Germanisms in Modern English Usage: A Cultural, Historical and ESL Perspective

D. Scott Humphries¹
Dr. Noraseth Kaewwipat²

Abstract

Every language has loan words or borrowed words from contact with other languages and cultures that, after a period of time, become permanent words of that language. This is considered to be a natural phenomenon, occurring often in almost all world languages. While English words appear more and more frequently at the present time in other languages, due to the use of English as a global language, English itself has adopted words from other languages; words that we now take for granted as or simply consider to be English words. English is, in fact, quite a heavy “borrower” of foreign words, as we plan to demonstrate in this essay. This paper will explore the incidence of borrowed words in English and, although we may mention examples from other languages, will focus on the phenomenon of borrowed German words (Germanisms) in English, especially in American English. This paper will also address issues that borrowed or “foreign” words in English might raise in the language classroom for learners of English as a second, or non-native, language.

Introduction

Borrowing or sharing words between languages is a natural process that occurs when different cultures and societies intermingle. It is safe to say that cross cultural contact has been a part of the human condition since the beginning of civilization and continues to be part of the current globalized world. From the Silk Road to the Internet, and all points in-between, it seems to be part of human nature for different people from separate countries and cultural circles to communicate with each other, whether out of necessity or desire. In terms of global trade, words as well as wares were – and are – exchanged.

Before English emerged as the current global language and today’s biggest source of borrowed words for other modern languages (we currently use the English

¹ D. Scott Humphries has a B.A. in German and English from Hunter College of the City University of New York and a CELTA Certificate from Embassy CES International Teacher Training Institute in Hastings, England. He taught English for five years in Kassel, Germany and is currently a lecturer of English at Chulalongkorn University in Bangkok.

² Dr. Noraseth Kaewwipat holds a B.A. in German from Thammasat University in Bangkok and an M.A. and Ph.D. in German as a Foreign Language from the University of Kassel, Germany. He is currently a lecturer of German at Ramkhamhaeng University in Bangkok.
verb when we “surf the internet” in many modern languages, for example), it had also experienced its own share of the natural process of borrowing from other languages, especially languages which had in the past played an equal and often specific economic, political or cultural role within English speaking countries and cultures.

According to Fromkin and Rodman, English has borrowed extensively (460). Of the 20,000 or so words in common use, about three-fifths are borrowed. Even in less established texts – online texts, for example – it is not uncommon to find passages noting that words from the French (beef, bon voyage), Spanish (fiesta, macho) and, of course, Latin (et cetera and the abbreviations a.m. and p.m. representing, respectively, the original Latin ante meridian and post meridian) have come into the English language by way of language contact with other countries, societies and peoples. So serious is the study of such occurrences, that many branches of linguistic study (e.g. sociolinguistics, historical linguistics) concern themselves with this topic.

It is our assertion that loan words from certain languages are already quite well known and studied in English, especially words derived from Latin and French. We suggest that Germanisms in English are less often discussed, although many examples exist, and have therefore decided to make German loan words the focus of this essay. We also assert that when German words in English are discussed, they are normally discussed in a context of earlier similar origin, i.e. the Germanic root of both languages (Pan-Germanisms). In this essay we discuss borrowing from the distinction of German and English as independent languages.

In discussing borrowing, it is also important to consider the different types of linguistic borrowings possible. The following types can be distinguished: lexical, phonetic-phonological, morphological and syntactical (Weinreich 14). The area of focus here is the influence of German on English with respect to the lexical aspect (vocabulary) only. It is also important to note that some vocabulary words are not easily identifiable as being of German origin, i.e. loan translations, loan meanings, and loan creations. The English compound noun power politics is a direct translation of the German Machtpolitik, for example. Discussion of these types of loan words is excluded.

Another aspect of borrowing that must be considered is the nativization of foreign words phonologically, orthographically and morphologically/grammatically in the target language system. This can be better demonstrated using the word schnitzel as a primary example.

- **Phonological integration.** The pronunciation of the word schnitzel in German and English is similar but not identical. The letter z in German is pronounced as affricate [ts] while, in English, it is [s]. The affricate [ts] is not used in the English pronunciation system and the German sound is therefore not integrated along with the word.

