliability of all translation because “it is impossible that the peculiar quality of one language be preserved in another”(Bacon 45). Bacon suggested that people study the Greek, Hebrew, and Aramaic languages to read the texts as they had originally been written.

⁷ Arabian translators using the non-literal method later extensively revised the early Arabic manuscripts that had been translated word for word (Baker, 1998).

Dante Alighieri was also an advocate of reading texts in the original, especially the works he had written. In an argument against translating his works into Latin, Dante noted that “nothing harmonized by the laws of the Muses can be changed from its own tongue to another without destroying all its sweetness and harmony”(Alighieri 45). Dante mourned the poetry of the Bible, which he thought had been ravaged in successive translations from Hebrew to Greek to Latin. During those translations, the poetry had lost its meter and rhyme and those characteristics that defined it as poetry. Bacon and Dante were both opposed to translation: Bacon because he thought translation was misleading and unreliable, Dante for artistic reasons. Both advocated reading the original language to avoid the problems caused by translation, and thus added a third side to the ancient argument between literal and nonliteral translation methods.

Through the Middle Ages, books had to be copied by hand and so were extremely rare. That changed at the end of the fifteenth century when the invention of the printing press drastically increased the number of books in circulation and also facilitated for the explosion of translation that was to occur in the next century. Another reason for this explosion was the rediscovery of classical Greek and Roman texts in Italian archives and the desire to understand and disseminate them. Rediscovery and renewed interest in learning led to the Renaissance of the sixteenth century and created a huge demand for translations. Moveable type supplied it.

Although the Middle Ages relied heavily on the works of previous Greek and Roman scholars for translation theories, scholars in the Middle Ages did expand upon those theories. The translation of information from Latin to the vernacular occurred for the first time in the Middle Ages, as did the codification of the necessary skills of the translator. The ancient practice of rewriting texts to give them a personal touch also carried over to the Middle Ages, yet towards the end, translators were beginning to credit the author with the work, or at least admit

they themselves were not the original authors. The debate over the best method of translation, free or literal, continued throughout the Middle Ages, with an anonymous scholar attempting to reconcile the two practices into a single theory, and Roger Bacon and Dante suggesting that reading the text in the original was preferable to either option. And in the southern part of the Iberian peninsula, texts translated into Arabic under the direction of a distant caliphate were being retranslated into Latin and spreading north again as the Renaissance began to arouse Europeans' curiosity about learning. The West was waking up.

The Sixteenth Century: Renaissance and Reformation

Several scholars have marked the sixteenth century as a turning point in the history of translation (Amos, 1920; Baker, 1998) While many practices common in the Middle Ages continued to be used during the Renaissance, there were also important developments during that era, including inventions such as the printing press and the encounter with the American continents. The Renaissance was marked by a renewed interest in education and the classics, and that period also saw important developments in theory, practice, and ideology that changed translation and that carried over to the Enlightenment and the Romantic movement several centuries later. The argument between literal and free translation, especially regarding the Bible, continued to be a topic of heated debate and eventually sparked Luther's 95 Theses and the Reformation movement in Germany. The medieval practice of raiding or imitating foreign and especially ancient texts to enrich emerging vernacular languages also continued through the century. The skills of the translator first listed by Duarte remained the same, as Etienne Dolet described, though Luther added certain necessary moral characteristics to the list.

New developments included arguments over Bible translation that sparked the Reformation, subsequent religious arguments, and war in Europe through the next century. Some scholars argue that the Reformation was made possible by the printing press, and its inherent potential for rapid replication and spread of written information, invented in the middle of the previous century (Anderson, 2003). Access to easy printing, coupled with renewed interest in ancient wisdom and education, increased the demand for books and for translators, who now saw translation as a way to spread information rather than just a scholastic exercise or a way to enrich language. For the first time words were also coined specifically to discuss translation. The first theory unconcerned with practical advice for translators also made an appearance. Michel Montaigne ushered in a new concept in relation to the new peoples contracted through Columbus' voyage. He discussed cultural rather than literary translation; how to explain one's culture to people of radically different backgrounds. It is because of these and other developments that made the sixteenth century a turning point, at which translation began to cast off the trappings of the Middle Ages and assume some of the features of modern translation studies.

The continued debate about literal translation, free translation, or of simply doing away with translation and reading the document in the original language, a debate that had begun with the earliest translators and lasted through the Middle Ages, continued throughout the Renaissance, especially in reference to the Bible.⁸ The Catholic Church maintained that Latin was the language of the Church. Translations were unnecessary because they changed the word of God and were therefore heretical. Strict Catholics such as Thomas More in England were proponents of translation provided it was extremely literal. Scholars and theologians such as

⁸Biblical scholar and translator Erasmus began as a literal translator, but through the course of his practice became an avid supporter of the free translation methods of Cicero and Augustine (Robinson 1997).

Martin Luther and William Tyndale were of the opinion that the Bible should be the foundation of Christian behavior. Therefore, everyone should have access to a copy in a vernacular that they could understand. Both sides continued to cite ancient scholars. The works of Cicero and early biblical translators such as Augustine and Jerome were used to support modern arguments.

Another constant facet of translation was the list of needed skills. Etienne Dolet of France, the first martyred translator,⁹ expounded upon the guidelines first proposed by King Duarte of Portugal. Like Duarte, Dolet felt that translators should: have a perfect grasp of both the meaning of the text and the author's motives; be completely familiar with the language being translated; not translate word-for-word; not usurp words from one language to use in another; and follow the rules of good writing in the vernacular (Dolet 95-96). Martin Luther also added to Duarte's requirements, though with virtues and not skills. Luther insisted that the translator be "upright, devout, God-fearing, faithful, learned, experienced, and disciplined"(83). Thus in addition to skill, Luther wished translators to have a good character. He was the first to ask for character traits in addition to knowledge of foreign languages.

Several of the new developments that mark the sixteenth century as a turning point were religious in nature. One of the earliest was Erasmus' revision of Jerome's Vulgate, which had been Europe's Bible for almost twelve hundred years. Erasmus of Rotterdam was a Biblical scholar who examined the ancient Hebrew and Greek texts and pointed out mistakes in the Vulgate translation. In 1516 he published a new Bible based on the original Greek and Hebrew source texts, despite attacks from conservative translators (most of whom knew neither language) who claimed that he had no authority to question Jerome or his work.

⁹ Dolet (mis)translated one of Plato's works, conveying the idea that Plato believed there was no afterlife. For such heresy he was condemned to death by an English court. He escaped to Germany for several years but was caught in 1543. His captors returned him to England where he was tortured and burned at the stake.

Martin Luther, a German theologian and scholar, believed that the Bible should be available to all people in their own language. Accordingly, he translated it into the German vernacular of his day. However, he did not translate literally, but attempted to translate into “German pure and clean”(86). In translating, Luther strove to recreate in writing the everyday, idiomatic speech he heard around him. This Bible was published in 1534. As a consequence of Luther’s non-literal methodology and other disagreements with the Catholic Church, the Bible was banned. Luther was branded a heretic and ordered to recant, and excommunicated when he refused.¹⁰ His subsequent efforts to explain his motives and beliefs, coupled with the following he gathered in Germany and across Europe as his 95 Theses and Bible spread, sparked the Reformation movement that led to his followers’ break with Catholicism and the rise of Protestant religions.

Luther’s writings spread quickly through Europe because of an invention in the middle of the fifteenth century – the printing press with moveable type. Books no longer had to be laboriously copied by hand, and it sped the dissemination of information because the printing press could work much faster than scribes could write. From 1520 to 1540, three times the number of books were printed in Germany as in the previous twenty years (Anderson 2003). In fact, Johann Guttenberg’s printing press also fed – and in turn was fed by – the growing demand for written material all across Western Europe. The Renaissance had begun because Italians rediscovered the works of the ancients and reawakened interest in them and in education in general. The desire to read texts ancient and new created an enormous demand for translations. And yet, the translator’s perception of his purpose was changing. In the Middle Ages translation was more often undertaken for grammar practice or scholastic reasons than to enrich a culture.

¹⁰ Although one enterprising young priest removed Luther’s name and preface, inserted his own as the author, and published the same Bible, which became an instant success.

Beginning in the early 1500s, prefaces to translations printed in England, France, Spain and Italy note that translators now worked “to disseminate information” and “for the national good”(Salama-Carr 411). The printing press also enabled new classes of people, such as merchants and women, to own books, which were suddenly rather commonplace and inexpensive (Anderson 2003). The easy access to vernacular material also increased literacy rates across Western Europe.

A second change in translation had to do with the enrichment of culture. Vernacular languages were still developing. Until the Renaissance, it was commonly held that translation would improve vernacular language in addition to helping the translator improve his language skills. The use of Latin words was acceptable when there was no vernacular word for the concept. That now changed. The trend moved from translation to imitation as a way to stretch language, and scholars such as Etienne Dolet of the *Pléiade*¹¹ movement in France now advocated creating the necessary vocabulary (as opposed to borrowing it) to broaden vernacular vocabulary. There was a distinct movement away from “peddling moldy old Latin words”(Rabelais qtd. in Baker 36). Instead, one could derive words from Latin or Greek, use old or uncommon vernacular terms, or words of lower classes. Neologisms were then explained in glosses provided by the translator. It is estimated that between 1500 and 1600, ten thousand new words were adapted or created by the English language alone (Anderson 2001).

Another new concept, described by French philosopher Michel Montaigne in relation to the discovery of the Americas and their new inhabitants, concerned cultural translation. In

¹¹ The *Pléiade* movement was a sixteenth century French poetry movement that attempted to “ennoble the French language by imitating the Ancients. Their mission statement suggested three approaches: to emulate select Greek and Roman authors such as Pindar, Horace, and Ovid; a vernacular innovation (free translation) of Greek and Latin literary texts; and creation of neologisms from Greek and Latin root words. The ideal follower of the *Pléiade* movement was so familiar with ancient Greek and Roman texts that, rather than slavishly imitate the original style, he could “convert [the known corpus] into an entirely new and rich poetic language in the vernacular” (“*La Pléiade*”).

Montaigne's experience this cultural translation meant explaining European customs to a native of the Caribbean Islands using concepts the native could understand. Montaigne questioned natives brought to France to learn of their cultures. He inferred from their answers that they had no poverty, no homelessness, no starvation, no economical class system, none of what he saw as the social evils plaguing Europe. His essay "On Cannibals" described the American native peoples as beings living close to nature and Montaigne consequently questioned who the real barbarians were: the unflawed natural beings or the worldly, corrupt Europeans. Montaigne also doubted the wisdom of teaching European customs and thus social and political evils to those innocents (1580).

A later issue in the translation field concerned what constituted an acceptable translator. Latin and knowledge were usually the province of priests, religious, and upper-class, educated men. The few women who were learned were supposed to restrict themselves to writing literal translations of religious or ancient texts. Lady Elizabeth Tudor, future queen of England, did such exercises as a girl, assigned by her stepmother Catherine Parr and her tutor Roger Ascham to develop her Latin and Greek skills.¹² Outside of convents, females were not supposed to write, nor read anything but religious materials. When Margaret Tyler translated a romance in 1587, her audacity caused a scandal because she broke nearly every social taboo of the time concerning proper learned feminine behavior. However, Tyler's translation made the romance genre extremely popular in England for a few years thereafter (Robinson, 1997).

Thus, Renaissance translation began as it had been practiced in the Middle Ages, with the same debate over literal or free translation. Its purpose was largely to practice or to educate in a linguistic sense, rarely to spread information. With the invention of the printing press, scholars and translators during the eras of the Renaissance and the Reformation developed the concept of

¹² She continued to translate as an adult, see Ellis, 1998.

free vernacular translations which promoted the rise in popular vernacular languages and standardized them. Translation also came to be regarded as a public service. The practice of translating merely as a scholastic exercise or to enrich the vernacular language fell out of favor, replaced by imitation of the ancients' style of writing and the practice of coining words rather than stealing them. Women also translated in increasing numbers and sought recognition for their work. Richer vocabulary paved the way for development in the seventeenth century and led to modern translation practices followed today.

Modernizing Europe, 1600-1900

The three centuries after the Renaissance saw a decline in the scholastic influence of Latin. Though clergy continued to use and translate the language, scholars now wrote almost completely in the vernacular by the middle of the eighteenth century. Though a certain amount of religious translation was still published, the bulk of translation and theory from the seventeenth century onward concerned literary and intellectual translation: poetry and prose, science and philosophy. French, the language of culture during the seventeenth century, gradually lost favor to English and German. Regarding theory, the argument over literal versus non-literal translation became secondary or tertiary to other debates and was superseded by some of the first non-practical theory in the Western tradition. Fewer theories discussed the best methods of translation, and there was an increasing discussion about what a translation should be like, what facets of the original text it should incorporate. The norm at the beginning of the seventeenth century, demonstrated by translators such as John Dryden, John Denham, and Nicholas D'Ablancourt, was to translate freely and to thoroughly domesticate the text. That practice changed over the next three centuries; the latter part of the seventeenth and early part of the

eighteenth century saw a gradual movement away from excessively literal translation practices. By the middle of the eighteenth century translators accepted the original text as the ultimate source for their translations. Although English translators continued to follow domesticating practices, the nineteenth century in Germany saw a movement away from excessive domestication tendencies. German scholars such as Frederich von Humboldt, Johann von Goethe, and Frederich Schleiermacher advocated leaving the foreignness in the text. That desire, and the active search for the Other, as opposed to the desire to tame the Otherness in the previous century, would be the final flowering of translation theory before the beginning of the twentieth century.

The Seventeenth Century

Translation in the seventeenth century was marked by excessively free translations and the thorough domestication of ancient and foreign works. Translators such as Nicholas D'Ablancourt, John Denham, and John Dryden explained their methods by saying that their audiences (French and English, respectively) wanted to read free translations with no hint of foreign culture. They claimed that no one understood the ancient customs any more, and the translators could "more freely reproduce the spirit of the original" if they were allowed to render ancient texts in terms of the French or British customs of the day (Amos 157).

Another factor in that excesses committed by French translators was that French was the dominant cultural language at the time. The French used that preeminence as an excuse to translate anything into the popular literary styles of the era. D'Ablancourt was the leader of one such group of translators called the *Belles Infieles* for the style of their translations. They were lovely to read and enjoyed a wide popularity, but were very different from the originals.

D'Ablancourt's own translations of classic authors such as Homer were so different from the originals that they were almost new creations. He was asked once why he did not simply *write* original works, since "he seemed intent upon making French originals out of Greek and Roman classics"(Robinson 157).

John Dryden's translations were of a similarly free nature, and likewise had a broad audience. He wrote a treatise which differentiated between three forms of translation: metaphrase, paraphrase, and imitation.¹³ Of the three, he felt that paraphrase gave him more freedom. He used it to present the ancients as he thought they would have written, had they lived in England in the seventeenth century (Amos, 1920).

As Dryden translated for a wide audience, so too did Aphra Behn consider her audience as she translated. In one of her translations, she explained that she had taken such liberties with the text because the original was very scholarly in nature; most English readers would prefer something with more ornament in a style easier to read than if she had translated more closely. She attempted to simultaneously "preserve the foundation and principal matter" of the text yet "give it another form," one more pleasing to her readers (Behn 183). Behn was one of the first female to write a separate treatise on translation rather than including it as preface to her words, but as a female, she was scorned by the largely masculine translation field for acting outside the social norms of the period.

Despite the commercial success of D'Ablancourt, Dryden, and others who followed their example, not everyone agreed that taking such liberties was correct. The Frenchman Pierre Huet stood in opposition to the *Belles Infieles*. Huet and others advocated a model translator who would "display in his own words the author...as if the author were to be preserved in a mirror

¹³ Although Dryden is often given credit for the originality of this three-part idea, the original two-part concept was actually Quintilian's, see Robinson 1997.

and picture”(Huet 164). A mirror image of the author’s work in another language was a far cry from the creative efforts of Dryden to “put classical verse into English garb”(Amos 137). Huet’s methods foreshadowed the eighteenth-century movement away from creative liberties and towards translations that more closely followed the source text.

The Eighteenth Century

Linguistically the eighteenth century saw a gradual decline in the preeminence of French language and culture and the subsequent rise in the popularity of the German tongue (and English to a slightly lesser degree). The tendency to take liberties with a translation was largely extinguished by the middle of the century, replaced by respect for the original text as the main source of information for ideas and style. Colonialism flourished during this century, and therefore, coupled with the tendency of Europeans at this time to regard anything originating from outside their borders as inferior and in need of cultural improvement, most texts were still subject to heavy domestication, especially modern texts. Other than the gradual change of accepted translation practices, which began to advocate translations that more closely resembled the source text, there were no major theoretical developments in Western European tradition in this century.

The early eighteenth century still saw translators influenced by the previous century, though less so as the first decades passed. The English translator Alexander Pope noted in the preface to his translation of the *Iliad* that one should not take liberties with a text except “those which are necessary for transfusing it with the spirit of the original and supporting the poetical style of the original”(Pope 192). While Dryden and D’Ablancourt also strove to recreate the

“spirit” of the original text, neither of them attempted to convey the original style in their translations.

The same changes were occurring in the French tradition of translation. In the middle of the century, Charles Batteux wrote that the previous century’s practice of paraphrase was faulty because it did not show the true text. Far different from Dryden and earlier translators, Batteux maintained that a translator “ought exactly to express the original, being neither too free nor too servile,” and that in all things, the translator was “obliged to follow the author”(Batteux 195). Batteux followed these pronouncements with a list of what was and was not permissible to change in the process of translation. The order of ideas should stay the same, but conjunctions, adverbs and punctuation should not be altered; he also advocated imitating the style of the original author. The changes permissible included license to cope gracefully with problems in language that still trouble translators today: proverbs, metaphors, and other idiomatic language. Finally, Batteux insisted that the translation not be awkward, that it flow smoothly when read.

The movement culminated with the ideas of Alexander Tytler. Tytler’s work was an explanation based on three basic rules that explained what and what not to do in translation. It also included exceptions to the rules and examples of good and bad translations. Tytler advocated that the translation “should be a complete transcript of the ideas of the original work”(11). Like Batteux, he also insisted that the translation follow the original style and that the translated version be easy to read.

As mentioned, there was no significant development of theory during the eighteenth century. The only major change, as Pope, Batteux, and Tytler demonstrate, was the movement away from the free translation of the seventeenth century and towards the type of academic translation still practiced today.

