

STUDIES IN HUMANITIES

CONFERENCE PROCEEDINGS

SPRING 2022



DAKAM

**STUDIES IN HUMANITIES
CONFERENCE PROCEEDINGS 2021**

DAKAM BOOKS

STUDIES IN HUMANITIES Conference Proceedings / Spring 2022
ISBN: 978-625-7034-21-0

Editor: Özgür Öztürk

2nd Edition

JUNE 2022 İstanbul.

DAKAM BOOKS - Özgür Öztürk DAKAM YAYINLARI

www.dakam.org

Firuzğa Mah. Boğazkesen Cad., No:76/8, 34425, Beyoğlu, İstanbul.

Cover Design: D/GD (DAKAM Graphic Design)

Print: Metin Copy Plus, Mollafenari Mah., Türkocağı Cad. 3/1, Mahmutpaşa/Istanbul, Turkey.

CONTENTS

THE PROCESSING OF SPANISH VERBS IN THIRD LANGUAGE ACQUISITION: EVIDENCE OF EYE-TRACKING	
HUI-CHUAN LU, AN-CHUNG CHENG, YU-HSUAN CHEN	7
L2 AS THE LEARNING LANGUAGE FOR L3: AN EXPLORATORY CASE STUDY OF LANGUAGE INTERACTIONS FROM TURKISH L3 LEARNERS TRANSLATIONS	
YASEMIN ÇİMEN, XINMING ZHENG	9
ORHAN PAMUK’S RECEPTION IN BRAZIL: A MATTER OF TRANSLATION	
PAULO STELLA, DANIEL CRUZ	24
Shift in meaning: The invisible hand in translation	
BADIA EL HARRAKI	38
A BIODESIGN EDUCATION PROGRAM PROPOSAL FOR ARCHITECTS	
SEÇİL YAĞLI, DİDEM AKYOL ALTUN	43
UNDERSTANDING GEOMETRICAL SHAPES' ROLE IN DESIGN STUDIO CREATIVITY PROCESSES	
DR. ODETA MANAHASA	59
MULTI-SPHERE COMPARATIVE CASES STUDY OF ICT, EQUALITY, AND 21st CENTURY COMPETENCE IN HIGHER EDUCATION INTERNATIONALIZATION RESILIENCE : DIACHRONIC IC MAP FRAMEWORK BASED ON ORGANIZATIONAL CHANGE THEORY	
YIRAN MA	71
THE FALL OF KABUL. HOW WAS “THE BIGGEST FOREIGN POLICY FAILURE SINCE SUEZ” EXPLAINED TO THE BRITISH PUBLIC?	
JOSEPH MACADAM	97
LIKELY NON-STATE ACTOR COUNTERMEASURES TO SIGINT MONITORING EFFORTS ON AND OFF THE BATTLEFIELD	

LAWRENCE FOX	110
YOUTH AS AN AGENT OF COUNTER-TERRORISM - A CASE STUDY OF PAKISTAN	122
SHABANA FAYYAZ	122
OCEANS AWAY FROM THE WAKEFUL DAY: A PSYCHOANALYTICAL READING OF MAURICE SENDAK'S "WHERE THE WILD THINGS ARE" -	
İLKAN CAN İPEKÇİ	124
BODY AND STAGE AS SITES OF STRUGGLE: OSCILLATING BETWEEN PERFORMING AND RESISTING PATRIARCHAL DISCOURSES IN TWO WOMEN (2017)-	
MARINA FARIMA	125