- **Orthographical integration.** An example of orthographical integration is the non-use of capital letters at the beginning of each noun in English as
they would be used in German. Thus, the German Schnitzel appears as schnitzel in English. Meaning, however, is retained. As another example, the German word kaputt is spelled with two t’s, the English version with only one. Meaning is once again retained.

- **Morphological and grammatical integration.** We can also use the word schnitzel as an example of morphological and grammatical integration. Grammatically, all German nouns must be masculine (der), feminine (die) or neutral (das). Schnitzel has the neutral gender shown by the definite article das (das Schnitzel). This gender system is not retained in English, i.e. the gender specific definite article is not borrowed along with the noun. To examine the morphological integration of the word schnitzel into English, we must look at the plural form. The plural form of German nouns is marked by several suffixes, e.g. -n, -en, -e or -er. For example, the plural form of the word die Lampe (lamp) is Lampen, or das Kind (child) becomes Kinder (children). The word das Schnitzel has in the German language system no marker in plural, i.e. it keeps the same form. But the English word schnitzel is fully morphologically integrated into the system of the English language and the plural is indicated with the letter -s. One schnitzel becomes two schnitzels.

It should also be noted that in addition to integrated borrowed words, there exist separate and distinct words with different meanings in both languages that have enough spelling and pronunciation similarities as to cause confusion (especially for German learners of English or vice versa). These words are called **faux amis** or **false friends**. For example, a gift in English can be defined as something given as a present. The German word Gift, however, means poison. These words are not part of the focus of this essay, as they are not actually borrowed.

**Different Periods of Borrowing during the Development of the English Language**

In Baugh and Cable and Kemmer different periods of borrowing during the development of the English language are introduced, which we would like to briefly discuss. These periods begin shortly before 600 A.D. in the Germanic branch of the Indo-European languages. A phenomenon called the Second Sound-Shift in the West Germanic languages produced two separate and distinct language groups called Anglo-Frisian and German (Baugh and Cable). English, now forming on its own, begins to be influenced by and to borrow from the German language it has just broken away from, hence the name of this period as “Germanic”.

---

3 For a list of examples of false friends in German and English, see Neuner, et al.
4 For more details see Kemmer <http://www.ruf.rice.edu/~kemmer/Words04/history/index.html>
The Old English Period (600-1100 A.D.) continued to be influenced by Latin. Latin was still the language of highly regarded civilization, especially in commercial and military and later religious and intellectual spheres (Baugh and Cable 33). Also during this time the Celtic people were conquered by the Anglo-Saxons and the mixture of these two populations added Celtic influence to the already existing Latin. Words from the Latin and Celtic (e.g. chest, from the Latin cest for box, and badger, from the Celtic brocc) entered the English language during this period.

The Middle English Period (1100-1500) saw the influence of the Scandinavian languages and French. The French influence was stronger and affected the areas of law and government, religion, royalty, military, cooking and culture, fine art, education and medicine. Some examples of words derived from the French during this time are revenue, chaplain, volunteer, poultry, pestilence and diamond. According to Baugh and Cable (177), so much of Middle English literature was based on French originals that it would have been hard for English writers to resist importing specific French words in their adaptations.

The Early Modern Period (1500-1650) included the renaissance and, as a result, a wider area of European influence. During this period Arabic and Spanish words, such as algebra, zenith, admiral, and words from other Romance languages (cipher, saffron, zero, sugar, coffee) were adopted by the English language.

Finally we arrive at the Modern Period (1650-present). In addition to even wider European influence we begin to see the first specific modern German words imported into English, namely feldspar, quartz, sauerkraut, stein and pretzel, to name a few (modern German meaning that both the German and English languages developed greatly and in divergent directions since the Second Sound Shift and by the Modern Period had become independent and completely different languages in contrast to the similar languages they were at the time directly prior to the Shift). Included also in this Modern Period are the birth of the United States as a nation and the beginning of the formation of American English as a new dialect of the English language. American English was heavily influenced by the languages of Native American tribes already present on the continent as the first Europeans arrived and from the languages of the diasporas of European and other nations who settled there and developed the country. This influence includes the 20th Century and continues even today.

Significance of German Influence on American English

In examining the significance of German influence on American English, we need to examine how the languages have co-mingled, i.e. what type or types of contact between the German and American cultures has resulted in some of the more current Germanisms in English. The contact can be broken down into three main areas, namely, influence through immigration, influence through education (especially in the areas of science and humanities) and political influence including
the historical role Germany played on the world stage during the 20th Century related to but not exclusive of the two World Wars.