The Nineteenth Century

The nineteenth century was characterized by the Romantic movement, the artistic and literary preoccupation with beauty and perfection, the search for the ideal. Linguistically, German and English were the two important languages in Europe, having superseded French during the previous century. Regarding theory, most important developments in translation were the work of German scholars and translators and concerned the emerging Romantic movement and the depiction of the Other. Whereas the eighteenth century had witnessed the removal of excessive freedom in translation to yield a final version that clung more closely to the original, the nineteenth century in Germany saw the tendency to domesticate the text replaced with a preference for things foreign. English translators, moreover, still adhered to previous practices. Translators such as Wilhelm von Humboldt, Johann von Goethe, and Frederick Schleiermacher demonstrated the new desire to leave the Other in the translated text, and their works still influence translation theory today.

The first translator to attempt to assimilate the Romantic tendencies emerging at the very end of the eighteenth century was the German scholar and translator Frederick Leopold. Writing under the pen name Novalis, he proposed three forms of translation: grammatical, transformative, and mythic (Robinson 1997). The mythic form was purported to be the ideal, the “pure and perfect character of the individual work of art”(Leopold 213). Novalis noted that, while mythic translations did not yet exist, he could see hints, glimpses, traces of them in certain works. That yearning for the ideal was a classic trait of the Romantic movement.

The seventeenth century had been characterized by translations that were both very free and extremely domesticated. Excessive liberty was mostly removed from theory and practice in

the eighteenth century; the nineteenth century saw the removal of domestication in Germany.¹⁴ In fact, translators such as Von Humboldt and von Goethe actively advocated leaving the sense of foreignness, of the now-exotic Other, in the translated version. Von Humboldt advocated a “foreign flavor” because foreignness strengthened language and cultural awareness, just as Cicero had explained two thousand years before (von Humboldt, 1816).

Johann Wolfgang von Goethe developed von Humboldt’s idea further. He described three levels of foreignness. The parodistic writer was one who used foreign ideas as his own, domesticating them. The next level, plain prose, “acquainted the audience with the foreign country on their own terms,” as though reading a travel book from the familiar surrounding of one’s own home. The third type, translation, “attempted to identify with the original work and culture of the original,” to “draw the reader back to the source text”(60). Frederich Schleiermacher in turn expounded upon von Goethe’s third type of translation, claiming that there were truly only two types of translation. The first “moved the writer toward the reader” and was a complete domestication of the text. The second type was to “move the reader toward the writer,” to keep the text as culturally accurate as possible, although Schleiermacher admitted that footnotes would occasionally be necessary to explain unfamiliar terms and customs to readers (Schleiermacher 36).

Despite the influence of the eighteenth century that curbed the excessive freedom of taking liberties in translation, there were still occasional translators in the nineteenth century who saw no other way to translate a text. Edward Fitzgerald used such a method in his translation from Arabic of the *Rubáyat of Omar Khayyám*. He explained that a translation “must live, with a transfusion of one’s own worse life, if one cannot retain the original’s better”(Fitzgerald, 249).

¹⁴ Domestication as a translation method has continued to be popular in English translation theory until the present day. It was challenged only by Modernism at the beginning of the twentieth century. See next chapter.

Having read the original, Fitzgerald knew its fire and beauty, its life, but he could convey that sense only at the cost of a freer translation. He decided the expense of the one was worth the achievement of the other.¹⁵

At the end of the nineteenth century, another German scholar, Frederich Nietzsche, proposed that the act of translation was actually a conquest. To exemplify his theory, he described the Roman method of translation which removed everything Greek from their translation. When complete, this Romanized text that contained the same ideas as the Greek, but there was nothing else Greek about it. Nietzsche presaged the late twentieth-century Postcolonial movement in translation in which the texts were examined for domesticating influences and practices were re-examined in light of the power of one culture over another. At the forefront of the movement in favor of nondomestication, the Germans foreshadowed an explosion of theory in the twentieth century that would continue to look not so much at practical advice as at the translators themselves and what they said about culture, politics, and globalization.

¹⁵ Other people thought so too. His translation is still in print today. See Robinson (1997).

Chapter Two: Translation Developments in the Twentieth Century

The twentieth century saw a continuation of the purpose and practices of translation in the previous century: those of *domestication*, the practice of removing anything foreign in the text and replacing it with local customs and concepts; *fluidity*, writing a translation that reads smoothly, and *transparency*, wording the translation so that it appears as if the familiar elements that the translator added were actually from the original text. During the past century, the focus also turned away from practical translation advice. Although practical advice was still available – the merits of variations of the literal as opposed to the sense-for-sense method of translation are still argued about today, in fact – theorists began to ask questions of the original and of the translated text and the process of rewriting the text as another language. During the first four decades of the century, due to the influence of the Modernist movement, translators such as Ezra Pound reacted against the dominant practice of domestication popular at the end of the previous century and produced foreignized, rough, or linguistically obscure translations. In the 1940s and 1950s, during and after World War II, translators such as Vladimir Nabokov, Roman Jakobson and others discussed translation as a bridge between languages and cultures. During the sixties and seventies, theorists such as Eugene Nida debated various equivalence theories; how one should produce a target language text that was equivalent in some way to the original text. Translation studies emerged as a distinct discipline in the 1980s, independent of foreign languages, linguistics, and philosophy. The dominant literary movement during the previous decade had been Poststructuralism, and its influence on translation theory and practice in the eighties was considerable. Since the 1990s, translation theory has emerged in relation to cultural studies and the Postcolonial literary movement. Lawrence Venuti, theorist, scholar, and translator of Italian, is especially vocal in his questions and accusations of English translation

practice as a way to graft English-language culture onto foreign works and further United States hegemony abroad.

1900 – 1930s: The Modernist Challenge

Modernism was the dominant cultural movement during the first half of the twentieth century. The movement “challenged and rejected most of the Romantic idealism of the late 1800s”(Barry 81). Instead of praising that which was static, lovely, ideal, and whole, Modernists, including author/translators, emphasized subjectivity, experimentation and innovation, fragmentation, and the blurring of traditional boundaries between literary genres. The horrors of World War I – millions dead, homeless, maimed, or missing, and new and horribly efficient weapons – created the feeling that mankind had lost its innocence. Modernism expressed a “deep nostalgia for an earlier age” when mankind still had faith in himself, his fellow man, and those in authority over him (Barry 82). Modernists “lamented the fragmentation, lost values and sense of purpose” that had marked the Romantics of the earlier era. They also scorned what they interpreted as the innocence of the Romantic movement. Unlike the elaborate styles affected by the Romantics, Modernism’s “fierce asceticism” found the overly decorative art of previous eras to be too ornate, too gaudy, too much. Hence, among other things, literary styles became plainer and poetry shorter and less ornate.

Modernism also challenged the dominant translation movement of the late 1800s. In English translation prior practice had been to translate a text as fluidly and smoothly as possible into the target language and often to change a work to make it more socially acceptable. Hence, in many Greek translations “Zeus” became “God,” and the earthy or obscene Greek humor was either sanitized or omitted from the translation altogether. Those practices continued into the

twentieth century. T. S. Eliot represented the dominant English translation practice when he referred to translation as a “fundamental domestication” that “makes something foreign or old live in our time”(Eliot 189). Many people still shared Eliot’s view of translation, but Modernist translators such as Ezra Pound, Walter Benjamin, and José Ortega y Gasset used the innovative, foreignizing ideas proposed by the German translator Schleiermacher, Goethe, and Humboldt to challenge the dominant translation purposes, practices, and styles.

The purpose of translation in the late nineteenth century was to present a text to which readers in the target language could relate. It frequently used vocabulary and concepts that could be easily read and understood and would not offend delicate Victorian sensibilities. All in all, a translation was intended to stand in place of the original, to completely replace it in the target language. Walter Benjamin challenged T. S. Eliot’s purpose in 1923 by referring to a translation as something that “[gave] voice to the *intention* of the original” as a “supplement” to the language in which the original text was expressed (Benjamin 79). This supplemental translation that Benjamin described was intended for an audience who could not understand the language of the original text. José Ortega y Gasset supported Benjamin’s argument. He claimed that a translation “[was] not a duplicate of the original text...and should not try to be”(Ortega y Gasset 109). It was instead a different interpretation, in a different language, using different vocabulary and syntax, and should not claim to replace the original work. Ezra Pound referred to several of his translations as “interpretive accompaniment” – texts to be used *in addition to* the original as another point of view or as a study guide, not as something that could *replace* the original text (Venuti, Reader 12). Benjamin, Ortega y Gasset, and Pound, all Modernist translators, referred to their work in translation as an addendum or a supplement to be used with the text. None of

them claimed that their translations were similar enough to replace the work of the original author.

Like the German theorists of the nineteenth century, Modernist translators advocated leaving the foreign element in the translated work. As Ortega y Gasset explained, “a country’s reading public [did] not appreciate a translation made in the style of their own language”(112). Ortega y Gasset attributed the success of the German translations of his works to a translator who strove to preserve the “Spanishness” of the books rather than imbuing them with domestic German sensibilities. On that evidence, Ortega y Gasset claimed that while readers enjoyed domestic literature because it was familiar, they enjoyed foreign works more if the translator left the sense of the foreign in the translated version, because then the text was not familiar.

Ortega y Gasset did not elaborate on the methods translators of his works used to imbue German language with Spanish culture and flavor. However, there are records of how Ezra Pound added foreign spice to the works he translated. Pound translated to English from Old English, Provençal, modern French, medieval and modern Italian, and Chinese, so he had a broad range of languages to draw foreignness from. He also availed himself of innovations of previous English translators and authors, whose language he thought of as different from his own. He used colloquialisms, foreign words, and archaisms to renounce fluid, transparent domestication in favor of the foreignness he sought to give his translations. Venuti explains that “transparency inscribes the foreign text with dominant English values,” and Pound wanted to avoid grafting those values onto his works (Venuti, *Invisibility* 109). Pound wanted to preserve the meaning without resorting to domestication of the text, so he ignored the transparent style in favor of methods that did not read as smoothly. For example, in translating a sonnet from medieval Italian to English, he closely imitated Shakespearean English rather than the modern

speech of the day. He also preserved the poetical structure of the sonnet rather than relax it into an easier and more modern style.

The Modernists combined the belief that a translation should be an addition to a text rather than a replacement, with efforts to write translations that were not transparent copies. Consequently, these Modernist translators came to view some of their translated works not as replacements of the original text, but as separate, original texts in their own right. Pound in particular differentiated between two types of translation. He produced “interpretative translation” meant to be a supplement to the original text. This helped people with weak language skills read the original text, a bit like Cliff Notes to help students understand Hamlet. In addition to translations meant to help understand the original, Pound also wrote “the other sort,” the ones he viewed as different enough from the original to be original creations in their own right (33). Ortega y Gasset had similar views about his work. Not only did he think of translation as an original work, to him it was also “a literary genre apart” from existing types of literature (109). T.S. Eliot, although he admitted to practicing domesticating translation methods, still claimed that the effort resulted in “an autonomous text”(189). As such, Pound claimed that these works should not be judged by literary critics as translations but as the original literary works they were.

The reason for insistence on autonomy for certain translations was perhaps a result of the Modernist ideology. Modernism deliberately blurred the boundaries between literary genres, but it also challenged the existing theories and accepted beliefs about translation. Because a translation had always been viewed as being the same work in the same genre as the original, albeit in a different language, it made Modernistic sense to separate the translation from the original. It was another way for Modernism to challenge the accepted values of the previous era.

Modernism was a challenge to the dominant practice of using transparency and fluidity to domesticate a text. However, it could not topple the dominant paradigm. The inventiveness of Pound and the purpose of Ortega y Gasset and Benjamin lasted only as long as the Modernist movement did. Few translators wished to imitate Pound's creativity, and by the 1950s the few who tried were ridiculed by others in the field.¹⁶ By the 1950s, the Modernist translators and their methods had faded into obscurity.

The 1940s – 1950s: World War II and the Postwar Era

The translation field changed during World War II and the postwar era due to the increasing contact between cultures. Instead of a hobby for aristocrats and scholars, translation became a profession that helped bridge language barriers. The types of texts requiring translation also changed. The majority were now scientific and technical texts as opposed to works of literature. However, as non-literary translation followed the practices of scholars engaged in literary translation, theories used for literary works were (and are) still applied to non-literary translations. There was also a change in the perception of languages; people began to view languages as equal expressions of culture, not as means of expression inherently superior or inferior to one another. Also, the increasing power of computers after WWII allowed further research and development of machine translation, which will be the focus of the following chapter.

As the influence of Modernism faded, pre-Modernist translation practices returned to the fore. Unlike the pre-Modern era, translation theory and practice during the war and postwar

¹⁶ The reluctance to imitate Pound's methods might also be because in 1945 he was arrested for charges of Italian Fascist sympathies. He was found unfit to stand trial due to insanity, and in 1946 was admitted to St. Elizabeth's Hospital in Washington, D. C., where he remained for twelve years. (See Wilmer, http://www.english.uiuc.edu/maps/poets/m_r/pound/bio.htm)

period focused on the “translatability” of a text. Taking into account the differences in languages and cultures, translators began to ask themselves and each other if a translation could reconcile those differences and be understood in the target culture. Although theorists such as Willard Quine were highly skeptical, Vladimir Nabokov, Roman Jakobson and Dudley Fitts answered yes, if one could in some way preserve the meaning of the original text.

Willard Quine was a scholar who rejected the possibility of translation. Quine claimed that language was a representation of culture and that a translator could never hope to understand the culture of the source language. In Quine’s opinion, the lack of comprehension of the source language and culture, the “inscrutability of the native mind,” resulted in all translations being mistranslations, and could be caused not only by a misunderstanding of the culture but also because the translator might read his own culture and values into the native text (Quine 112).

Although their methods of translation differed, Nabokov and Fitts claimed that translation was possible because to them, the hallmark of a good translation was one that preserved the meaning of the text. Fitts supported a style of translation that was a “free paraphrase” of the original, similar to the style of John Dryden and his contemporaries (Venuti, *Invisibility* 209). Fitts also rejected the elaborate experimentation and language play of the Modernists, instead praising poets and translators who used “exact and current English without any spurious poeticism,” and his translated works were written in the modern American English of the day (Venuti, *Invisibility* 213). Nabokov also strove to capture the “spirit” of the work in his translations rather than the “textual sense,” but he attempted to do so by a different method (Nabokov 127). Nabokov’s primary goal was accuracy of the translated text. Unlike Fitts, he preferred an accurate passage in awkward English to one that read smoothly at the cost of straying further from the original meaning. In short, both translators thought translation was

possible by preserving the meaning of the text, yet Fitts favored paraphrase and Nabokov favored a style that adhered more closely to the source text.

One Modernist belief that survived into the next era concerned the status of the translated text, especially poetry. Like the Modernists before him, Dudley Fitts believed in the autonomy of the translated text. He wrote that a poetry translation should “be judged as an autonomous literary text, with a status free from the shadows of the original author”(Baker 315).

Roman Jakobson, in addition to being a translator, made another contribution to the field. He was a forerunner in the emerging field of linguistics, a scholar whose works subsequent theorists would use as a basis for their own ideas. A generation earlier, Ortega y Gasset had hypothesized that the art of writing down one’s thoughts was an act of translation because thoughts could change during the transition from mind to paper. Frequent reasons for the change were the limited vocabulary of the writer, or the inability of the language to carry a fine enough nuance of meaning to accurately reflect the idea (Ortega y Gasset 1937). Deliberately or not, Jakobson expanded Ortega y Gasset’s theory to the ascertainment that there were actually three types of translation. The first was *intralingual*, the restating of an idea in the same language and medium that originally expressed it, for example, “I want food” restated as “I’m hungry.” The second was *interlingual*, restating that idea in a different language, but the same medium, such as saying both “I’m hungry” and “tengo hambre.” The third, and the one that related to Ortega y Gasset’s theory, was *intersemiotic* translation, the restating of the idea in a different medium, such as thinking “hunger” and writing down or saying “I’m hungry.” Jakobson’s work served as a foundation for other linguists and translators on which to build new linguistic theories.

The 1960s – 1970s: Equivalence Theory

Translation theory during the 1940s and 1950s emphasized the question of translation, and scholars claimed translation was possible by if the translation captured the original author's meaning. The next period, the sixties and seventies, foregrounded the equivalence itself, the search for equal meaning between an original and a translated text, or for a translation that had the same effect on the target audience as the original did on the original audience. Equivalence was not a new concept. Ancient scholars such as Cicero had first written about it, as had the English translators Alfred and Aelfric and the Catholic reformer Martin Luther. During these two decades, equivalence theory acquired many new adherents and each one had different ideas about what constituted a translation equivalent to the original text. The first step then was to decide what exactly constituted an equivalent text. Eugene Nida, the first to discuss the topic, described two different forms: formal equivalence and dynamic (or pragmatic) equivalence. Nida explained that three things determined the form of a translation: its purpose, its intended audience, and the message the translator wished to convey. Nida's different theories were meant to allow for the different audiences and purposes of translated texts.

Nida's translation strategy changed depending on the purpose of the translated text and the future audience of what he was translating. He noted that a poem's structure was usually an important element in the comprehension of the poem, so an equivalent translation should attempt to conserve the structure because it was a part of the message the poem conveyed. If the purpose was to give a general idea of the text, the equivalent could be in freer language with fewer footnotes than one meant to give an exhaustive account. Finally, if that audience was young, the equivalent would need to use different vocabulary than that for a specialist or for a college student (Nida 1964).

To answer those triple requirements of message, purpose, and audience, Nida hypothesized two forms of equivalence: the *formal* equivalent, based on the ancient word-for-word translation theory, “[focused] on the message itself, in both form and content” by translating “as literally and meaningfully as possible”(129). In other words, when writing a formal equivalent, Nida strove to match the target language as closely as possible to the language of the source text, and he was constantly comparing them to assure himself of the accuracy of the target language text to the source. Because many foreign cultural practices and grammatical structures have no English equivalent, Nida also used copious footnotes, both to explain the odd turns of phrase and unfamiliar customs and to define any archaic or unfamiliar words in the translation. The purpose of such a translation was for the reader to learn as much about the text and the culture that created it as possible. In short, the formal equivalent focused on the text and the message and had definite foreign “unnatural” flavor to it. In Nida’s mind, the domestication of the work would have made its educational purpose impossible and his translations reflected his beliefs.

The second type of equivalence that Nida described was the *dynamic*, or pragmatic, translation based on the ancient sense-for-sense theory of translation. The formal translation was intended to have an equivalent *meaning* in the target language, the dynamic an equivalent *effect* upon the target language reader. To that end, when Nida used the dynamic equivalence form he “[aimed] at complete naturalness of expression” in the cultural and linguistic context of the target language reader (Nida 129). It was meant to be an easy read, aimed specifically at a target language audience that did not intend to focus on gleaning every last bit of information from the text. For that reason, the dynamic style could be a freer translation than the formal, without the copious footnotes so common in Nida’s formal equivalence translations. Nida’s 1964

publication became a sign. Others elaborated his work, publishing their own ideas of equivalence throughout the next several years.