Influence through Immigration

As stated, the focus in this essay is German words imported into American English. It is perhaps best, therefore, to begin a discussion of the contact between those two cultures with a look at German immigration into America.

Although German immigration began with the establishing of the original British colonies in the New World, it was considered light until the middle of the 19th Century when the failure of the revolution in Germany in 1848 resulted in about a million and a half immigrants coming in the decade directly following (Baugh and Cable 351). According to travel author Bill Bryson, many of these Germans settled in the mid-western area of the United States in cities such as Milwaukee, Wisconsin; St Louis, Missouri and Cincinnati, Ohio (169). Bryson also notes differences in various sub-cultures of German immigrants, including Jewish-Germans from Eastern Europe, who used a dialect of German known as Yiddish (originally written from right to left as Hebrew is written and using Hebrew characters), and another group of Protestant immigrants called Pennsylvania Germans since they primarily settled in that state.

Still existing groups of Pennsylvania Germans known today as Mennonites, Amish or Pennsylvania Dutch – a misnomer of the German word Deutsch (German) – remain concentrated in the southeastern sections of the states of Pennsylvania and Ohio. For religious reasons, these groups shun electricity and modern conveniences, including automobiles. Their insularity has kept their peculiar dialect of German largely intact and in use. This dialect has, however, been largely influenced by contact with the American English language. Cross-cultural language trading between early Pennsylvania German and English settlers has resulted in some general words still currently in use in English: *loaf, kindergarten, hoodlum, kaput* (broken), *kaffeeklatsch, liverwurst, bratwurst* and many others (Bryson 169-70). The borrowing which happened during this period of immigration is also a reason why a 21st Century American is just as likely to say *gesundheit* (good health) as “God bless you” when someone sneezes.

Yiddish, as stated, is the historic language of Jews from Central and Eastern Europe. It can be more accurately described as a combination of a type of medieval German city dialects, including Hebrew and Aramaic (Katz). It is through American Jewish-German immigration that many Yiddish words have entered everyday English, although these words tend to be localized in areas where there are heavy Jewish populations, e.g. New York City. It is not unusual even now to hear a New Yorker talk about having to *schlep* from the Village up to the Bronx while stopping for a *bagel* (a type of bread resembling a cross between a roll and donut) along the way. Other Yiddish words currently in use in American English include: *kibbitz* (to interfere), *keister* (rear end), *nosh* (eat a small amount), *mashuggah* (crazy) and *chutzpah* (boldness) (Bryson 169-70). These words are often imported since the
original Yiddish word retains a more detailed or nuanced meaning that cannot be translated. *Schlep*, as can be noted in context above, means “to travel”. But a more nuanced description of *schlep* would include the idea of being burdened or tired on a long trip. *Chutzpah*, as another example, is often translated as “boldness” but its subtleties get lost along the way. Bryson illustrates this with the old story of the boy who kills his parents but later begs the court for mercy since he is now an orphan (171-72). Now that’s chutzpah! Another example would be a burglar who breaks his leg while robbing your house, causing him, of course, to be arrested since he can’t run away. Later, though, he might sue you for damages since he’s injured himself on your property. Such chutzpah!

Yiddish in English also often includes a change in syntax that causes an English sentence to suddenly sound a bit German or “foreign”, e.g. “You want I should worry?” instead of the more English sounding “Do you think I should worry about it?”

**Influence through the Area of Education: Science and Humanities**

Immigration from Germany to America was not the only circumstance during the middle and late 19th Century which influenced the borrowing of German words into English. German universities developed also during this time into major world renowned seats of scientific and intellectual thought. In fact, the failed revolution in 1848, which sparked the wave of German immigration to North America, began at the University of Heidelberg and was largely a result of the development of the new and radical ideas being discussed in the German academic environment. German words relating to science and medicine began to be imported into English as well as other languages at this time. The German language, it can be said, was exported along with the new and exciting academic and scientific ideas coming out of the country. In the early part of the 20th Century it was necessary for many English students majoring in or involved with the sciences (e.g. chemistry) to study German in order to read scientific texts, which were mostly written in German (Ammon 251, 256). German was, during the end of the 19th Century and the beginning of the 20th Century, one of the main languages used for scientific discourse. Many current English scientific and medical terms also reflect this early scientific role of German language, even German proper names, as their source, e.g. *Alzheimer’s disease* from Alois Alzheimer (1864-1915) who first identified it in 1906, or *Doppler Effect*, named after the Austrian physicist who discovered it.5

This use of German in scientific and intellectual study carried over into the humanities, specifically in the areas of psychology, philosophy and language science, mainly via Freud and Jung, both of whom were native German speakers and who wrote their original works in that language. In the area of philosophy,

Nietzsche and Schopenhauer wrote also in their native German. While works of these great thinkers would later be translated into English, certain words that could not be translated without losing their specific meanings were imported and adopted. This resulted in words like *weltschmerz*, *übermensch*\(^6\), *Sturm und Drang*, *zeitgeist*, *angst*, *gestalt*, and *schadenfreude* and their related meanings being borrowed into English. While some of the words here originated in use in only specialized scientific or intellectual areas\(^7\), some of the more frequently used made the transition into general usage.

At the beginning of borrowed usage some of these words may have been italicized in English texts, or offset with quotation marks, to indicate that the word was from a foreign language. But by the middle to end of the 20\(^{th}\) Century, the word *schadenfreude*, as well as other borrowed German words, had been used so often as to render any special indication of its foreign root unnecessary. The word simply appears in English texts as a now fully integrated borrowed word, understood by most educated English speakers.

An example from the American magazine *Vanity Fair* (April 2004), used in an article about a corrupt and arrogant businessman now caught in scandal, shows the word used without any explanation: “… and as he and his wife retreat behind the gates of their mansion in Toronto, there is much Schadenfreude\(^8\) the world over.” Another example from *TIME Magazine* (September 25, 2003) involves an interview with former U.S. Secretary of State Madeline Fulbright. The interviewer states: “Bush’s foreign policy started as ‘anything but Clinton’ in almost every area – the Middle East, North Korea, China. Now events have pushed it back much closer to your approach. Do you ever succumb to schadenfreude?” Her reply: “No, I’m much too kind and generous a person.” Not only is the borrowed German word used without any explanation, but Ms. Fulbright answers directly and accurately without asking for one. That she understands the fine nuance of the word, i.e. the glee or intense joy one feels at another’s pain or misfortune, is evident in her equally nuanced answer when she uses the words “kind and generous” in opposition to the meaning. No explanation is necessary between interviewer and interviewee, nor is one necessary for the reader.

It can be argued that we have English equivalents for some of these borrowed words. *Schadenfreude* is often translated as the English verb *to gloat*. But *to gloat*, which is to look at or think about something with great or excessive, often smug, satisfaction\(^9\), while close in meaning, misses the fine distinction of the glee one experiences when someone, especially someone one doesn’t like, experiences

---

\(^6\) *über* alone, with or without the umlaut (the two dots above the u that changes the sound of that letter), is also often used as a prefix in English meaning *super*

\(^7\) See About.com &lt;http://german.about.com/library/blvoc_gerloan.htm&gt;

\(^8\) *Schadenfreude* appears here capitalized as in the original quote. Either capitalized or lower case S is possible for *schadenfreude*.

misfortune. So the borrowed German word is used in its original form because there is no true English equivalent.  

**Influence through the Area of Politics and War**

With Germany at the center of both World Wars in the 20th Century, it is obvious that politically motivated language contact inevitably occurred. Baugh and Cable note that great developments or events influence language (300). Especially during and after World War II (1939-1945), we see German words such as *blitzkrieg* and *flak* enter the English language. Often they retain a form of their meaning, as in *blitzkrieg* (*lightning war* for sudden air attack). Sometimes, however, the meaning is altered, yet related. *Flak* is defined in English as antiaircraft fire, yet the original word in German is actually an abbreviation for the gun from which the fire comes (*Fliegerabwehrkanone*, literally “aircraft anti gun”). Many words associated with Hitler and the Nazis also became well known in English during this time, such as *Gestapo*, *SS*, *Reich*, *Autobahn*, and *Fuhrer*\(^\text{11}\). Other military words, not directly related to the Nazi party, also entered English at this time. This list includes *Luftwaffe*, *Panzer*, *U-Boat*, etc. While some of these words can be considered political and/or military, other more common German words entered the English language after more direct contact between soldiers and civilians on the ground, e.g. *verboten*, *achtung*, *jawohl*. It is not common to use the term *Luftwaffe* in American English to describe the Air Force, but an American, especially of the WWII generation, would understand the meaning of the word in context. It is, however, not unusual to see words like *verboten* and *blitzkrieg* still currently in use in major U.S. publications. An article in *TIME* (July 15, 2002), for example, spoke of items not allowed on airplanes after the September 11, 2001 terrorist attacks thusly: “… nail clippers, tweezers and syringes … are now allowed after inspection. Yet plenty of verboten items – knives, screwdrivers, scissors – are still being confiscated.” Or consider this except from an article in *Newsweek* (December 20, 2004) discussing a government crackdown on the mafia in Italy: “Finally, last week, Rome launched its blitzkrieg.” *Newsweek* and *TIME* are, it should be noted, weekly news magazines consumed by the American general public and not obscure academic or niche market journals.