The 1980s: Translation from a Poststructuralist Perspective

The decade of the 1980s began with the recognition of translation studies as an independent discipline. Spurred by research done in previous decades, translators and theorists began to claim that their work, although drawing from such disciplines as linguistics, semiotics, philosophy and foreign languages, was an entity separate from those disciplines. Perhaps because of that recognition, perhaps spurred by previous research, the amount of work done in the eighties and the number of people writing about new theories and concepts skyrocketed. It suddenly seemed that everyone wished to contribute something regarding some aspect of translation. The largest noticeable difference between theory in the eighties and in eras past was the influence of the literary movement of Poststructuralism on translation theory. Gregory Rabassa, Jacques Derrida, William Weaver, and later Kaisa Koskinen, were among those who contributed to the idea of translation as impossible – for linguistic reasons. The debate over whether a translation was a separate text also continued into the eighties, argued by Edmond Keely, Derrida, and Paul de Man. Translation also became associated with the concept of violence and manipulation by Margaret Sayers Peden and the negative concept of manipulation by Theo Hermans. Although experienced translators agreed that a perfect and timeless translation was impossible, there was also a resurgence of practical advice for aspiring translators, as well as the assurance that with enough practice a translator would develop the skills to tell whether his translation was accurate or not.

Poststructuralism, the dominant shaping force of translation theory in the 1980s, was a literary movement coaxed from the prior movement of Structuralism by the French philosophers Roland Barthes and Jacques Derrida in the late 1960s. Structuralism was based on the field of linguistics. A cornerstone of that movement was that language is subjective, so that *how* one saw – one’s ideology and experience, determined *what* one actually saw (Barry, 2002). Poststructuralism, extending that philosophy, considered language a system of signs that constantly changed meaning. Because nothing was firmly anchored to anything else, people entered a literary world “without intellectual reference points,” a “decentered universe” (Barry 62). The linguistic applications of a movement in which “the sign floats free of what it represents” were that the meaning of words could never be guaranteed. Indeed, Poststructuralists viewed any literary text with skepticism and professed doubt that one could truly learn anything from a written text. To that end, they engaged in “deconstruction,” or “reading the text against itself,” to prove that the text truly was full of contradictions that rendered it meaningless (Barry 64). The literary and linguistic problems of Poststructuralism and deconstruction were compounded by translation. The belief that it was impossible to know anything in one language was compounded when two languages, each with its own system of free-floating signs, were used. According to Poststructuralist theory, translators were attempting to match meanings to words in a foreign language, thus adding more uncertainty to the text. Now the translator had to cope with two languages’ worth of uncertainty instead of only one. Without concrete meaning the process was impossible because a word or a phrase never meant the same thing twice.

Poststructuralism had an enormous effect on literature in the late 1960s and 1970s, and on translation in the 1980s. In 1985 Jacques Derrida deconstructed the process of translation itself by pointing out a basic *aporia*, an “unknotable knot,” in the idea and process of translation

(Barry 67). Derrida claimed that translation was “at the same time necessary and impossible”(Barry 219). It was a necessary thing because not everyone spoke everyone else’s language. Yet it was impossible because language, that unstable system of signs, was constantly changing, thus words never meant the same thing. To those of the Poststructuralist persuasion, translation involved not one but two systems floating free not only of concrete meanings but of each other. Therefore, there was no more concrete correlation between any two languages than there was between a meaning and its sign in a single language, and translation became an impossible task.

Although Gregory Rabassa and William Weaver disagreed with Derrida’s concept of translation as a completely impossible task, they do reflect the Poststructuralist linguistic uncertainty and the skepticism of the translator’s ability to adequately carry a meaning from one language to another. Rabassa explained that words were merely metaphors for the objects or ideas they represented. They were not mirrors that reflect exactly what they see, nor synonyms that are similar to each other, but *metaphors*, which often compare two things that are completely different from each other. Rabassa viewed translation as a choice – translators chose the best possible words for the concept the author conveyed in the source text, and he cautioned that “there was little certainty” about the choices one made in the process (7). Rabassa’s view of a translation was that, because of that uncertainty, a translation could never be finished. The translator would always feel that his choices had been inadequate and attempt to fix them, thus to have his text adhere more closely to the meaning of the source. William Weaver had a similarly uncertain outlook. In his opinion, translation was an area of complete uncertainty, with “no rules, no laws, no absolute right or wrong”(Weaver 67). According to the Poststructuralist creed, any argument about an aporia will send one around in circles, always returning to the

impossibility of resolution but unable to stop trying to reach it. Derrida, Rabassa, and Weaver were three of those who shared the Poststructuralist view of translation as inherently impossible.

By the early 1990s the most intense Poststructuralist influence had ebbed, and Kaisa Kostenen was able to obtain a closer view of the translation process from the Poststructuralist perspective. Like Derrida and Rabassa, Kostenen claimed that language was an “arbitrary system of signs,” and that the meaning of those signs was in a state of constant flux (23). To that end, she explicitly stated that all translations were actually *mistranslations* because they could never adequately reflect the changing meaning of the source text they were based on.

The eighties also witnessed a continuation of the debate about the translation of a work being an autonomous text. Edmond Keely, a translator of ancient Greek, argued that translation was a “truly creative enterprise” that “created a contemporary voice” for the ancient author”(55, 59). Although Keely recognized a new, creative element of the process, his view was a continuation of those Modernists and their precursors who saw their work as an extension of the author rather than as a replacement or a new text. Supporting the opposing side of the argument, Susan Bassnett based her early works on the assumption that the work of the translator was “an act of invention that produced a new original in another language,”(Bassnett and Trivedi 1). That perception of a translated text as free from the original was a view that became “the most common theoretical assumption of [the] period”(Venuti, Reader 215). Two others scholars, Derrida and Paul de Man, refused to agree with either opinion. Instead, they emphasized the translated qualities of both the original and the translation. They followed Roman Jakobson’s notion of intersemiotic translation theory for the original and noted the creativity and element of linguistic and cultural interpretation, rather than literal translation, that found its way into the translated text through the lens of the translator.

The eighties also witnessed the association of translation - all translation and not just certain works or certain translators - with adjectives of a negative connotation. Margaret Sayers Peden described translation as “suppressed violence”(105). Translation was a violent process because, like the melting and refreezing of an ice cube, the pieces were torn apart and then reassembled in a different order. In the process, some of the pieces were lost or cast aside, and others were added. Theo Hermans claimed that translation was actually the manipulation of the literary text by the translator. Though he did not specify for what ends the manipulation took place, his opinion was enthusiastically embraced and expanded by theorists of the next decade.

During the eighties, there was also revival of the visibility of mundane, practical advice from experienced translators. Most of it was a repetition of practices already seen or of common sense: to try to preserve the structure, tone, and rhyme of poems and the style and word choices of prose authors in addition to the ideas of those authors. However, two new ideas surfaced. The first was the explicit statement of the importance of reading and comprehending the text and the text’s purpose before one attempted to translate it. Ian Roe listed “reading and comprehension of the text” as the first thing and most important step in the translation process (38). Christine Nord, a German author, translator, and professor of translation studies, devoted a whole book to the process of text analysis in translation to ensure comprehension and thus adequate translation (1988). The second new idea involved ways to tell if one’s translation was adequate. Rabassa claimed that with enough practice translators would develop an “acquired instinct” to tell them something was adequate; William Weaver described the “thrilling tingle” he felt when “something [seemed] to have come out right”(Rabassa 7, Weaver 117). Thus, new practical advice concerned reading the text thoroughly before translating it and the assurance of the developing sense of textual adequacy that translators would acquire.

Poststructuralism and its innate skepticism and belief in the uncertainty inherent in language carried over to thoughts and theories of translation. Skepticism and linguistic uncertainty made any Poststructuralist theory distrust a written text, and those same theorists then distrusted translation written from those texts, as Derrida and Rabassa demonstrated. The next fifteen years see a continuation of the importance of poststructuralist theory in translation, but see it applied in a slightly different way. Theory in the next fifteen years uses Poststructuralism in a new way, to call attention to marginalization in translation, then applies it in conjunction with Postcolonial literary theory to discuss the innate biases of English translation.

The 1990s and Today: the Last Fifteen Years

The explosion of theories of translation in the 1980s, caused in part by the recognition of translation studies as an independent discipline, continues into the 1990s and today. Poststructuralism and linguistic theory continue to affect translation studies, while simultaneously, other theories are developed. In fact, the translation studies movement of the eighties has today splintered into several sub-specialties. Scholars are currently examining translation as it relates to globalization studies and literary theories: postcolonialism and the sexuality of gay studies and feminism, to name only two. The number of university programs that teach translation has also increased dramatically in the last fifteen years. That increase has created a demand for textbooks of practical theory and examples for all levels of students, and for practical theory – ways of translating the text rather than new angles from which to examine the translated work – of use in teaching translation. Modernism and Poststructural theory, however interesting, are not very helpful to a college student who has to translate the poem the

professor has just handed him. Also, students needing information about the job market have created a need for publications detailing for them what to expect from a career as a professional translator.

Poststructural theory has continued to affect translation throughout the last fifteen years. However, it is now the distrust inherent in Poststructuralism that etches new angles of examination. Poststructuralism distrusts any overarching universal concept, so the fluid, domesticating translation style so popular in the English language method for the last three hundred years falls under close scrutiny, especially from Lawrence Venuti. Venuti claims that the “illusion of transparent language, the fluent translation that seems untranslated” actually conceals “the exclusions and hierarchies” inherent in translation, especially in the translation of works into English (Venuti, Reader 336). In fact, he calls translation a “manipulation” of the source text, claiming that “transparent” methods that do not appear to be translations actually conceal the manipulation so well that readers do not notice its presence in the text. Venuti claims that translation may have positive consequences: such as introducing new concepts and new genres to a readership. However, manipulation of the text can only have negative effects, such as repression of unpopular political or social opinions.

That repression that Poststructuralism identified in translation theory opened an avenue to the literary theory that foregrounds the repression of the Other. Postcolonialism came into being in the 1960s as Europe’s Asian and African colonies were winning their independence. Native authors, who had been taught that native literature and culture were inherently inferior and that they should therefore embrace European culture and read European texts, began to read and write their own literature. In the process, these former colonized peoples began to reclaim their past, and “erode the colonialist ideology by which that past had been devalued”(Barry 193).

The first step was to rethink their acceptance of the inherent superiority of all things European over all things colonial, the second was to re-examine interpretations and translations of native works for signs of the inherent European bias against all things non-European.

Heretofore, translation had been thought of as a static activity about a message translated from language A to language B. However, Postcolonialist translators view theory differently. They note that translations do not occur in a featureless void but in the real world, done by human translators and not robotic automatons. Therefore, a translation is always “imbedded in cultural and political systems, and history”(Bassnett 6). Those who translate a work also imbue that work with a cultural bias, whether or not they consciously intend to insert that cultural or political perspective into the text. For instance, Sir William Jones, in his translation of an Indian drama to English in the late 1800s, omitted references to the heroine’s sweating. In Indian culture the act of sweating was a symbol of interest, sexual arousal, or a symptom of the hotter climate, but in England it meant that the person was performing strenuous labor, nervous, or ill (Bassnett, and Trivedi 1999). Jones omitted what he was certain English readers would see as unattractive, simply because their culture had no equivalent expression. André Lefevere gives examples of Indian culture translated into Dutch by Dutchmen, who depicted non-Europeans as “courageous mestizo[s]...with eyes full of seductive dalliance”(88). While the native and mixed heritage stereotype was usually brave, they were also viewed as lazy, sexually promiscuous, emotional creatures by the Europeans, everything that Europeans denied about their own natures. The translation theory that derives from Postcolonialism seeks to expose and disclaim those stereotypes.

Several years ago, Peter Newmark expressed a need for theories that focus on the practical, theories that would actually help with the translation process (1994). The new theories

were interesting, but in his opinion the examination of the translated text in light of Poststructuralism or feminism did not actually help one learn how to translate. Newmark was answered in part by Umberto Eco, an Italian translator and professor who described practical theory and how he used it in his translations (2001). Eco discussed a wide range of topics old and new, including equivalence theory, cultural translation, and tips on how to preserve prose and poetry styles. Jack Child anticipated this call with an elementary-level book concerning Spanish translation, which describes translation history and idiosyncrasies of the Spanish language that have caused problems (1990). Child also introduces useful concepts and vocabulary, such as the theories of sense for sense and word for word translation, the theory of translation as the black box,¹⁷ and certain linguistic theories and terminology he deems useful to the beginning translator of Spanish.

Another need answered in part by Eco and Child is the need for practical career advice and information about what to expect from a career in translation. Child includes information about what types of projects and what level of pay to expect. He also suggests steps to make oneself more employable, such as taking the national certification exam. A book devoted entirely to these issues is provided by Geoffry Samuelsson-Brown in 1995. Samuelsson-Brown begins with how to become a translator, describes necessary tools and software, gives a brief outline for entrepreneurs on how to run a translation company, and describes translation organizations and their publications. His publication has universal relevance; unlike Child's focus on Spanish or Eco's focus on Italian. Samuelsson-Brown's work is not language specific, instead it is written for those who are "bilingual."

¹⁷ The "black box" is so called because words in one language go in one end, and come out the other in another language, and no one knows how they are translated from the one to the other.

Since the beginning of the twentieth century, various literary theories have had a noticeable effect on translation theory and practice. At the beginning of the century, Modernists led by Ezra Pound challenged the dominant practice of domestication with their ideas of experimentation and foreignization. However, they could not displace a practice common to English language translation for nearly three hundred years. Led by the example of translators such as Dudley Fitts, by the 1950s the Modernist influence had become only a memory warning how not to translate a text. During the eighties Poststructuralism and its circular argument came to influence translation, and translators such as Gregory Rabassa became convinced that translation was not possible. The Poststructuralist influence continues to matter during the 1990s and today, though in a slightly different manner. It brings attention to the marginalization and the plight of the Other in translation, which is then explained according to the relatively new theory of Postcolonialism. The explosion of theory in different directions also sparked a request by Peter Newmark and others that theory have a practical value. It was becoming too esoteric – interesting but not necessarily useful. Newmark's request spawned a small movement to produce practical texts that would help students learn to learn the profession, and translators to improve the quality of their work.

Chapter Three: Machine Translation: Uses, Problems, and Benefits

Due to the rising cost of and ever-increasing need for translation during the twentieth century, especially of scientific and business documents, translators and those needing their services began to look for an alternative translation method that would be faster and less expensive than humans. They found a possible solution in machine translation, or MT.¹⁸ If machines could be built or software could be written that would translate automatically and with minimal human input, it would provide faster and cheaper translation services. The first patents for MT were issued in 1933, but the field did not begin to expand rapidly until computers came into common use after World War II. With the advent of computers, research into MT and CAT, or computer-aided translation, increased throughout the fifties all over the world. Despite setbacks, such as the 1966 ALPAC report¹⁹ that froze research in the U. S. (and slowed it in most other countries) for the next decade, and the realization that MT developers faced a whole new set of technical and linguistic problems in addition to those which human translators already had to cope with, today MT and CAT software programs are relatively successful and extremely useful all over the world. But despite the successes, problems remain. Humans have the capacity to resolve linguistic ambiguity by reading the entire text and can often understand ambiguous words by their context. Developers are trying, but to date computers do not have the capacity for precise translation.

Previous chapters considered how translators have historically coped with difficulties, and this chapter examines how MT deals with them as well as its new set of problems. The first

¹⁸ Harold Somers writes that, while he is sure there is a sound, scholarly reason to use the term “machine translation” instead of “computer translation,” or “automatic translation,” no one remembers it (“Memory” 2003). The literature uses the term “machine translation” to refer to automatic translation with minimal human input or control, and “computer-aided translation” to refer to computer-based tools that translators use. To be consistent with that literature, this paper does the same.

¹⁹ ALPAC is defined in the next section of this paper, and the report the committee issued is explained in further detail.

section of this chapter gives a very brief history of MT. The second section takes a look at computer-aided translation, its benefits and problems, and some of the tools available to translators today. The third section examines the problems in machine translation, the different approaches developers have taken to deal with them, how successful their efforts have been, and how scholars in MT evaluate the computer systems and the translated texts to measure that success. The evaluation points to the belief of several scholars that MT will not displace humans in the translation field for many years; some believe it will never happen, due to the difficulties of literary translations, which those scholars say machine translation will never surmount. Yet, MT offers many benefits, such as storing information and translating scientific and technical information. Some of its unexpected benefits include Internet access to sites in foreign languages and access to free automatic translation programs. Despite the problems MT still has and its inability to translate literature,²⁰ it provides time-saving benefits to translators, it saves money for the companies that use it, and it is able to provide information from foreign sources to monolingual internet users.

A Brief History of Machine Translation

The first scientists to hypothesize an automatic form of machine translation did so several hundred years ago, but the first actual device did not appear until the 1930s. The French-Armenian George Artsouri developed a system to store words in foreign languages according to numerical codes, and in 1933 patented a machine to automatically look them up. He

²⁰ “Literature” in this sense includes any work that incorporates stylistic elements in addition to content. Poetry and works of fiction and other texts that incorporate copious amounts of idiomatic language are certainly included in this category. Depending upon the style and content, other works fit, as well. A science textbook would be relatively easy to translate, as would a history whose primary goal is to impart the information. When one wishes to convey style and playfulness along with information, such as Rabassa’s “No Two Snowflakes are Alike,” or other articles that write according to a certain way, computer programs have more difficulty.

demonstrated a working prototype four years later. Another 1933 patent relating to MT was issued to the Russian Petr Smirnov-Troyanskii. He hypothesized a three-stage process, the first step of which was for a human to translate the source language to a simplified version of itself. After the human finished, Smirnov-Troyanskii envisioned a machine with the ability to *transfer* the simplified source language to a simplified version of the target language. Thirdly, another human familiar with the target language would translate that simplified version into the everyday target language.²¹

World War II broke out in Europe in September of 1939 when Adolf Hitler's Nazi German army invaded the neighboring country of Poland, an action that sparked massive resistance from other countries. Through the next five years, the practice of cryptography – encoding information and deciphering the codes used to hide it – became critical. Cryptographers on both sides of the conflict studied their craft diligently, to discover unknown information about enemy forces. Cryptographers were aided by that new-fangled calculation machine, the computer.