With Germany’s defeat, the influence of German words in English declined rapidly after the end of the Second World War. During the Post-War occupation of and rebuilding of Germany, English borrowed words into German increased. This trend has continued until today. In fact, the use of English words in German has been so pervasive during the last half decade that “German as an endangered

---

10 See About.com <http://german.about.com/library/blvoc_gerloan.htm>

11 The German spelling contains an umlaut: *Führer*. The noun is no longer used alone in German due to its association with Hitler, but is often used in compound nouns, e.g. *Reiseführer* (tour guide). The German verb *führen* (to lead) remains in common use.
language” (see Eisenberg) is a constant topic with much discussion, both oral and written, in that country today.

Practical Didactics – Borrowed Words in the ESL Classroom

If the borrowed German words in English discussed in this essay are presently recognized and defined as English words, is it even necessary to address them as loan words in an ESL classroom setting? The answer must be yes. Although these words can now be considered technically English, they still present an issue to the learner and instructor, namely when or at what level to introduce them as vocabulary. Since these words are not found in beginning level textbooks, it is safe to assume they are not suitable for that level. Even upper intermediate textbooks may not contain any of these words. But at the upper intermediate level a student is likely to encounter such words in assigned or self chosen auxiliary reading texts, especially American texts. It is then that these words can be introduced into the ESL classroom and first addressed as English vocabulary. Once the students are comfortable with the definitions, it may be then interesting at an upper intermediate level to address the roots of such loan words, either in general or grouped by specific languages, as a language awareness or cultural awareness topic.

As a language awareness topic, students can be introduced to the idea that English is a diverse, multi-layered language, especially in terms of vocabulary. English has been and continues to be open to the influence of other languages, accepting vocabulary words from them, and has perhaps developed into or survived as a global language because of this flexibility. Other languages are often not as flexible in this regard. French, for example, is strictly regulated in terms of foreign words allowed to enter the language.

At this point we would like to recommend some guidelines or present some specific ideas about how to incorporate loan words as part of an ESL lesson. These examples are presented in a general form and can be adapted for any classroom situation:

- Text-based context rather than word list

As mentioned, loan words can appear in auxiliary texts at an upper intermediate or higher level. An ideal text might contain several loan words from one or several languages. Once finished with text comprehension, students can extract borrowed words and sort according to language. This activity is possible because most (humanities) students have knowledge of more than one foreign language and should be able to recognize borrowed words in an English text. It is possible to use this exercise with texts that have borrowed words from only one language or words from various languages. If only one foreign language is the focus

---

12 Authenticity of text, i.e. an actual text from a published source or an instructor created text, should be up to the discretion of the ESL teacher.
in a particular text (e.g. German), these words can be extracted and put into categories (e.g. political, medical, etc.) in the same manner as that used with various languages. Other loan words not in the text can then be solicited from or given to the students and added to the list. The exercise might look like this (text excluded):

Find all foreign words in the text and place in one of the languages and categories below:

<table>
<thead>
<tr>
<th>Language</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>German</td>
<td>Alzheimer’s</td>
</tr>
<tr>
<td>French</td>
<td>Coup d’etat</td>
</tr>
<tr>
<td>Spanish</td>
<td>Paella</td>
</tr>
<tr>
<td>…</td>
<td></td>
</tr>
</tbody>
</table>

Can you add more foreign words to the list that you know are used in English that are not in the text?