Institutions in the U. S. and elsewhere carried out intense research in the two decades after the war. The USSR, Canada, Europe, and Japan all supported active MT research. In the U. S. in 1951, Yehoshua Bar-Hillel became the first faculty member (MIT) specifically appointed to study MT, and he convened the first conference of machine translation, at MIT, only a year later. The purpose of the conference was to discuss possible directions of future research and to highlight some of the major problems in the MT field. Per MIT's example, other institutions quickly followed with MT research programs and faculty of their own. In 1954 the program at Georgetown University publicly demonstrated a computer-based translation

²¹ Today, Smirnov-Troyanskii's process is also known as the transfer method of machine translation. Unlike his process, programmers have endeavored to mechanize not just the middle step, but the entire three-step process. See Hutchins and Somers' Introduction 1992.

prototype that translated Russian into understandable English without benefit of post-editing. Despite the simplicity of the experiment – the program used just two hundred words and six rules of grammar – it was regarded as a success. Scientists claimed it demonstrated the feasibility of machine translation, and it generated publicity and more funding for the MT field (Hutchins and Somers 1992).

Despite public success and widespread support for MT, there were already problems. The U. S. government, now in the middle of the Cold War, needed more Russian translators. Machine translation seemed to be a possible way to fill the need, so politicians and government intelligentsia wanted and expected “fully automated high-quality translation,” or FAHQT, as a return on investments of government dollars. Yet even then there were scholars such as Bar-Hillel who claimed FAHQT was an unrealistic goal given current technology capabilities and the complexity of language. Bar-Hillel’s opinion was that language was too complex and too ambiguous for a machine to translate without knowing the content or context of what it was translating. Researchers should focus on finding practical uses for MT that included humans to post-edit the results as a part of the process, to give them the polish the software could not. In short, he told the field that the goal was impossible and urged them to adopt one that was realistic (1960).

Bar-Hillel’s skepticism was a harbinger. In 1962, dissatisfied with the minimal return on its investments, tired of assurances by its scientists that a break-through to enable FAHQT was right around the corner, the U. S. government assigned a group of people, the Automatic Language Processing Advisory Committee, or ALPAC, to determine if MT was a feasible alternative to human translation. In 1966 the “infamous” (because of the negative effect it had on MT research funding and credibility) ALPAC report was published, and the committee’s

consensus was no. ALPAC claimed that there was no shortage of translators and that the quality of documents generated by MT was lower than that of human translators and cost twice as much to produce. The report suggested that a better use of government money would be to teach humans to speak and translate Russian instead of continuing support for research into machine translation.

Predictably, the government cut funding to MT research in the wake of the ALPAC report. Capital earmarked for MT was instead diverted to research in artificial intelligence. In addition, the report crushed enthusiasm and credibility for MT in the U. S. and, to a lesser extent, around the world. A few programs, such as the one at Georgetown and the Mormon programs in Utah that centered on Bible translation, survived the anti-MT era of the 1960s and early 1970s, but only through donations of private funds. During the next decade most new research was done outside the U. S.: in the USSR, Canada, and Europe, although at a decreased intensity. The field is still trying to recover from the effects of that report today.

There was a resurgence of interest in MT in the mid and late 1970s. The Systran system later adopted by France to translate French into English was developed at the request of the U. S. Air Force, and later used in the Apollo-Soyuz project in 1975. A year later, Canada began using the Météo system to translate weather reports from English to French. In 1978 European countries jointly launched the Eurotra project to design a program to translate among all nine major European languages, and development of the system continues today. The Pan-American Health Organization began research into SPANAM, a program intended to translate Spanish and English. In 1980, Japan began the Mu project, designed to translate between Japanese and English, and the Japanese began to use the system just two years later. All of these systems except Eurotra, which is still being developed, either remain in use today or have a more recent

incarnation which still in use. The worldwide resurgence elicited more interest in MT in the United States.

Until the early 1970s, most systems used the direct method of translation.²² The direct method translates word for word, with no consideration of grammar or syntax, which was part of the reason its translations were of such poor quality. In the late 1970s the interlingua method was hypothesized, to create a language-neutral system as an intermediate and aid to translation.²³ However, faced with the difficulty of creating such a system, most developers turned to the transfer method. The transfer method was easier to develop because it called for simplified versions of languages, not a language-independent system. However, the transfer method proved to be more time-consuming to develop and much bulkier than a program using the interlingua method. Where the interlingua method requires an intermediate useable by all languages, the transfer method requires a separate transfer module for each language pair.²⁴

Knowledge-based MT, example-based MT, and statistics-based MT were also in their beginning phases of development by the late eighties and early nineties. Knowledge-based MT is based on the theory that if the text were analyzed before translation, the machine would yield more accurate results needing less post-editing (Nirenburg et. al. 1992). Example-based MT is a method that requires a large sample of previously translated texts and their translations. Like translation memory software, example-based MT attempts to construct a translated text using fragments of previously translated documents. Unlike TM programs, example-based MT is

²² Because the direct method was the first method used, those programs are also known as “first-generation” programs. Later, indirect method approaches are known as “second-generation” programs. See Trujillo 1999.

²³ Interlingua was not a new concept. Scientists such as René Descartes had postulated a universal language (such as Esperanto) to facilitate communication between those of different languages as early as the seventeenth century. See Hutchins and Somers Introduction 1992.

²⁴ For instance, in translating German to French, the program would only need one transfer module. But if developers wanted to translate among German, French, and Spanish, the program would need *three* modules, assuming each module was also capable of back-translation. If not capable of back-translation, then six modules would be needed to translate three languages in all possible directions.

designed to be fully automatic and does not require the prompting of a human user. Statistics-based MT is grounded in the theory that if one knows enough about how a source language statistically relates to a certain target language, one can guess what will happen when the source language is translated to that target language. The method requires a large bilingual corpora, or body of text from which to obtain the statistics.

Improvements in computer capabilities and advances in research, language comprehension and linguistics in the 1980s led to the eventual mass-market of MT software programs in the late eighties and early nineties, especially those produced by Japanese electronics companies. Because of the increasing frequency and decreasing cost of owning a personal computer, developers also began to market translator tools: computer-aided translation programs, designed to be controlled by the translator who used a computer to do most of the mundane work. Research also delved into areas of speech recognition translation; how to program a computer to recognize and transcribe a dictation. The late nineties and today are seeing powerful translation software for use by translators on their PCs. There are also engines on the Internet, such as the Systran-based Babel Fish on AltaVista and the Google translator, that translate text passages and websites.

Computer-Aided Translation

The drive for MT development was begun because of the high cost of human translation in money and time. However, with the mass market of MT software for free-lance translators also came tools for computer-*aided* translation, storage programs or databases, which the Encyclopedia of Translation Studies says “perform translation but rely on human intervention at various stages of the process”(Baker 135). In other words, unlike MT software designed to

replace or minimize the role of the human, CAT programs are not fully automatic. They are designed to help the human translator, not to replace him.

Although there had been previous hints of CAT in literature prior to the eighties as well as a few crude systems produced, the first outright suggestion for the development of computer-based aids to facilitate the translator's job rather than take it over entirely came from Martin Kay in 1980. Kay suggested that computers could store large bilingual dictionaries that translators could access, as well as edit if they wished. The speed of translation depends on how well one knows language and can look up the words one does not know, so there was a need for a more efficient method of storing and accessing unfamiliar terms. Kay's suggestion for an accessible electronic dictionary reflected this need.

Even though the translator may not use a CAT program, there are several basic tools regarded as necessary by professional translators. Gathered together they become the basic translator workstation, what Somers calls "the most cost-effective facility for the professional translator" ("Workstation" 28). The first necessary item is a computer. Somers notes that most translators use PCs or Pentiums, as the more sophisticated software is not Macintosh-compatible. The computer should have a basic text-editing software installed, with the ability to read and write in the more common font styles. Many translators use a form of Microsoft Windows. Spell check and grammar check are also necessary, as is access to a thesaurus (Trujillo 1999; Somers "Workstation" 2003).

These bare necessities are adequate for some translators. However, for those who want more, there are more complex translation aids available. Internet access makes it possible to send and receive documents in electronic form and to access on-line dictionaries and specialized

or technical term banks. Developers of CAT software usually assume two things for a translator using their product: access to an electronic form of the source text and access to the Internet.

Some of the CAT software programs used today are modern incarnations of software that has been in use for years; others are brand new. Some of the programs that work from older concepts fall under the category of “term management.” They quickly find words in the target language that are equivalent or similar to the source language. There are two categories: lexical resources and translation memory software. Lexical resources include dictionaries and terminology databanks, both on-line and available on CD-ROM. They are available in monolingual, bilingual, or multilingual forms, and one can look up words by meaning or the root. Some dictionaries come with one or more blank databases meant to be used as term banks, for the user to fill with difficult or highly specific vocabulary that on-line resources may not have. Linguistics databanks differ from dictionaries in the information they store. One difference is that they usually focus on specific, highly technical topics, whereas dictionaries usually contain more general vocabulary. Linguistics databanks also include more information in their entries. For example, the English-French TermiumTM program includes not only the definition of the word, but linguistic information, synonyms, and technical information such as when the term was added to the databank.

Translation memory software is a bit more complex. It relies on databases of previously translated texts matched sentence by sentence to their translations and stored in an easily accessible format. Translation memory software differs from the lexical category because, instead of the user actively looking up terms, the TM software automates the search. A human makes a request, and the software searches the databanks for source-language text that matches the source language text being translated. If it finds a match, it shows both the match and the

translation to the user. Depending on how extensive the database is, the software may find several sentences or fragments that match to varying degrees of accuracy the sentence the translator was searching for. When the two source language fragments are identical, CAT users call it an *exact* match, and the translator then has the option to simply copy and paste the found translation into the current translation project. They A *fuzzy* match is similar, but not identical to the source language text fragment or sentence. In that event, the translator has the choice of rejecting the fragment and its translation, or accepting it and either using the translation as is, or changing it to fit the meaning of the source text more closely. If pieces of two sentences match what the source text says, the translator also can opt to use only the appropriate fragments instead of either entire sentence.

Somers describes three ways of acquiring the massive database of sentences needed to support the translation memory software (“Memory” 2003). One option is for the translator to build it himself as he translates various projects, by matching every sentence of every document he translates to its translation(s) and saving the matched pairs in an accessible format. The advantage of that option is that the database is personalized; it reflects the style of the translator and the terminology in the types of documents he most frequently translates. However, Somers notes that using this method also requires considerable time before the database acquires the necessary depth and volume to be of any use to the translator. Another way to acquire a database is to use someone else’s. Presumably it has the required depth and volume of fragments to be of use, but it will reflect the bias and works of the person who created it. It may require additional entries before the needed sections contain a wide enough variety to help the translator in any significant way. A third method also involves creating one’s own database, but includes text

alignment: taking whole texts and their translations, matching the sentences bit by bit, and saving them.

Another Most people can speak faster than they can type. Speech recognition software allows one to translate a text and then dictate it to the computer rather than typing it. The primary advantage of this relatively new software is that the time saved increases the speed of production of the final translation draft. Less mundane advantages include greater fluidity of the target language text, as speech can be a method of editing the text. Health benefits come from not being hunched over a desk all day. However, there are drawbacks. The technology is still in the first stages of development, so it may not recognize spoken words accurately. One also has to speak more clearly and slowly than natural speech for the software to recognize the words. Different accents and dialects also cause problems.

Despite the problems and expenses, there are noted benefits to using CAT software programs. One is the increased efficiency with which the user can work. A program can store a translated text, so similar texts need to be translated only once. For instance, if the instruction manual for a software package is saved, then when upgrades are issued, for upgrades one need the original manual, not translate the entire document. Programs have the ability to build customized glossaries of technical terms, which the translator can refer back to, thereby increasing the terminological consistency within the document. The software enables translators to work faster, thus spending less time on the translation draft, which leaves more to be used for polishing the translated text. Computer-aided translation software can also reduce production costs and increase the profit of any given job. CAT systems are very highly recommended by experienced professional translators and are becoming more common every year (Samuelsson-Brown 1992).

Machine Translation

Machine translation is the “now traditional and standard name for computerized systems responsible for the production of translations from one natural language into another, with or without human assistance,” according to John Hutchins and Harold Somers, two of the leading scholars in the field (3). Their definition encompasses both computer-aided translation – discussed in the last section – and fully-automatic translation, which the Encyclopedia of Translation Studies defines as “cases where the source text is input to the system and the translation is delivered, both without any involvement of the user” (Somers, “MT Applications” 137). The latter is the subject of this section. Machine translation was originally intended solve the problems of scarce translation services, rising costs, and the enormous amount of time required to complete a project of even moderate length. In some fields – mainly technical – MT answers those problems, but the development of MT over the last five decades and the search for improved quality of output have led to new problems for the developers of translation technology. This section examines the linguistic and technical problems of machine translation, and how different approaches, such as the transfer method, the interlingua method, or knowledge-based machine translation combat those problems. It also examines why it will be extremely difficult to fully replace human translators. Indeed, some scholars claim that machines will never fully supplant human translators. Despite the difficulties of developing a system that will yield results of a higher quality than currently available, MT already plays a vital role, especially in technical translation and the dissemination of information, such as on the Internet. The final part of this chapter briefly examines the unexpected role of MT on the Internet, and why it fills that role so well.

First-generation Systems: The Direct Method

The first MT systems in the U. S. responded to the need for faster and cheaper translation. The systems worked by the “direct method” – translation almost literally word for word, with no consideration of context or part of speech, and only small concessions to grammar and proper syntax. For instance, adjectives in French and Spanish come after nouns instead of before them as in English. One of the first systems made for everyday use and not as a prototype or demonstration machine was the Systran program (*System Translator*). It was developed in the 1960s for the U. S. Air Force and used to translate Russian documents into English for “information-gathering”(Hutchins and Somers 175). As a direct system, Systran’s major component was a large bilingual dictionary, though it contained some grammatical and semantic information. Systran worked by first looking up Russian words in its dictionary, analyzing them slightly for meaning, then synthesizing the English translation. Nirenburg et. al. note that the original developers and researchers of MT were all computer engineers and mathematicians, not linguists. They may not have even known the language they wanted the computers to translate into or out of (1994). The technicians regarded language as equivalent and thought that by merely substituting one word for its “equivalent” in another language, the program could produce an adequate to above-adequate translation.

However, language is more complex than the engineers first thought, and it is not equivalent. One hundred and fifty years ago Humboldt best expressed the concept that language is synonymical, not identical (55). For instance, examine the methods two languages use to express likes and dislikes. In Spanish one says “me gusta el chocolate,” which literally means “chocolate is pleasing to me.” In English one says “I like chocolate.” The idea and intent are the

same, but even discounting differences in languages, the methods of expressing them - the grammar and syntax - are different.

Another problem, one that Yehoshua Bar-Hillel described in 1960, is that language is ambiguous. Words and constructions can have more than one meaning, depending upon the context in which the word is placed or the way the particles of the sentence are arranged. Doug Arnold (2003) defines two types of ambiguity: lexical, or ambiguity because of words, and structural, which occurs because of sentence structure. Hutchins and Somers (1994) define subcategories within those types. According to them, types of lexical ambiguity include: 1) *categorical* – the word is a noun or verb, such as “swim” or “building” 2) *homography* – the same word used to denote different concepts, such as “club” 3) *polysemy* – words can have a range of meanings all related to one another; and 4) *transfer ambiguities* – one word can translate to more than one word in the target language, such as the English “corner” translating to “rincón” if the corner is inside, or “esquina” if the corner is outside. Structural ambiguity is of two types: 1) *accidental*, where humans who understand the context have no trouble translating the passage, and 2) *real*, where both human and machines will have difficulties. For instance, “he saw the girl with the telescope” can be interpreted two different ways: either he used a telescope to see a girl, or he saw her while she was using a telescope. Hutchins and Somers also define a third type of ambiguity: anaphora. *Anaphora* refers to pronoun references and is ambiguity caused by a word that refers to something else mentioned explicitly elsewhere in the text. “Mommy, can I have *this dolly*?” “Of course you may have *it*, dear,” is an example.

Indirect Methods of Machine Translation: The Second Generation

The problems with the first-generation systems highlighted both the ambiguous nature of language and the fact that languages are different from each other. Direct, word-for-word substitution was not a viable method to produce publishable translations, so some form of language analysis was needed to reduce ambiguity and so improve the quality of MT-translated texts. The increasing globalization of the world market created a demand for more efficient systems that needed less post-editing, thus increasing the speed of production of the final text, and that could translate more than one language to serve companies with clients in several countries. To that end, engineers and linguists in the early 1970s tried two theories, both falling under the category of indirect machine translation: the interlingua method and the transfer method. The interlingua approach was first proposed as a means to overcome language barriers several centuries ago; it hypothesized a neutral language that everyone could learn. The interlingua method of machine translation requires a language-neutral system of representation. The MT program analyzes the source language and converts it to that neutral representation, then generates the target language text from the representation. Although the system requires modules - instructions written for a computer to follow - to analyze the source text to the interlingua and to generate the target language afterward, the method was (and still is) the preferred method for multilingual systems. Its popularity is because it is less bulky than a system that translates the same number of languages using the transfer method. However, the creation of a truly language-neutral system was much more difficult than linguists and developers had anticipated. While a few groups continued working on the interlingua problem, emphasis switched to the less-efficient but still useable transfer method.

Unlike interlingua's two-step approach, the transfer method uses three steps. It analyses the language into a simplified version meant to remove most of the ambiguity and idiosyncratic nature of language, then transfers that simplified source language to a simplified *target* language. Finally, another module generates the final target language version of the text from the simplified target language. One of the earliest systems designed to use the transfer method was the SUSY system developed in the late seventies to translate German to and from Russian, English, and French. SUSY was a traditional transfer system that used the method described above. The Eurotra project was begun in 1978 to translate among the nine most common European languages, also by using the transfer method. By 1986 SUSY had merged with that project. Eurotra has been called the single most ambitious MT project to date – those nine languages constitute seventy-two language pairs, each pair needs its own transfer module, and each language needs its own analysis and generation modules. Because the transfer modules are usually the bulkier of the two, the developers of Eurotra are trying to keep them as simple as possible in order to hold the project to one of a manageable size. The developers also admitted, after ten years of research without a working prototype, that using the interlingua method would likely have been a better solution. The advantage of the transfer method is that it does not require a language-neutral system. The major disadvantage of programs that use the transfer approach is their size. With reference of the number of permutations mentioned above, each language pair needs a separate transfer module, double that number if the module only works in one direction and one wants the system to back-translate. In addition, each language needs an analysis module to convert to the simplified version of that language, and a generation module to create from it.

After several years of hiatus scientists again began to experiment with the idea of an interlingua MT system. One of the results was METAL, created to translate German into English. However, since linguists at the time were still trying to perfect the language-neutral system, METAL is interlingua-*based*, but not all of its parts make use of the interlingua method. Syntax analysis relies on the language-neutral interlingua method. Lexical analysis is derived from the transfer method. METAL was created to translate scientific data containing highly technical information and diagrams. When the system was first evaluated in the mid 1980s, 75% of its sentences were correct enough to need no post-editing, and 20% of all texts needed no editing at all. The company that used it indicated that it cost 40% less to use the program and post-edit the results than to pay the extra wages to do the work manually. The efficiency of the interlingua-hybrid system was comparable to results from transfer-based systems also in service at the time (Hutchins and Somers 1992).

Yet, despite the advances in technology and quality, the interlingua and transfer systems had problems. The linguistic analysis of the new approaches had resolved some of the ambiguity problems but not all. Editors still needed to pre-edit texts, to search texts before feeding them into the system for words and phrases with more than one meaning or more than one translation and to give the program more information about them so that the computer could resolve the ambiguity, or they needed to post-edit the results of the computer-generated translation to insert the correct terms.

New theories of MT: Non-linguistic Approaches

Although the second-generation systems did decrease the amount of time and effort needed to post-edit any translated text, researchers and developers still thought machine

translation capable of more. Three new approaches to machine translation were theorized in the late eighties and early nineties. The first, knowledge-based MT, which some scholars classify as an interlingua approach, relies on the precept that a machine must understand the text it is translating in order to produce an adequate version. A general knowledge of the subject field and content of the text would help reduce the problems with ambiguity that continued to plague MT developers and researchers. To that end, the knowledge-based MT project at Carnegie-Mellon University created a way to give the translation program, not only the text to be translated, but also the context the document was to be translated in.

The other two methods are called *nonlinguistic* approaches to differentiate them from the direct, interlingua and transfer methods, also called *linguistic-based*, or *traditional* methods. One is example-based MT and is actually similar to the CAT theory of translation memory; the other is statistics-based machine translation. Like TM, example-based MT contains databases of previously translated sentences paired with their translations, and the software has the ability to pick a source-language sentence and find any matching or partially-matching source language fragments and their translations in the database. Unlike CAT, which relies on human users to select the sentence or part of the sentence in some cases, example-based MT attempts to automate the process of selecting the appropriate fragments and piecing them together to synthesize the translation draft. Like all MT systems, example-based machine translation systems are intended for use with technical and scientific documentation.

The other nonlinguistic method is the statistics-based method of machine translation. Trujillo explains that concept by comparing translation to a large and crowded place (1999). One may not notice patterns of movement if inside the mob, but stepping back for a moment, one may notice the patterns that eventually enable one to guess what the mob will do. Translation is

the moving crowd in this analogy. For the method to work, the computer needs to know the statistics of what occurs and how often. That is how the linguist may step back to examine the crowd. The statistics of what *has happened* enable one can to make an educated guess as to what *will happen*. The method requires a large body of bilingual texts, which developers found in the minutes of Canadian parliamentary sessions, recorded in both English and in French.

These new methods of MT will nevertheless need development before they approach the usefulness of the traditional, linguistics-based MT methods. Scholars agree that while the new methods have potential for improvement (and additional potential to uncover still more new possibilities in MT), the current systems require further development. The traditional MT methods are agreed to be the best; they yield the best translations and are also the most cost-efficient.

Evaluation of a Machine Translation System

Relatively few scholars who have contributed to the literature on machine translation discuss specifically how those translations are evaluated. Hutchins and Somers explain that, even after fifty years of MT experimentation and development, there is still no single accepted method for evaluation of an MT system (1992). Typically, evaluations are done either by people with no knowledge of MT systems, or by people with lots of MT experience. The former often expect too much from the system. They are not aware of the software limitations and base their evaluation of system performance on what they think the system should be capable of instead of how well it performs those tasks developers have designed it to do. The latter type know a great deal about MT systems and can therefore bias the evaluation by their choices of sentences they use for evaluation, to make the system appear more or less capable than it actually is. Neither

method is helpful to developers who want constructive feedback on their projects, nor to translators needing a realistic estimate of software capabilities.

Despite the lack of a consensus, one can piece together an evaluation method based on what scholars say they look for in a translation program. For Hutchins and Somers, it is necessary to know if the software does what it was designed to do. Cormier claims that a general evaluation method applicable to all systems is not possible because different systems are designed to do different things in different ways (1991). However, she proposes that any evaluation system should measure the adequacy of the translated text – how good it is, how close to the original the translation is and how much post-editing it needs to be of publishable quality. Any evaluation should also measure the potential of the MT system – how easy it is to upgrade and how easily one can fix errors that the system commonly makes in translation. Furthermore, Trujillo advocates taking into account the cost efficiency and time-saving of any system, i.e., how much it would cost and how long it would take humans to produce a translation of comparable quality to the version produced through joint software and human effort (1999). Moisl writes that systems should also be easy to learn, as well as easy to use, and should save the translator both time and effort. Although no single scholar includes all of these criteria in any one paper, they are all valid points. An examination of the system according to each criterion can provide useful information about how valuable that translation system and its translations are. While scholars all applaud some of these criteria, the ideal methodology, if scholars ever agree on it, will include most, if not all, of these points.

Why will Computers not Replace Humans in the Translation Field?

Despite new advances in linguistics and computer programming that make MT systems better at first-draft translation, and despite new systems that open up new possibilities in MT system design, leading scholars such as Doug Arnold, Harold Somers, and Yehoshua Bar-Hillel agree that MT systems will not replace human translators. Some claim that the possibility exists, but only after further advances in computer engineering. Others believe computers will never replace humans for several reasons. Bar-Hillel said forty-five years ago that the expectation people had that MT could produce high-quality translation automatically, with no human input or post-editing, was unrealistic. In other words, without human help, MT could never produce a translation of publishable quality, though it could impart the general idea of the original text. Arnold expounds on that assertion (2003). Computers have to follow rules. Programs, modules and algorithms are sets of rules that tell the computer what to do. Unlike humans, computers have no common sense. They lack the “extralinguistic knowledge” Bar-Hillel said was necessary to decipher the text (132). They also lack the creative element that Arnold says a translator needs, both to resolve ambiguity and to create elegant translations. Bennett reminds us that a translation is also only as good as its dictionary (2000). Since there are millions of words and much ambiguity in any language, no MT dictionary can contain them all. Although MT was never meant to be used for literary translation, Allen notes that literary translation is too idiomatic and stylistic to reproduce literary elements the way a human can (2000). DeClerq writes that MT can produce draft quality translations like a human’s first version of a translation project, but the final touch to make any translation of publishable quality will be human (1999).

Despite those who echo the ALPAC report’s pronouncement that MT is a useless waste of money, machine translation does have practical uses. Certain jobs are highly repetitive and

require low vocabulary and language understanding; and MT completes those jobs beautifully. Consider the Météo system, a transfer-based MT system developed in 1975 and installed in 1976, which translates weather reports from English to French for Canadian weather broadcasts. Although it has a severely limited vocabulary, a *sublanguage*, or subset of language, it has translated for the last thirty years, several thousand words a day, with only five percent mistakes. The few it does make are usually attributed to the information it receives, not to the program. Before the system was installed, job satisfaction among the humans was low and the turnover rate of that department was quite high. Since then, the turnover rate has dropped dramatically (Hutchins and Somers 1992).

Bennett and Gerber claim that MT is most useful when applied to highly technical or formal translation projects, such as academic journals or the instructional manuals that come with machinery, appliances, or software (2003). Although the quality may not meet the standard of a native speaker, humans can edit the translation enough for consumers to understand the information. The style of the text in this type of document is not important. Also, MT can store documents and terminology so that when a software upgrade is necessary, the translator can merely call up the saved version of the document and change only the parts that need to be amended; he does not have to translate the entire upgraded manual.

Another use for MT is “gisting” – generating a rough translation to give the reader the general idea of a text, especially if the style is not important and all the reader needs or wants is the information. The Air Force used Systran for gisting after it was first developed, for gathering information from Russian documents. Scholars need the same thing in reading reviews of new research by foreign scientists. If they cannot wait for a translation of publishable quality, then an

MT translation that provides the salient points of the original article enables that scholar to keep abreast of current research.

An unexpected application of MT to get the gist of a text is to decipher foreign Internet sites - where people want not perfect translations, but to acquire and disseminate information and to communicate (Somers Introduction 2003). Many sites now that offer adequate instant translations of themselves, and several sites offer instantaneous translation services. The sites allow people to enter text, usually up to 150 words, and ask the user to indicate which language pair to use and which direction to translate. There is also a space for users to enter a URL, and the translator will translate the entire site. One such site is Babel Fish, which takes its name from a method of universal translation in a work by Douglas Adams, The Hitchhikers Guide to the Galaxy. The Babel fish in Adams' work "feeds on brainwave energy received...from those around it. It absorbs all unconscious mental frequencies from this brainwave energy...then excretes into the mind of its carrier a telepathic matrix formed by combining the conscious thought frequencies with nerve signals picked up from the speech center of the brain which has supplied them. The practical upshot of all this is that if you stick a Babel fish in your ear you can instantly understand anything said to you in any form of language" (42). Although the Web version of Babel Fish and the Google translator do not have the capacity to read minds or to produce perfect translation, they do what they were designed for; provide a working knowledge of a website or text passage written in a foreign language. For instance, any random passage in English can be translated into Spanish through the Babel Fish or Google Translate programs. The following is an excerpt from a recent article posted to a science website:

Last winter's outbreak of SARS—severe acute respiratory syndrome—triggered an unprecedented emergency medical response worldwide. Researchers put aside scientific rivalries and within weeks not only discovered the coronavirus that was responsible but also mapped the virus's genomic sequence. After the outbreak had been contained, writer Barry Yeoman asked top medical scientists to reflect on the long-term lessons of the

crisis (from "Science News Articles" <http://www.discover.com/issues/jan-04/features/medicine/>)

When the preceding passage is cut and pasted into the Babel Fish translation window and the "English to Spanish" option is selected, this was the result:²⁵

El brote pasado de los winterâ™s de respiratorio agudo de SARSâ "severe syndromeâ "triggered una respuesta médica de la emergencia sin precedente por todo el mundo. Los investigadores pusieron a un lado rivalidades científicas y dentro de las semanas no solamente descubiertas el coronavirus que era responsable pero también traz la secuencia genomic de los virusâ™s. Después de que el brote hubiera sido contenido, el yeoman de Barry del escritor pidió que los científicos médicos superiores reflejaran en las lecciones a largo plazo de la crisis.

The Google translator produced:

El brote pasado de los winter?s de respiratorio agudo de SARS?severe syndrome?triggered una respuesta médica de la emergencia sin precedente por todo el mundo. Los investigadores pusieron a un lado rivalidades científicas y dentro de las semanas no solamente descubiertas el coronavirus que era responsable pero también traz la secuencia genomic de los virus?s. Después de que el brote hubiera sido contenido, el escritor Barry Yeoman pidió que los científicos médicos superiores reflejaran en las lecciones a largo plazo de la crisis (de los artículos de las noticias del?science

The quality of the translations is not perfect. The dictionary lacks some of the terms in the passage – which are marked with squares in the Babel Fish translation and question marks in the Google translation. The sites also have trouble recognizing names and proper nouns, as Babel Fish did not recognize "Yeoman." However, the bilingual reader will notice that the automatic translators give an accurate idea of what the original passage says: only weeks after the SARS outbreak, cooperating scientists found its cause. Most people surfing the Web do not need a perfect copy and are content with the "gist" of the information contained in the foreign site.

For poetry, which the programs were *not* designed to translate, Babel Fish and the Google translator do not fare as well. For instance,

²⁵ Results from Babel Fish and Google Translate were cut and pasted into this document directly from the translation windows of the respective websites. Results have not been edited.

I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host, of golden daffodils;
Beside the lake, beneath the trees,
Fluttering and dancing in the breeze

is the first stanza of Wordsworth's poem "I Wandered Lonely as a Cloud," composed of six stanzas that follow a set rhyme in each verse, ABABCC. The poem is written in iambic quadrameter, with eight beats per line and every second syllable stressed. The poem also incorporates words meant to evoke strong mental images in the reader's imagination: to picture the poet "wandering" through "vales" and suddenly seeing a "host" of yellow flowers, "fluttering and dancing." Babel Fish translates it thusly:

Vagué solo como nube que flota en altos vales y colinas de o'er, cuando de una vez vi a muchedumbre, anfitrión de A, de narcisos de oro; Al lado del lago, debajo de los árboles, agitando y bailando en la brisa.

and Google does an equally inadequate job:

Vagué solo como nube que flota en vales y colinas altos del o'er, cuando de una vez vi a muchedumbre, anfitrión de A, de narcisos de oro; Al lado del lago, debajo de los árboles, agitando y bailando en la brisa.

Both programs give an account of the subject of the poem: a poet takes a walk and sees a bunch of flowers, but neither captures the poetic style, rhyme or meter, or the language meant to conjure such strong images to the "inward eye" that Wordsworth mentions later in the poem, the memory and imagination. To preserve those elements, the translation needs a human touch. For instance, the following verse is an excerpt of "Me gustas cuando callas," by Pablo Neruda. The first English translation is courtesy of Babel Fish; the second is from an amateur human translator of Spanish to English.

Me gustas cuando callas porque estás como ausente,
y me oyes desde lejos, y mi voz no te toca.
Parece que los ojos se te hubieran volado
y parece que un beso te cerrara la boca

I like when you shut up because you are like absentee, and you hear to me from distant spot, and my voice does not touch to you. It seems that the eyes had flown to you and seems that a kiss closed the mouth to you

You please me with your silence, because you're as one absent,
And you hear me from a distance, and my voice it does not touch you.
It seems as though your eyes have taken flight,
And it seems as though a kiss would close your mouth.

The Babel Fish translation gives an idea of the subject matter to those who do not know Spanish, the translation lacks the elegance and fluidity of the original. While the second is still only an imitation, it makes an attempt to preserve the smooth language and style of the original author. Computer translation programs simply do not have the ability to preserve those stylistic elements as a human can. The computer can only translate the poem's words.

As Bennett notes, Babel Fish is used quite a bit, but there are numerous complaints about its quality (2000). Bennett explains the reasons for them. Online translators have a specific purpose: to allow people to accumulate information and to allow sites to disseminate information to people of other languages, and to allow communication between them. In those areas, the translators do an adequate job, as the above demonstration emphasizes. Not perfect, but no translation is ever perfect. Babel Fish and the Google translator do what they were designed for. When people expect translations beyond the capabilities of machine translation, such as poetry, and then decry the abysmal results, the online translation programs suffer an undeserved reputation for inferior quality. People ignorant of the purposes or limitations of MT expect too much from the system and then blame that system for not having abilities it was never intended to have.

Machine translation can translate neither literature nor poetry, nor render letter-perfect translations of scientific or technical texts. The first need requires humans; the second requires human help in the form of pre- or post-editing. MT is one tool for translation. If used as CAT, it

can save time by remembering terminology and by automating the search for unknown words, which increased consistency within the text and speeds the translation process. Fully automatic MT produce first drafts, and some systems have the ability to tag passages beyond their capabilities, so that humans know what most urgently needs editing. The systems can also remember and store previously translated technical or instructional manuals, which can easily be revised for product upgrades. On the Web, translation does a good job of assimilation, dissemination and communication. Gisting lowers the language barrier. People needing something more polished than a draft translation can always appeal to a translator to edit the text to the desired quality.

Conclusion

Among the many short-lived trends in translation theory and practice of the past two thousand years, two important tendencies stand out. The first is the gradual acceptance of sense-for-sense translation in lieu of the extremely literal style many early scholars supported. That non-literal theory of translation began with in 55 B. C. Cicero – the first to write about how he translated. Through debates, martyrdoms, the decline of Latin, and the birth and coming of age of Europe's new vernacular languages, Cicero's theory and those who supported it endured, defended their reasons, and finally prospered. By the twentieth century, conveying the meaning of the text as opposed to its words was accepted practice in the field. Despite the various directions translation theory has taken this past century, those theories at bottom discuss a text that has been translated not literally, but with the intent to capture the meaning of the original work.

The seeds of the second movement were planted in the 1600s. It had previously been the custom of translators to take creative liberties with the text and to experiment with playful language; no one minded as long as they captured the sense of the text. In the 1600s that playfulness in translations began to decline. Translators began to insist on a translation that read smoothly in the native tongue – one that had been smoothed over, and that according to Lawrence Venuti, had been domesticated – all traces of the foreign source and culture removed, replaced by familiar signs and gestures from the culture of the target language. The insistence on fluidity at the cost of faithfulness to the original was challenged in the 1800s by the Germans and again in the early 1900s by certain American author/translators such as Ezra Pound. By the 1950s that willingness to experiment had faded from translation literature – the challenge had been unsuccessful regarding the English language and translation. The foreign taboo has been

lifted slightly – Gregory Rabassa’s version of Cien años de soledad bears the South American cultural stamp and the occasional odd turn of phrase, and the American English editions of the Harry Potter books contain British cultural references and language that the editor retained in the text – Linda Britt cautions us that one need only look at the Christensens’ translation of Como agua para chocolate to see that the trend of text domestication is alive and well in the American English tradition (1995). The Spanish-language original contains references to surreal and magical elements give the story and Tita’s cooking a special touch. Those magical elements, one of the reasons for its popularity with Hispanic readers, are not in the English translation. Although it reads smoothly and captures the sense of the story – Tita and Pedro defying social constraints and family tradition to come together – the translation removed most of the magic.²⁶ Perhaps it made the Christiensen uncomfortable, or they thought American readers would not understand or enjoy the magical elements of the text, or they were incapable of the suspension of logical elements necessary to enjoy magical realism. Whatever the reason, they removed it from their translation.