Through this activity students can also determine which language dominates which domain or topic (when loan words from more than one foreign language are present). Other possibilities are also available depending on the creativity of the instructor or the class.

- Background discussion: historical and cultural

A discussion of how certain loan words came to be used in English can open the floor to interesting and exciting discussions in which the students are able to demonstrate and review their already existing knowledge of history and development of human civilization which they have acquired in their general studies. In the German based ESL classroom, for example, a discussion of Germany’s role in the 20th Century, especially in relation to the World Wars, can be brought into the classroom as a historical or cultural discussion along with the borrowed words generated by the events. In this instance, it is especially useful to have students focus on any words from their own language that have been borrowed into English.13

If the students have no background information allowing them to participate in the historical and cultural discussion illustrated here, then they can look up the information in the classroom or as homework in an appropriate research text, such as an encyclopedia (e.g. Britannica) or lexicon. This also presents a good opportunity for non-native learners of English to familiarize themselves with these types of reference materials and the specialized formats and layouts, even elevated language, inherent in such materials. It is also possible to allow students to use the

---

13 In the author’s experience in ESL classrooms in Germany, any discussion of German loan words in English was well received and stimulated speaking activities as well as vocabulary building.
computer and internet (e.g. search engines like Google or free online encyclopedias like Wikipedia). However, the trustworthiness and acceptability of such electronic information should be determined by the teacher beforehand and/or discussed with the students.

- **Dictionary Work**

  By dictionary work we refer to something slightly different and more specific from the ideas already stated relating to encyclopedias and other reference materials. Rather than focus on texts found in reference materials and the analytical approach inherent in the same materials, the dictionary provides a more lexical approach, beginning with the actual meaning of a word followed by a more in-depth discussion of other meanings, idiomatic usage and other related vocabulary (such as synonyms, antonyms and homonyms) and grammatical oriented issues. A dictionary also provides etymological information. It should be stated that the word dictionary for purposes of this discussion refers to monolingual dictionaries rather than dual language dictionaries, which tend to provide simple translations without going into depth.

  Students can be encouraged, then, at an upper intermediate level to begin to use monolingual dictionaries if they are not doing so already and the use of such a reference book can be demonstrated in the classroom in relation to loan words but also in relation to other more general vocabulary. When focusing on loan words, the etymological aspect of the dictionary can also be pointed out. Thus two objectives can be defined and achieved with dictionary work: training students to properly use and appreciate a monolingual dictionary and, in the case of Germanisms or loan words from other languages, demonstrating how a monolingual dictionary acts as a tool for the etymological task at hand, namely looking up and gaining an in-depth understanding of the origin and development of said loan words. In combination with the earlier given in-class exercise focusing on borrowed words, the monolingual dictionary can be brought into the ELS classroom, demonstrated and used as part of an activity rather than simply recommended as a reference tool for use outside of the classroom.

  These examples show that language learning, especially at the upper intermediate level, can go beyond simply learning to speak in the target language and can also begin to include critical thinking and critical use of language itself and language learning tools, like dictionaries, as topics.

**Conclusion**

In our discussion of loan words we have presented a description of periods of borrowing in the English language with a focus on the significance of Germanisms in American English. This significance has included a look at different areas influencing the adoption of Germanisms currently in use in English and has provided examples. From there we moved on to a discussion of the inclusion of
Germanisms or loan words from other languages in the ESL classroom and offered suggestions as to exercises and methods that can be used to present this material effectively. We have demonstrated that borrowed words are a topic worthy of etymological discourse and interest.

From a cultural perspective as well, borrowed words and language itself relate to social harmonization. The study of loan words can encourage better cross cultural relations by raising student’s awareness about their own language, the English language, the language of others and language in general (Garrett and James 331). It can be emphasized in the classroom that borrowing is a normal process that includes people and cultures as well as words. Therefore the tolerance of borrowed words in a language can show a student that cross cultural societal tolerance is also a possibility. By focusing on borrowed words in the classroom, an ESL teacher can foster such cross cultural understanding and tolerance. It can only be beneficial to carry these ideas forward into the ESL classroom and then out into the world.
Works Cited


The electronic version of this article is identical to the version printed in Chulalongkorn University’s Journal Thoughts. However, due to formatting differences the page numbering in the electronic version does not match that of the Thoughts version. Please keep that in mind when quoting.