Machine translation has been a field of growing interest in recent years. Although initial excitement and expectations during the inaugural research in the 1950s and early 1960s were high, the inability of developers and their programs to meet those sky-high expectations of fully automatic, high-quality translation led to the negative verdict of the ALPAC report and a virtual moratorium on government-funded MT research during the late 1960s and early 1970s. Today

²⁶ For instance, when Tita discovers that her beloved Pedro has agreed to marry her sister Rosaura after asking Tita to marry him, she is heartbroken. That night Tita removes from the chest in her room a bedspread that she had begun to crochet when Pedro asked her to marry him. It should have taken her a year to finish, just in time for their nuptials. Esquivel’s original text says that Tita “decidió darle utilidad al estambre en lugar de desperdiciarlo y rabiosamente tejió y lloró, lloró y tejió, hasta que en la madrugada terminó la colcha y se la echó encima.” The translation says that Tita merely “decided to use the yarn, not to let it go to waste, and so she worked on the bedspread and wept furiously, weeping and working until dawn, and threw it over herself.” The translation does not tell us that Tita finished in mere hours a blanket that should have taken her a year to make, merely that she did not want to waste the yarn, and that she used the blanket to cover herself in the morning (Britt 1995).

various MT systems can mitigate the problems that led to its development: disseminating information and speeding the translation process, but only by generating draft-quality translations of scientific and technical documents such as a human might produce as the first, unpolished version of a translation project. Those rough translations, while not of the best quality or most fluid language, capture the gist of the document for people only looking for information, such as Web surfers in foreign sites, or scientists keeping abreast of foreign research in their field, or purchasers of foreign-made software who need the manual to learn how to use it, or medical professionals, or weather forecasters, people who would rather have an imperfect version quickly than do without it when needed. The list of useful, practical MT applications is quite long, and the list of users saving both time and money has included such corporate names as Ford and Xerox. So why does machine translation retain a reputation for being capable of only producing bad, rough, or inaccurate translations?

The chief complaint today is the same as it was forty years ago when the ALPAC report was made public. Computer-generated translations do not read as smoothly as their human-produced counterparts or MT-generated documents that have received human post-editing. People laugh at the online translation programs Babel Fish and the Google translator and scorn other MT systems, even though those systems do exactly what they were meant to do – produce a rough, preliminary translation to make the information available quickly. In doing so they speed the translation process and sometimes save the companies that use MT substantial amounts of money. However, the generated texts are not fluid translations, so critics claim that MT does not translate “as well as humans do.” True; MT cannot translate at a human level. This is partly because of the incredible difficulty of resolving ambiguities in language, partly because of the technological limitations of programming language nuances into a computer. Yet instead of

acknowledging the limited usefulness of MT, critics choose to see only MT's imperfections. Although it translates information, the result is not as pretty nor as fluid or as easy to read as a human translation. To critics who want perfect translations, that inflexibility is unacceptable and renders MT useless.

The idea that MT is disdained for lack of fluidity of the generated texts bears more investigation. Little or nothing has been written on this topic, it could also be a subject of future research. Other possible directions that would add to the literature in translation studies are non-literary translation, the early history and theory of translation, the history and methodology of Bible translation, and practical translation theory in the 1900s.

Most of what has been written regarding translation theory and practice relates to literary translation. There are several reasons for that bias. The first is that most scholars who publish literary translations are academics who conduct research and teach in addition to accepting translation projects. Their interests are primarily literary; they translate and write about what interests them. Those who make a living primarily from translation do so from informative or scientific, not literary, documents, and do not write about what they do, or how they do it. Academics explain their methodology in the articles they write. Yet as they translate literature, they apply their methods to it and not to technical material. As a result, literary texts and not technological translation receives most of the space in publications.

There is also a dearth of information available on the earliest translators, from the decline of Rome until the high to late Middle Ages. Many sources mention Cicero, Jerome, Philo Judeas, Boethius, or Alfred, but they rarely discuss the details of their philosophies. Perhaps very little information about translators from those centuries has survived to the present; there may be little demand for that information in the translation studies field. Another possible

reason for lack of certain information is that the philosophy that a particular translator adhered to is no longer popular. Just as one rarely hears mention of Ezra Pound's translation today because his experimental style fell out of favor with later generations of translators, in today's mindset Boethius' literal approach is unpopular. People have long quoted Cicero and Jerome, with the result that their names remain in the literature. People rarely cited Boethius, either because they were translating according to the dominant theory and did not need to defend their style, or later because the literal style had fallen out of favor.

In recent years there has also been little publication on practical theory. Much of the recent work done in translation studies concerns the influence of literary theory, globalization, or linguistics. While there have been a few authorities, such as Biguenet and Schulte, Child, Eco, and Samuelsson-Brown, who offer practical advice for the translator, they are few and far between, and most of them assume that translators will work with literary texts and not technical or scientific documents.

A trend worth pursuing further is the influence of literary theory on the theory and practice of translation in the twentieth century. The Modernists during the first half of the century had a significant influence, though it had faded by World War II. The more recent literary theories of Poststructuralism and Postcolonialism continue to affect translation theory and practice. Further studies might examine translation in light of earlier theories, such as structuralism or postmodernism, or today's gay or feminist theory, to see if and how those have affected translation.

This study could be strengthened with more computer and linguistic information. Much of the MT and more recent literary theory assumes at least a passing understanding of linguistic theory, and nearly all the MT studies assume some familiarity with computer languages and

programming. I chose to present a historical perspective of machine translation rather than write from a linguistic or technological approach, so those areas were merely touched on. However, a thorough understanding of either or both would enable further research in MT studies.

Machine translation and computer-aided translation are two very useful tools available to translators today. In order to understand the problems still present in MT, it helps to comprehend the difficulties of human translators and the expectations people have of translations from humans and computers alike. Understanding the difficulties of language, for both humans and machines, and the technical difficulties that further complicate and limit MT, will lead to a deeper appreciation of what machine translation can do and how well it does what it is supposed to do in spite of those limitations.

Afterword

Researching and writing this paper proved very educational for me. Not only did I learn how to research and organize massive quantities of information, I learned about translation history and theory, and about the uses of machine translation and computer-aided translation. My prior experience with machine translation extended to the reputation and translations done by Babel Fish and like programs without knowing what they were designed to do, so I expected to find that MT was a casual toy used by people too lazy to pick up a dictionary. Instead, I learned that machine translation and computer-aided translation programs are great boons to translators because of the time and labor they save. They help the companies that use them by saving money, and the people that exist in this globalized world with its language barriers, by making new information available in their own language in a timely manner. Computer-aided translation helps translators work faster by facilitating the search for vocabulary, or by making available databases of previously translated fragments. Babel Fish and Google Translate are not the idle toys I thought they were. Through research, and through use of those two programs, I learned the purpose of MT and how best to take advantage of its capabilities. The strength of MT does is not in generating perfect translations, but in quickly producing rough translations that convey the general idea of a text, and that a human can later edit if a copy of publishable quality is desired. Reputations are not always true. This is especially true with machine translation. While it may never be of much use for perfect translations or literary translation, MT not the pointless waste of money portrayed in common opinion. In fact, it is already a functional part of the gathering and dissemination of information around the world.

After seeing the state of MT, CAT, and the profession today, I would cautiously submit some predictions about the future of MT and CAT use and development. Because it is not very

useful in literary translation, those focused on the translation of literature will continue to shun MT and CAT in favor of the traditional methods of translation. Machine translation has been of most use to industry and science, and developers will focus their efforts on improving the capabilities of machine translation in those two areas, perhaps with programs that generate first draft translations more quickly, or that can translate slightly more accurately. In the professional world of CAT-users, I think that more people will begin to use CAT tools simply because of the greater efficiency and speed they give a translator once he has mastered them. The increased use of time-saving technology will enable professional free-lance translators to take on more projects. Those who do not now use CAT technology may eventually be forced to do so simply to stay competitive in the profession.

Annotated Bibliography

Books:

Amos, Flora Ross. Early Theories of Translation. New York: Columbia University Press, 1920, 189pp.

In this book, Flora Ross Amos focused on English language translation, beginning with King Alfred in the ninth century and ending with Alexander Pope in the nineteenth. She traced the development of English language translation from Alfred's insistence on rendering the sense of the words, to Queen Elizabeth's more literal works, to John Dryden's much freer translation methods. She presented the sixteenth century as a turning point in translation. She believed that at that time, translators still followed the examples of the Middle Ages but also began experimenting with new styles and writing new theories of translation. Although the book is old, the historical information is sound and the book would be helpful to anyone studying English history or translation theory.

Anderson, Benedict. Imagined Communities: Reflections on the Origin and Spread of Nationalism. 1980. 2nd ed. New York: Verso, 2003, 224pp

As the title would suggest, Anderson focuses on the origins of nationalism movements in Europe and the Western Hemisphere. He claims that nationalism originated when people began to have access to printed material written in their own vernacular tongues rather than relying on Latin. The second chapter is particularly relevant to translation because it discusses the invention and effects of the printing press, especially regarding Martin Luther's 95 Theses and his new German Bible translation.

Arnold, D., et. al. Machine Translation: An Introductory Guide. Cambridge, Mass.: Blackwell Publishers, 1994, 240pp.

Arnold et. al. have written a basic book about machine translation. It describes why MT is necessary and gives examples of the programs currently available, their capabilities, and how to use them. It also suggests topics for future research. Although the technical aspects are a bit out of date – the book was published ten years ago – the background information, linguistic aspects, and evaluation information are still applicable. Anyone seeking an overview of the field would do well to read it, and it is also frequently cited as a secondary source in more current works

Automatic Language Processing Advisory Committee, National Research Council. Language and Machines: Computers in Translation and Linguistics; a Report. National Academy of Sciences, 1966, 92pp.

This work is the ALPAC report that caused so much trouble in MT development after it was published. The consensus of the committee was that machine translation was uneconomical; they suggested using the money currently being spent on MT to train more human translators. Anyone interested in MT or MT history should read this report, as it presents several myths of MT still being circulated today.

Baker, Mona and Kristen Malmkjær, eds. Routledge Encyclopedia of Translation Studies. New York: Routledge, 1998, 721pp.

Baker and Malmkjær have collected under one cover information on every topic that could possibly aid anyone interested in translation. To facilitate use of the book they have divided it into two parts. The first part is an alphabetical list of terms and topics. Entries include “machine translation,” “paraphrase,” “*skopos* theory,” and others. The second part of the work consists of the histories of translation of over thirty languages, such as the “American tradition,” the “Spanish tradition,” the Greek or Arabic or Indian traditions. The histories also include brief endnotes on the most important translators and they are important to the tradition of that language. Although not an exhaustive work, the encyclopedia is still a good primary reference. The recommend readings can provide more information on subjects of particular interest to the reader.

Barry, Peter. Beginning Theory: An Introduction to Literary and Cultural Theory. 2nd ed. Manchester: Manchester University Press, 2002, 290pp.

This is intended to be an introductory textbook to the various movements in literary criticism that have been used in the twentieth century. To that end Barry provides a basic definition of such movements as Modernism, Poststructuralism, Feminism, Postcolonialism, and others. The book, though simple, thoroughly explains the basic concepts of the various literary movements, and includes examples of texts evaluated according to various theories. Its contribution to this study consists of the information it contains on literary theories that have affected translation theory and practice. It would also be useful as an introductory work explaining literary theories of the twentieth century.

Bassnett, Susan and Harish Trivedi. Post-Colonial Translation: Theory and Practice. New York: Routledge, 1999.

The literary theory of Postcolonialism has had a noticeable effect on translation theory in the last fifteen years. Bassnett and Trivedi’s purpose in this work was to compile essays that emphasized the most important aspects of the relation between translation and Postcolonialism. They were careful to select a variety of authors who work with several languages, though English, French, and Indian authors are well represented. This book represents a facet of translation theory in the previous decade and today. Anyone studying recent translation theory, Postcolonialism, or both, will find the book helpful.

Biguenet, John and Rainer Schulte. The Craft of Translation. Chicago: University of Chicago Press, 1989, 153pp.

Biguenet and Schulte’s collaboration has produced a compilation of successful translators of various ancient and modern languages, intent on giving practical advice to others in the field. Articles by Gregory Rabassa, Margaret Sayers Peden and Burton Raffel discuss how to translate poetry and prose. Burton Raffel and Edward Seidensticker give examples from several texts they have translated. Peden and John Felsteiner dedicate their essays to the steps they follow in

the translation of a single poem. Overall, the book is a sampling of the practices modern translators use to translate into English.

Child, Jack. Introduction to Spanish Translation. Lanham, MD: University Press of America, Inc., 1992, 212p.

Child's book was written to be a textbook for an introductory-level course in Spanish translation. Each chapter is divided into sections. They begin with a brief section of historical information in translation, then continue with a section on translation theory or linguistic theory. Child selected theory with a practical value to include in his book. The next section in each chapter discusses a problem in translating between English and Spanish, and the final two sections present a list of difficult vocabulary words and idiomatic expressions.

Delisle, Jean and Judith Woodsworth, eds. Translators Through History. Amsterdam: John Benjamin's Publishing Co., 1995, 287pp.

This book grew out of the desire of an international translating group to document translation history. It chronicles the impact translators and translations have had on various peoples: from alphabets, to national languages and literatures, to spreading knowledge, religion, and cultural values. It considers many languages, using examples from the Germanic and Slavic tribes, the Chinese, India, Hebrew, and even Native American languages. The editors also include a chapter on power relations: how translation can be manipulated for political or cultural ends. It does not include excessive amounts of theory, and does not claim to include information on all relevant topics, but it is not a vague text. It focuses on specific effects of translation in more detail.

Eco, Umberto. Experiences in Translation. Trans. Alastair McEwen. Toronto: University of Toronto Press, 2001, 137pp.

Eco's primary aim here is to consider problems he has had as a professional Italian translator and as a translated author. He discusses such issues as the difficulties of finding equality of expression between languages, and the cultural differences between languages. He also to use common sense in his translation process, and he offers practical advice from a practitioner in the translation field.

Hutchins, John and Harold Somers. An Introduction to Machine Translation. San Diego: Academic Press, Inc., 1992, 362pp.

Hutchins and Somers' introduction is exactly that. It gives a brief history of MT, describes the basic linguistic concepts necessary to the field, and the basic strategies used by developers, such as interlingua and transfer methods. It also discusses problems in the field and some practical uses for MT by translators. Later chapters are devoted to the positive and negative aspects of individual MT systems, such as Systran, Eurotra, and METAL. Despite the subject, very little of the book is technical; it addresses an audience that wants an introductions to the field and its uses, and it does not detail how do develop that system. The book would be of use

to anyone studying MT, and is also listed as a secondary source for several more advanced volumes.

Nirenburg, Sergei, Jamie Carbonell, Masaru Tomita, and Kenneth Goodman. Machine Translation: A Knowledge-Based Approach. San Mateo, CA: Morgan Kaufmann Publishers, 1992, 201pp.

Nirenburg and his colleagues describe the applications knowledge-based translation, the approach based on the idea that at least a partial understanding of the text is necessary for adequate translation. They first place its context by describing the overall field of MT and defining the position of knowledge-based MT within that field (a subset of the interlingua approach). They then describe how the text is analyzed and the target text is generated. Although many of the text examples are specific to programmers and developers, the overviews at the beginning of each chapter are sufficient for people seeking an overall understanding of knowledge-based machine translation.

---, Harold Somers, and Yorick Wilks, eds. Readings in Machine Translation. Cambridge, Mass.: Massachusetts Institute of Technology, 2003, 413pp.

This compilation binds rare yet important works about machine translation in one convenient volume. Nirenburg et. al. include Warren Weaver's memo, the ALPAC report of 1966, articles by Yehoshua Bar-Hillel, and other works about the field's history, theoretical issues, and design ideas. As the editors note, several of the included papers are out of print or were never published, so this is the only source for several seminal works. This book is an important resource to anyone interested in the history and development of machine translation.

Robinson, Douglas, ed. Western Theory: from Herodotus to Nietzsche. Manchester, UK: St. Jerome Publishing, 1997, 336pp.

Robinson, a noted translator and scholar of translation studies, has collected in one volume many of the seminal works in Western translation theory written by the most influential translation theorists and practitioners in the last two millennia. The works include letters, essays, book chapters and prefaces. Each title is also preceded by a brief description of the author's life that serves both to place the work in a historical context, and to explain why that author or that work is important. This extremely useful reference gives access to works thousands of years old, rare, or out of print.

Said, Edward. Orientalism. 2nd ed. New York: Vintage Books, 1994, 394pp.

Said's book is of interest primarily because of its relation to Postcolonialism. An understanding of Said's portrayal of the Other has become necessary to understand Postcolonial theory which has influenced translation theory. An understanding of the Other also necessary to fully comprehend these influences.

Samuelsson-Brown, Geoffrey. A Practical Guide for Translators. 2nd edition. Cleveland:

Multilingual Matters, Ltd., 1995, 150pp.

The increasing size of the translation profession has created a need for informative works about the realities of what to expect as a professional translator. Samuelsson-Brown has provided that work. He discusses many of the topics relevant to a career in translation: how to become a translator and what working environment to expect and what tools are needed, the sources and help guides available, the quality of work and professional organizations in existence, and how to protect oneself in case of mistakes. The technological data is slightly out of date, but the concepts are still applicable and the rest of the book is an invaluable guide to those wanting to join the profession.

Schulte, Rainer and John Biguenet, eds. Theories of Translation: An Anthology of Essays from Dryden to Derrida. Chicago: University of Chicago Press, 1992, 254pp.

This work is a compilation of works Schulte and Biguenet feel are a sample of the seminal works in the area of translation theory from the past two centuries. As German theorists were the sources of most of the useful theory in the nineteenth century, Schulte and Biguenet have included works from noted theorists Frederich Schleiermacher, Wilhelm von Humboldt, and Frederich Nietzsche. Sampling from the twentieth century include Ezra Pound, Walter Benjamin, and the Spanish theorists José Ortega y Gasset and Octavio Paz. Although not a comprehensive compilation, Schulte and Biguenet have included the highlights of Western translation theory and theorists. Anyone interested in translation theory will be interested in the work, and supplemental sources.

Sethi, Ravi. Programming Languages: Concepts and Constructs. Reading, Mass.: Addison-Wesley Publishing Company, 1989.

This book, while not cited above, was helpful because of its overview of several computer languages. Among them tran, the first computer language, was used to write many of the early MT programs. Prolog is a programming language used extensively by developers of translation software. Scholars often assume that their readers have a working understanding of these languages. If not, then Sethi's book can remedy that lack of information.

Somers, Harold, ed. Computers and Translation: A Translator's Guide. Philadelphia: Benjamins Publishing, 2003, 349pp.

In this compilation, Somers has attempted to collect essays of use to practicing translator using or interested in using MT or CAT. Very few of the essays discuss theory or development. Instead, the contributors, such as Somers himself, Doug Arnold, and John Hutchins, discuss practical applications of MT, how one can set up a translator's workstation, and how to obtain the best results from available tools. A few essays also discuss how to evaluate the translation done by software, and explains why precisely translation is so difficult for computers. The scholars are notable and often-cited in the field, and the publication date is recent. Anyone researching machine translation for practical purposes would find, if not the whole book, than at least several of the articles to be time well-spent in reading.

Spielvogel, Jackson J. Western Civilization Volume I: To 1715. St. Paul: West Publishing Co., 1994, 617pp.

This work is a general history of Western Europe. It was useful to this paper because it provides a general source for the historical context in which to place translation theories and practices. The book also contains some specific information about Martin Luther that was both informative and useful. The book would be of use to students of Western history as well as those studying the history of translation theory and practice.

Trujillo, Arturo. Translation Engines: Techniques for Machine Translation. London: Springer-Verlag, 1999, 303pp.

Trujillo's volume discusses some of the particulars of machine translation and machine-aided translation, such as translator's workstation and knowledge-based and example-based machine translation and evaluation. Although much of the work is quite technical, intended for computer programmers, Trujillo does include a brief history of the field of MT and an overview of the most important approaches developers used, as well as a summary of important linguistic concepts. Each chapter also begins with a summary of the contents written to be understandable even to those not familiar with the workings of computer programming. The book would be helpful to those seeking an overview of the field and its capabilities and shortfalls without the desire to conduct an in-depth study.

Tytlar, Alexander Fraser. Essay on the Principles of Translation. London: for T. Cadell and W. Davies, 1797, copy reprint New York: Garland, 1970, 312pp.

Tytlar billed this work as the first book published solely on translation theory and practice. In it, he described the three most important characteristics of a good translation and why they were good. He illustrated his ideas with examples both good and bad, drawn from Latin, Greek, French, Italian, and Spanish translations. Although the book is over two hundred years old, much of what Tytlar had to say, such as advising translators to capture the sense of the original document, and to try to conserve the style of poetry when translating, is still relevant to translators today.

Venuti, Lawrence, ed. The Translation Studies Reader. New York: Routledge, 2000, 524pp.

This work is Venuti's attempt to compile a useful reference containing seminal works in translation studies that can also be of use as a textbook in college-level translation courses. The book is organized chronologically; an introduction to each section describes the major beliefs of that period and how the works of the selected authors relate to that movement. In addition to containing important works by translation theorists of the twentieth century, the book is useful for the information given in each introduction, the overview of each period of translation in the twentieth century.

---. The Translator's Invisibility: A History of Translation. New York: Routledge, 1995, 287pp.

In this work, Venuti explains his idea of the invisibility of a translator – to translate so result seems to be the work of the original author. He also relates that invisibility to domestication of foreign works, and claims that domestication can hide manipulation of the source text. The book traces Western translation theory, especially of English, from the 1600s until today. It is informative about the domestication theory, and is also useful for history of translation.

Articles:

Aelfric. “Translating into Idiomatic English.” (997 AD) Trans. Albert S. Cook. Robinson 39-40.

----. “Translating into Our Ordinary Speech.” From the preface to Book I of Catholic Homilies (989 AD) Trans. Benjamin Thorpe. Robinson 39.

Aelfric, an English monk, translated certain works of Catholic faith from Latin into the English vernacular. These two of his works defend his methodology and are important for two reasons. One is that they defend the growing popularity of nonliteral translation against the traditional practice of word-for-word translation. The second is that they discuss translation from Latin into a vernacular language. By translating into English, Aelfric and others marked the decline of Latin and the increasing importance of vernacular tongues in Europe.

Alfred the Great. “Translating Books which are Most Necessary for all Men to Know.” (890 AD) Trans. Michael Swanton. Robinson 37-38.

Alfred the Great was a king of Wessex and the first known person to translate from Latin into the Anglo-Saxon vernacular. He explained in this work that, although very few of his countrymen knew Latin, they still wished to have access to written holy works. Alfred’s work in translation was a departure not only from the Latin language, but also from the strict literalness that characterized translation in that era. He was the first translator in a trend that would continue to grow until vernacular languages completely replaced Latin as the languages of learning and religion; his works should be of interest to anyone studying the history of translation theory and practice.

Alighieri, Dante. “Translation Destroys the Sweetness of the Original.” From The Banquet. (1304-07). Trans. Katherine Hillard. Robinson 47- 48.

Dante wrote this work in defense of the vernacular tongue as opposed to Latin. Dante eschewed the scholarly practice of writing in Latin and instead wrote in the vernacular, claiming that translation ruined the stylistic beauty of the work. While many people translated into the vernacular by this point in history, Dante was one of the first to write his original drafts in his native tongue. The work is important to European history, language, and Western translation history because it is a sign of the continuing rise in importance of the vernacular languages in

Europe, and by extension, of the growing power of the middle classes at the expense of the Church and the aristocracy.

Allen, Jeffrey. "Giving the Machine Equal Time." Language International 12.3 (2000): 24-25, 44-45.

In this article Allen claims that, while literary translation is not a practical use for machine translation because MT as yet cannot reproduce the stylistic nature of literary texts, there are translation jobs that MT can perform quite adeptly, such as the translation of technical manuals or scientific articles. He also explains the reasons that companies invest in machine translation systems: to improve quality of the translated text and the speed with which it is generated. He gives an excellent summary of some of the reasons for the use of machine translation systems and their practical applications.

---. "Post-editing." Somers 297-317.

In this article, Allen defines post-editing and discusses its importance to machine translation. He also explains who does post-editing and why they use it. The article is of interest because most computer-generated texts intended for public consumption must be edited for quality before they go to press, and Allen explains that process.

Anonymous. "The Three Kinds of Translating." (12th century) Trans. Charles S. F. Burnett. Robinson 43.

This fragment is of interest to translation because of its background. At the time it was written, the most heated debate in translation was between proponents of sense-for-sense and word-for-word theories of translation. The anonymous author's short work attempted to consolidate the two theories into parts of a single theory, and was the first attempt ever recorded to reconcile the two sides of the debate.

Arnold, Doug. "Why Translation is Difficult for Computers." Somers 119-142.

In this article, Arnold admits that, despite forty years of advances in technology, MT still has problems translating, and he then explains why. He reminds people that humans also find translation to be difficult but that, unlike computers, we have the abilities of logic and creativity to aid us. Computers have only the instructions programmed into them. This article is of interest to anyone investigating machine translation and its capabilities, as well as those who think MT has nothing to offer translators, because Arnold explains step by step the reasons for the ambiguous nature of language and why computers find it difficult to resolve those ambiguities in translation.

Augustinus, Aurelius. "The Use of Translations." From On Christian Doctrine. (428 AD) Trans. D. W. Robertson, Jr. Robinson 30-34.

Augustine's translation works are important because of how their author's position related to the then-current debate about current translation theory. Augustine admitted that many literal

translations were imperfect and gave only a vague idea of the original text. In this work he suggested that those having trouble reading the translations seek out the source text. Very few scholars made that suggestion, making Augustine a rare scholar of his time.

Bacon, Roger. "On the Usefulness of Grammar." From his Great Work (1268?) Trans. Robert Belle Burke. Robinson 44-46.

This work is important because in it, Bacon enumerated the faults of translations: that languages are very different (an idea that is still valid today), that translations are unreliable, and that there is a lack of people qualified to translate. Through those systematic arguments, Bacon argued that people should read the original works, and he used that argument as a platform to attempt to introduce foreign language study as part of the scholastic curriculum.

Baker, Mona. "Arabic Tradition." Baker and Malmkjær 316-326.

This encyclopedia passage is informative to anyone studying the history of translation. Baker explains the history of Arabic translation studies from the rise of Islam to the present day. The Arabs were especially important during the early Middle Ages, because they safeguarded many European texts by translating them into Arabic. Baker notes that the same literal versus non-literal argument taking place in Europe was also an issue in the Arabic translation tradition.

Bar-Hillel, Yehoshua. "The Present Status of Automatic Translation." 1960. Nirenburg et. al. 45-76.

This essay was written as the field of MT was still emerging and developers were struggling to find out what its capabilities and limitations were. Bar-Hillel focused on its limitations, stating that high-quality translation without some form of human editing was impossible because of both the nature of language and the limitations of computer technology. He urged the field to set more realistic goals. This article is relevant from a historical perspective because it is the first realistic assessment of the capabilities of computer translation, and from a technical perspective because many of the limitations Bar-Hillel noted then are still true today.

Bastin, Georges L. "Latin American Tradition." Baker and Malmkjær 505-513.

In this passage, Bastin details the translation practices common in Latin America from the Spanish encounter in 1492 to the present. The passage provides a broad view of common practices that readers can supplement with readings that discuss these same issues in greater detail. Bastin also includes important translators, such as Jorge Luis Borges, and tells why they are important to the Latin American tradition of translation.

Batteux, Charles. "Principles of Translation." From Principles of Literature. (1747-48). Trans. John Miller. Robinson 195-199.

Of primary interest in this work is Batteux's description of the ideal translation, which should be "neither too free nor too servile." He describes the growing trend in translation theory

throughout Western Europe during the 1700s. Batteux's description is also valid today, as people seek to render the sense and stay faithful to the text but to avoid literal translation. This text could be viewed an early incarnation of modern translation theory. The work should be of interest to anyone studying the modern theory or practice of translation.

Behn, Aphra. "Recasting, not Translating." From the preface to the History of Oracles. (1688).
Robinson 183.

Behn's work is typical of the methods used in the 1600s that focused on interpretation of a text rather than translation. Later translators called those methods "excessively free." Her blithe descriptions of "improving" or "clearing up" the texts she translated were in the tradition of John Dryden's methods. Anyone interested in the history of translation, especially during the seventeenth century, would find Behn's works useful and informative.

Benjamin, Walter. "The Task of the Translator." 1923. Trans. Harry Zohn. Schulte and Biguenet 71-82.

Benjamin's essay conveys the task of the translator: to create a translation that will have a similar effect on its readers as the original had on the original audience. He also discussed some features he thought were necessary in any good translation. Benjamin was a noted scholar in translation studies, and this essay is regarded as one of the seminal works in the discipline. Despite the effort needed to get through its difficult language, it would be quite informative to anyone studying twentieth-century translation theory.

Bennett, Winfield Scott. "Taking the Babble out of Babel Fish." Language International 12.3 (2000): 20-21.

Babel Fish is an Internet translator. Its free services have a very poor reputation. Bennett examines why and explains the capabilities and limitations of Babel Fish. His verdict is that critics have unrealistic expectations of the program, and he explains what it was meant to do. The article is of interest to MT because it foregrounds one of the principle problems in the MT field: that of unrealistic expectations people have about machine translation.

Bennett, W. Scott and Laurie Gerber. "Inside Commercial MT." Somers 175-190.

In this article, Bennett and Gerber explain the purpose of machine translation – to gather or disseminate information. They describe the conditions MT can be used under to obtain optimal results: technical or scientific translation. They also delve into some of the reasons MT is not more widely used, and some of the myths surrounding it and why. The article is of use to anyone looking to discover what MT should ideally be used to translate, and why it has such a reputation for producing poor translations.

Boethius, Anicius Manlius. "Committing the Fault of the Interpreter." (510). Trans. Charles S. F. Burnett. Robinson 35-36.

Boethius' works are important to translation history and theory because at the time they were written, they represented the dominant belief that translation should be carried out according to the literal methodology. In this passage, Boethius castigated translators who used pretty words that were aesthetically pleasing but that failed to accurately convey the meaning of the text.

Bowker, Lynne. "Terminology Tools for Translators." Somers 49-65.

In this article Bowker notes the tools available to translators that can facilitate the search for vocabulary. She describes the history of term banks, the type of information they are ideally suited for, and some of the systems in use today and their strengths and weaknesses. Any professional translator interested in investing in a CAT system, or anyone interested in computer-aided translation, would find this article extremely informative and helpful.

Britt, Linda. "Translation, Criticism or Subversion? The Case of Like Water for Chocolate." Translation Review 48/49 (1995) 10-15.

In this article Britt explains what she sees as the shortcomings of the Christensen translation of Como agua para chocolate. She notes that the translators butcher the author's style and that they remove the magical elements from the text. She treats the translation as an example of translation that has gone beyond liberty and become unfaithfulness to the text and the author. Her argument can also be used as an example of the tendency for domestication of texts still common in English language translation today. Anyone interested in text manipulation or domestication would be interested in this article.

Bruni, Leonardo. "On the Correct Way to Translate." (1224/26). Trans. James Hankins. Robinson 57-60.

Bruni's work enumerates the skills necessary in a translator and also the faults one is likely to have. Bruni, as one of the Italian humanists, supported and translated according to style that adhered closer to the source text that was perhaps currently fashionable in the rest of Europe. However, his methods were surprisingly similar to practical theory today, and as such would be of interest to anyone studying translation history or medieval or modern practical translation theory.

Cicero, Marcus Tullius. "The Best Kind of Orator." (46 BC). Trans. H. M. Hubbell. Robinson 7-10.

Although the title claims that the essay is for orators, Cicero discusses his own practices of translation in this work. This is the reason why so many later translators cited him; here he gives the argument in favor of non-literal translation that he is best known for. Anyone studying translation theory or anyone interested in the history of translation would value this work, and many later scholars cited it to give credence to their own non-literal methods of translation.

----. "Translating Greek Orations into Latin." From On the Orator. (55 BC). Trans. E. W. Sutton and H. Rackham. Robinson 7.

In this work, Cicero detailed the uses of translation, uses that would be quoted by later translators for centuries. Many translators cited it to explain and defend their translation theories and methods, that anyone interested in the origins of translation and its purpose will be interested in this work.

Cormier, Monique. "Evaluation of Machine Translation Systems." Language International. 3.4 (1991): 12.

Cormier has a unique view of MT evaluation. Other scholars discuss a general evaluation method that would apply to all MT systems, but Cormier says such a method is impossible. In this article, she claims that a general evaluation method is not possible; systems are developed for specific reasons, and because of that she claims that any evaluation method of them should take those reasons into account. The article is another opinion about MT evaluation methods, and as such would be of interest to anyone studying MT or its evaluation.

De Meun, Jean. "Plainly Rendering the Sense." (1285/1305). Trans. Rita Copeland. Robinson 47.

This letter to the king of France accompanied a completed manuscript that he had commissioned from de Meun. The letter is important not only because it claimed that de Meun translated in the non-literal style, a method becoming increasingly popular during the Middle Ages, but that he was directed to do so by the king, which underscored the popularity of non-literal translation. It was now receiving royal patronage. De Meun also described the result of translating excessively literally – that book would be nearly incomprehensible for people with no knowledge of Latin. This result of literal translation is still true.

DeClerq, Christophe. "Internet for the Translator." Language International 11.6 (1999): 26-27, 30.

The number of people using CAT tools to translate is increasing, as is the number and variety of CAT tools available. DeClerq's article included a number of sites that offer descriptions of CAT tools, as well as downloadable versions that can be tried for free for a trial period of up to thirty days. He also gives site addresses for online translation tools such as Babel Fish that may be used free of charge. The information is approximately five years out of date and some of the sites no longer exist, but most of the websites, as well as the information in the article, are still valid and would be of help to those wishing to research CAT tools or on-line translators on the Internet.

Dolet, Etienne. "How to Translate Well from One Language to Another." (1540). Trans. David G. Ross. Robinson 95-97.

This work is Dolet's contribution to the growing body of texts that detailed the skills and characteristics of a good translator. Although several of his ideas are not original, Dolet went into further detail about each necessary skill than had any of his predecessors. What he saw as necessary is also still relevant today, especially regarding literary translation. As such, this

source would be of use to anyone interested in translation history and what qualities a translator should have.

Dollerup, Cay. "Translation in the Global Age." Language International. 14.5 (2002): 40-43.

Dollerup's relatively recent article gives a brief history of translation, then summarizes machine translation, computer-aided translation, and their uses. Dollerup is optimistic about machine translation, especially on the Internet, but he warns that developers do not have sufficient working knowledge of every language available. Depending on the language, some translations are more reliable than others. The article should be of interest to anyone studying MT, and could also be used as a counterargument for those who think there is no useful future for machine translation.

Duarte of Portugal. "The Art of Translating from Latin." From The Loyal Counselor. (1430/39).
Trans. Maria J. Cirurgião. Robinson 60.

This work is another that lists the skills of a good translator and the methods he should use. Duarte did not include many details of his ideas, but he set a standard that others would follow in later descriptions. A great deal of what Duarte said is still in practice today, and this work would be of interest to modern scholars of practical theory as well as those of translation history.

Duranti, Riccardo. "Italian Tradition." Baker and Malmkjær 474-485.

Duranti's encyclopedia entry gives a broad, general description of Italian translation history and methodology. It also lists several important Italian translators and tells their contributions to the body of translation theory. Knowing that he could only gloss over concepts that in fact were important, and that space constraints meant skipping lesser concepts, Duranti also provides a list of works that will supply more knowledge to those interested specifically in Italian language translation

Ellis, Roger and Liz Oakley-Brown. "British Tradition." Baker and Malmkjær 333-347.

Ellis and Oakley-Brown detail the history of British translation history in this encyclopedia entry. They give a chronological account of important movements in Anglo-Saxon and English translation theory, tell what is happening in the language today, and also provide a list of important scholar/translators and tell what contributions they made to the field. Like other contributors to this volume, the authors structure their entry so that one wishing a passing knowledge of British translation history can obtain it from the entry, and they suggest further reading for anyone wishing to know more.

Esselink, Bert. "The End of Translation as We Know It." Language International 11.6 (1999):
28-30.

Bert Esselink is concerned with globalization and its effects on the translation profession. His article predicts the changes globalization will have on the translation profession, and the

need to prepare products for specific markets around the world for simultaneous release. Esselink predicts that because of that pressure for faster translations, instead of finishing a manual and handing a copy to translators, future projects will begin while the original version is still being written. The predictions are plausible, and would be of interest to those contemplating a future in technical translation

---. "Localisation and Translation." Somers 67-86.

This article provides information on the growing practice of localization – preparing international products for local markets of different cultures. As localization at times relies heavily on machine translation, Esslink provides relevant MT information. The article examines how the globalization of commerce has affected business and increased the need for translation and cultural adaptation, and would be of interest to anyone studying those fields.

Fitzgerald, Edward. Letter to E. B. Cowell. (1859). Robinson 249.

Fitzgerald supported the practice of translation into the idiom of the current day. In other words, his letter supports domestication. He wrote it after translating Arabic poetry, and he expressed frustration at his inability to capture Arabic culture as it appeared in the poems, in a way modern English readers could understand. Anyone interested in Lawrence Venuti's theory of domestication would find this letter both interesting and relevant to the topic.

Flanagan, Mary. "MT Today: Emerging Roles, New Successes." Machine Translation 12.25-27 (1997): 25-27.

Flanagan's article explains that MT's sole function is no longer to aid translators, and she describes some of the areas in which MT has recently become useful, such as Internet translation. She claims that in "shallow information acquisition," which is the purpose of Internet translation programs, MT does an excellent job. The article would be of use to anyone interested in MT capabilities, especially those that fall outside the scope of traditional professional translation roles.

Goethe, Johann Wolfgang von. "Translations." (1819). Trans. Sharon Sloan. Schulte and Biguenet 60-63.

In this essay, written during the flowering of translation theory in Germany in the nineteenth century, Goethe described three types of translation: plain prose translation, parodistic translation, and a translation style that attempts to bring the reader closer to the culture in the original work. Goethe was one of the seminal German theorists in the nineteenth century, and several theories today are based on his works.

Gregory I. "Giving the Sense." (591 AD). Trans. James Barmby. Robinson 36.

Gregory's short letter asks the recipient to translate any of Gregory's works in a non-literal fashion, to capture Gregory's ideas and not his words. This was early recognition that if a translation was done literally, then the sense of the passage would be lost in the translation

process. Gregory wrote this nearly one thousand years before non-literal translation became common practice.

Hieronymus, Eusebius. "The Best Kind of Translator." (395 AD). Trans. Paul Carroll. Robinson 22-30.

Known as Jerome, later as St. Jerome, the translator of the Vulgate Bible, described in this letter to his friend Pammachius how he translated biblical and nonbiblical texts. The letter is important because, although Jerome claimed to translate Biblical works in a literal fashion, the controversy sparked by his new Bible edition makes his claim not entirely believable. The letter marked the spillover of nonreligious theory to religious texts, translating them in a non-literal fashion

Huet, Pierre. "Concerning the Best Kind of Translation." From De optimo genere interpretandi. (1661). Trans. Edwin Dolin. Robinson 162-169.

Huet's work was rare during the 1600s because he spoke out against ornaments and excessively showy translations popular at the time. This letter called for translations that rendered the sense of the author as plainly and as closely to the original as possible, while still preserving the sense of what the author said. Anyone studying the relatively recent history of translation theory and practice would find Huet's work useful. He was ahead of his time.

Humboldt, Frederick von. From the introduction to his translation of Agamemnon. (1816). Trans. Sharon Sloan. Schulte and Biguenet 55-59.

This essay is of interest primarily because in it von Humboldt described languages as synonymical rather than identical. That principle helps explain why translation is so difficult. In MT development it helps explain why literal translation is not a good method.

Humphreys, R. Lee. "Is Machine Translation Actually Translation?" Language International 4.2 (1992): 7-11.

Humphreys' article is another suggestion of how to evaluate MT systems and their results. Humphreys explains that evaluation is so difficult because the quality of the translation generated by the program is poor. To remedy the quality, Humphreys suggests using more systems that take advantage of sublanguage, such as the successful Météo system. The article, while out of date regarding the technology it describes, would be of interest to anyone searching for a method to evaluate machine-generated translations.

Hutchins, John. ALPAC: The (In)Famous Report." 1996. Nirenburg et. al. 131-135.

Hutchins details the immediate and long-range consequences of the ALPAC report and how accurate it was. Hutchins attempts to give fair rendering. His judgment is that the report was needlessly biased against machine translation, and it made some unnecessary conclusions about machine translation before the report was written. To anyone interested in MT or MT history, this article, as well as the ALPAC report itself, would be of interest.

---. "Commercial Systems: The State of the Art." Somers 161-174.

Hutchins' article is a recent description of the uses and usefulness of MT and CAT systems – what they can be used to do and how well they do it. He describes several categories of systems and what types of texts they can ideally be used for. The article is quite recent and therefore gives a good description both of the "state of the art" regarding the equipment currently in use, and the "state of the art" describing the newest equipment available.

Judaeus, Philo. "The Creation of the Septuagint." (~20 BC). Trans. F. H Colson. Robinson 12-14.

This work was the first instance in Christian theology of translation being divinely inspired. Later translators working in the literal style used the Septuagint both as inspiration for how to translate, and as a warning of what would happen to them if they deviated from the source text. This was the origin of the literal method in Biblical translation, and those interested in translation history would find it an informative work.

Kay, Martin. "The Proper Place of Men and Machines in Language Translation." 1980. Nirenburg et. al. 221-232.

Kay wrote this article during the early resurgence of MT research and use after the worst effects of the ALPAC report had faded from memory. Kay supported human translation, but suggested that machines could be used to facilitate word search and to store translations. This article is regarded as the founding document for computer-aided translation, and anyone interested in MT or CAT would find Kay's comments informative.

Keely, Edmond. "Collaboration, Revision, and Other Less Forgivable Sins in Translation." Biguenet and Schulte 54-69.

Keely's essay, although written several decades after the Modernist influence faded from translation, is very much in the Modernist tradition. The essay reflects part of the debate in the 1980s about the autonomy of a translated text; like Poststructuralists, Keely argues that a translation, due to the creative energy needed to generate it, is an autonomous text separate from the original document that inspired it. This essay reflects the Poststructuralist influence in translation theory, and would be of interest to anyone studying recent translation theory, or how literary theory has affected translation theory and practice.

Kittle, Harald and Andreas Poltermann. "German Tradition." Baker and Malmkjær 418-429.

This encyclopedia entry concerns the translation history of the German language. It focuses on broad concepts and the most-well known and influential German translators: Martin Luther in the 1500s and Frederick Schleiermacher and Wilhelm von Humboldt in the 1800s. Like other entries, this good general source provides a list of further reading for those who wish to know more.

Koskinen, Kaisa. "(Mis)Translating the Untranslatable – the Impact of Deconstruction and

Post-Structuralism on Translation Theory.” Meta: journal des traducteurs 39 (1994): 446-52.

The literary theory of Poststructuralism has had a measurable impact on translation theory. In this article, Koskinen examines some of those impacts, such as circular arguments, a translation that is never finished, and the impossibility of translation. She also examines the process of deconstructing the text, and the article would be of interest to anyone studying recent translation theory or literary theory.

Labeo, Notker. Letter to Bishop Hugo von Sitten. (1015). Trans. Rita Copeland. Robinson 40.

Notker the German was one of the first people to translate from Latin in to German, and the first person to mention the expenses incurred in the translation process. His work is important both because he translated out of Latin for those German schoolboys of his who did not know Latin, and also because he mentioned the cost of his labors. The letter gives an economic perspective to translation early in the second millennium. Anyone interested in translation and the economic realities thereof would find this an interesting source.

Laviosa-Braithwaite, Sara. “Computers and Translators.” The European Messenger 5.1 (1996): 39-41.

This article explains, with examples, the various types of computer-aided translation programs. Laviosa-Braithwaite covers everything from term management systems and dictionaries that automate the search for vocabulary, to translation memory systems that store entire phrases and their translations. Her theory is that they are extremely useful and can be good time-saving devices if used properly. Although the article is slightly out of date, the descriptions of the various CAT tools, if not the tools themselves, is still valid, and would be helpful to anyone searching for information on CAT systems.

Lefevre, André. “Composing the Other.” Bassnett and Trivedi 75-94.

The literary theory Postcolonialism has had a substantial impact on translation theory. Lefevre examines the Postcolonial construction of the “Other,” and how that Other is used in translation. Although his ideas are more theoretical than practical, the article is still informative and would be of interest to anyone studying literary theory or the practice of domestication in translations.

Leopold, Frederich. “Grammatical, Transformative, and Mythic Translations.” (1798). Trans. Douglas Robinson. Robinson 213.

Leopold, also known as Novalis, named and defined three types of translations in this work. The work, a forerunner of the flowering of German translation theory in the 1800s, would be of interest to anyone studying recent translation history or theory.

Luther, Martin. “Circular Letter on Translation.” (1530). Trans. Douglas Robinson. Robinson

84-89.

This letter highlights Luther's translation methodology, and in it Luther explained his new ideas. He was the first to deviate from the written original not to dress up the text, but to simplify it. He used common, vernacular speech so that people with only a modest education could still understand the religious texts he translated. The letter is also interesting because Luther freely expressed his frustration with those who, in his eyes, could not translate but condemned him for his methods. Luther's German Bible provided the basis for the written German language, and this letter will be of use to those studying German language and history as well as those studying translation history and theory.

Moisl, Angela. "A Fresh Look at MT." Language International 14.5 (2002): 27-29, 31.

This article reviews of Moisl's experience with a personal, commercially available machine translation program. She then makes suggestions for what type of personal translator to buy: one that is cost-efficient and easy to use. She also claims that, while unfair to compare the results of human and machine translation, machine translation does have an important role to play in the profession. The article would be of interest to anyone contemplating investing in a personal translator system.

Montaigne, Michel. "On Cannibales." (1580). Trans. J. M. Cohen. Robinson 116-118.

This work was the first appearance of the concept of cultural translation – of explaining cultural practices so that those from other cultures could understand them. Cultural translation is important today because of the increasing globalization of commerce, travel, and diplomacy. Montaigne's essay introduced the concept, and so will be of interest to anyone studying cultural theory and globalization, in addition to translation.

Newmark, Peter. "Modern Translation Theory." Lebende Sprachen: Zeitschrift für Freie Sprachen in Wissenschaft und Praxis 34:1 (1989): 6-8.

Newmark's article expresses distress that so many modern theories of translation discuss not so much how to translate, as what type of information and biases can be derived about the translated text or the culture of the translated text. In Newmark's eyes these theories are informative but do not help translators to translate better. He asks for a return to practical theory of translation that will help those struggling with difficult translations, or help students just learning to translate.

Niven, William, Jr., Dr. "Machine-Friendly or Reader-Friendly?" Language International 7.6 (1995): 4-10.

Niven's article describes what types of texts are easiest for machines or for humans to read, and the differences between them. The work is important to the field of machine translation specifically because it highlights those differences – MT computer programs cannot always understand source texts, thus the practice of pre-editing.

Nyberg, Eric, Teruko Mitamura, and Willem-Olaf Huijen. "Controlled Language for Authoring and Translation." Somers 245-281.

Nyberg et. al. explore the advantages of using controlled language - restricting available vocabulary - to improve the quality of texts generated by machine translation systems. The authors claim that, although controlled language does have disadvantages, its use increases the readability and uniformity of terminology within the translated text. The article would be of interest to anyone interested in MT, and to those interested in current development methods that give systems the ability to generate a better translation.

Peden, Margaret Sayers. "Building a Translation, The Reconstruction of Business: Poem 145 of Sor Juana Ines de la Cruz." Biguenet and Schulte 13-27.

Peden describes her metaphor of translation: that it is equivalent to the melting and refreezing of an ice cube. She also gives some practical advice, proceeding step by step through her translation of a Spanish sonnet, emphasizing that one should preserve the structure of the piece if one wishes to be faithful to the original text and author. Her sound advice would be of interest to anyone who translates poetry.

Plinius, Gaius Secundus. "Imitation of the Best Models." (85 AD). Trans. Betty Radice. Robinson 18-19.

In this letter, Pliny the Younger supported his theory that translation is the best method of building vocabulary and familiarity with a foreign language one wished to learn. It was a common belief and practice among the Romans and Greeks; Pliny added a new twist when he suggested translating both ways, not simply from the Greek into the Latin. The work should be of interest to anyone studying early history and theory of translation.

Pym, Anthony. "Spanish Tradition." Baker and Malmkjær 552-563.

Pym gives an overview of the history of Spanish language and its translation practices, from when that language separated from the Latin, until the present day. Included are several important Spanish translators, and explanations of what contributions they made to Spanish language and translation theory. It should be of interest to anyone looking for an overview of Spanish. Like other encyclopedia entries, this one is relatively brief; it only gives the barest skeleton of the history. Pym has included a list of works at the end that give more detailed history of Spanish translation.

Quine, Willard O. "Meaning and Translation." 1957. Venuti 94-112.

In this article Quine concerned himself with how to preserve the meaning of text while translating. Although much of the article is quite technically linguistic and difficult to understand without some background in that discipline, the article is also an excellent example of translation theory in the 1950s and its tendencies to reject fancy language in favor of plain, domesticated speech and text.

Quintilianus, Marcus Fabius. "On What We Should Employ Ourselves When We Write." (96 AD). Trans. John Shelby Watson. Robinson 19-20.

This work by Quintilian made the distinction between *metaphrasis* and *paraphrasis*. That distinction between those two types of translation would be echoed by John Dryden fifteen hundred years later, and would become a major component in modern translation theory. The work should be of interest to anyone studying ancient or modern translation theory.

Rabassa, Gregory. "No Two Snowflakes are Alike." Biguenet and Schulte 1-12.

In this essay Rabassa, the well-known translator of the works of the Colombian author Gabriel Garcia Marquez, examines some of the problems of translation and notes their possible solutions. The article will interest practicing translators because of the practicality of his advice. It is of interest to theorists both because of what he says, and because of Rabassa's style of writing. Written in the late 1980s, Rabassa's quirky way with words and excellent command of English, as well as his belief in the impossibility of a translation ever being perfect, render the work an excellent example of the Poststructuralist influence on translation theory.

Roe, Ian F. "Translation Theory and Translation in Practice." German Life and Letters 48 (1995): 376-89.

Here Roe has some practical advice for translators: to read and comprehend the text and its purpose before translating, and to create a final translation that is culture-specific. Roe also includes a few ideas of how translation can be incorporated into language learning. The article should be of interest to teachers who wish to use translation as one of their methods, and also to translators seeking advice on better translation methods.

Salama-Carr, Myriam. "French Tradition." Baker and Malmkjær 409-418.

This encyclopedia entry gives an overview of the history of French translation, from the time when it was separating itself from Latin until the present day. The author has included names of influential French translators and why they were important, as well as a list of recommended works for further reading.

Schleiermacher, Frederick. "On the Different Methods of Translating." (1813). Trans. Waltraud Bartscht. Schulte and Biguenet 36-54.

In this essay Schleiermacher pursues several different ideas. He describes several uses for translation, explains why translation is impossible and gives several versions of it, and describes the task of the true translator. Schleiermacher was a German translator and scholar during the 1800s and was a key figure in the development of the new theories of translation that surfaced in Germany at that time. As his ideas remain important today in both German and non-German translation theory, the work would be of interest to anyone studying modern translation theory.

Schneider, Thomas, Dr. "Stop the Presses: Why the Web Has Not Changed Machine

Translation.” Language International 12.3 (2000): 22-24.

Schneider’s article discusses possible uses of machine translation, specifically its suitability for translation for the purpose of information dissemination and acquisition, and translation of repetitive texts. He admits that while MT cannot produce perfect translations, the texts generated manage to communicate the main points of the original text. This article would be of interest to anyone interested in the practical uses of machine translation or web translation, and could also provide a counterargument to those who claim MT has no practical value.

Seneca, Lucius Annaeus. “What Is.” From Moral Letters to Lucilius. (64 AD) Trans. E. Phillips Barker. Robinson 16-18.

Seneca’s comments highlighted the differences between Latin and Greek that made translation so difficult, and that today can be applied to most languages. The letter also highlights the difficulties to be found in literal translation. Seneca’s works would be of interest to anyone studying ancient translation theory and practice.

Somers, Harold. “Machine Translation, Applications.” Baker and Malmkjær 136-140.

---. “Machine Translation, History.” Baker and Malmkjær 140-143.

---. “Machine Translation, Methodology.” Baker and Malmkjær 143-149.

These three encyclopedia entries give an overview of the history, methodology, and uses of machine translation and computer-aided translation. Written by one of the foremost scholars in the MT field, they provide a brief but solid introduction to the field of MT. The list of recommend further reading that follows each passage will fill in any holes left by the encyclopedia entries.

---. “Sublanguage.” Somers 283-295.

The MT system Météo uses a specific, limited vocabulary, which is one of the reasons it works so well. That subset of language, or “sublanguage” is described in greater detail by Somers, one of the leading scholars in the MT field. This article describes different types of sublanguages and explains why using sublanguage is so successful at producing translations that need little or no post-editing. Anyone interested in MT, especially in the Météo system, would find this article interesting, informative, and relevant.

---. “Translation Memory Systems.” Somers 31-48.

Somers describes a component of computer-aided translation, the translation memory system, a database of previously translated fragments matched with their translations and stored in an easily accessible format. Somers explains how they are created, what they can be used for, and how they can be of aid to translators. He also offers caution, because translation memory software programs have some unresolved problems. This article would be of interest to anyone

researching MT or CAT, and also to professional translator contemplating investing in a computer-aided translation system.

---. "The Translator's Workstation." Somers 13-30.

The translator's workstation is made up of basic computer software, such as Word, spell check, and grammar check. Rather than replace the translator, these tools save him time. Somers describes the basic translator workstation and its advantages and disadvantages, and also explains some of the more complicated or recently released CAT systems that a professional translator may invest in to facilitate the translation process. Because of that information, anyone interested in CAT, MT or investing in a CAT system will find this article informative and relevant.

Venuti, Lawrence. "American Tradition." Baker and Malmkjær 305-316.

Venuti's encyclopedia entry gives the history of American English translation from colonial times until today. He also briefly describes MT, and the state of professional translators today. This article was particularly helpful when writing the second chapter of this paper, as it not only provided information, but also a starting point for further research. As with other encyclopedia entries, this one gives only the most general facts, but it lists works that the reader may peruse if he chooses to pursue more in-depth information.

Weaver, William. "The Process of Translation." Biguenet and Schulte 117-124.

What is of most interest in this essay is the ascertainment that translators claim they have when they have translated something correctly. Weaver claims that he knows something is correct not by cognitive process, but by a tingling feeling he has. This was a new concept in the 1980s, and the essay would be of interest to anyone studying that period of translation history, theory and practice.

White, John. "How to Evaluate Machine Translation." Somers 211-242.

There are several ideas about how to evaluate the results of machine translation. White's article describes his ideas about MT. He describes possible scenarios: to evaluate based solely on output or based on input and output both. White also describes various parties of interest, such as developers, investors, and vendors who evaluate MT systems, and what criteria they use. The article is useful to those interested in MT, and provides useful information about judging the texts generated by machine translation systems.

Wilmer, Clive. "Pound's Life and Career." Modern American Poets.
http://www.english.uiuc.edu/maps/poets/m_r/pound/bio.htm

Wood, Paul. "What do Translators do? And What Machines can Not." The Linguist: Journal of the Institute of Linguistics 39.5 (2000): 133-135.

This essay argues against machine translation. Wood claims that on-line and commercial translation programs yield terrible translations and that engineers who developed them tolerate mistakes they would not from a human translator simply because they enjoy playing with technology. Although one may not necessarily agree with the opinion, it is still important to know what the criticism is, and why its adherents believe so.

Yang, Jing and Elke Lange. "Going Live on the Internet." Somers 191-208.

This article provides more information on the instantaneous translation systems available on line, such as Babel Fish and Google Translate. Yang and Lange describe the history, the strengths and weaknesses of the free systems, and what tasks they are ideally suited to. They also describe what is needed to create such a system: the computer requirements as well as dictionary and linguistic requirements. This article would be of interest to anyone studying machine translation. It makes a counterargument to those opposed to online translation programs.