LINGUISTICS AND LANGUAGE STUDIES

THE PROCESSING OF SPANISH VERBS IN THIRD LANGUAGE ACQUISITION: EVIDENCE OF EYE-TRACKING

HUI-CHUAN LU, AN-CHUNG CHENG, YU-HSUAN CHEN

National Cheng Kung University, Taiwan

University of Toledo, USA

ABSTRACT

This study examined the initial stage of input processing or the form-meaning connection in the second language acquisition model (VanPatten, 1996, 2004), focusing on the Spanish subjunctive. It investigated the attention and comprehension of the Spanish subjunctive by Taiwanese learners of Spanish, whose first language is Chinese and who learned English as the first foreign language and Spanish as a second foreign language. Previous research has shown that acquiring the Spanish mood selection between the indicative and the subjunctive is difficult for English-speaking learners. Furthermore, learning the Spanish subjunctive is even more challenging for learners whose native language does not include verbal inflection. There have been numerous studies on the Spanish subjunctive in theoretical linguistics and second language acquisition. However, little research is found on empirical studies concerning the cognitive processes of the subjunctive by Spanish L3 learners. Thus, this study attempted to tackle this problem with the eye-movement recording technology, using the results of corpus-based analysis for stimuli, to investigate the processing of the verbal inflections in the acquisition of the Spanish subjunctive by the Taiwanese learners of Spanish as a third language.

Eye-tracking techniques enable us to take moment-by-moment measurements to examine reading times on areas of interest (e.g., letters, words, or sentence segments) to make inferences about the cognitive processes involved in reading. This study focused on the processing and comprehension of the target forms under two input processing principles in second language acquisition: The sentence location principle and the lexical preference principle. We hypothesized that participants would notice the verbal inflection when the stimuli included verbs in a sentence's initial position. In addition, they would first attend to lexical cues before attending to the verbal inflection when they read a sentence. The participants were Taiwanese college students of Spanish who have completed at least 200 instructional hours at different levels measured by a standardized proficiency assessment (STAMP 4s). The stimuli of the eye-tracking experiment were designed to verify the two input processing principles, including two sets of sentences and comprehension questions. Part I presented complete sentences containing either the indicative or subjunctive forms in the subordinate clauses, followed by questions regarding the speaker's certainty. Part II presented the subordinate clause of sentences, same as those in Part I, except that the main clause was left blank, followed by a comprehension question to fill the blank in the main clause. This latter type of stimulus puts the verb in the subordinate clause in a sentence's initial position.

The results revealed that participants' attention toward verbs in the subordinate clause affected their sentence comprehension accuracy and that morphology's importance cannot be ignored. Participants tended to focus on the element in the sentence-initial position, the first word of the main clause in Part I, and the conjugated verb in the subordinate clause in Part II. This finding suggests that the position of elements is more influential than verbal morphology. The results also showed that participants at different proficiency levels demonstrated other behaviors in attention to the verbal inflection of a subordinate clause

and comprehension accuracy in grammaticality judgment when they read a sentence on a computer screen. The high proficiency level participants tended to have a longer total fixation time on the verb ending of a subordinate clause when they better understood the pragmatic meaning. On the other hand, participants of the low proficiency level showed the opposite behaviors. Meanwhile, the experiment results revealed that high-level participants showed a more consistent and stable acquisition state of the Spanish subjunctive than the low-level participants. Pedagogical implications for the Spanish subjunctive will be provided at the end of the presentation.

KEYWORDS: Subjunctive, Eye-tracking, L3 Acquisition

L2 AS THE LEARNING LANGUAGE FOR L3: AN EXPLORATORY CASE STUDY OF LANGUAGE INTERACTIONS FROM TURKISH L3 LEARNERS TRANSLATIONS

YASEMIN ÇIMEN, XINMING ZHENG

Yasemin Çimen

Ph.D. Student, Shanghai International Studies University

XINMING ZHENG

Professor, Shanghai International Studies University

ABSTRACT

This study provides a comprehensive analysis of the interaction of Turkish learners' (native speaker) first foreign language, English, and their second foreign language, Chinese, and aims to explore whether learners' English (L2) is a trigger or not in the process of their acquisition of Chinese (L3). In order to select the most suitable candidates to acquire baseline data, a pilot study is conducted in the context of this study and it showed that %85 of the Turkish students learned Chinese with the help of English written sources. Four Students are selected as focus group. For a deeper study of the effects of "transferability", a qualitative research method is adopted in light of the research questions, and translation is chosen as the tool to explore interactions between L1, L2 and L3. The selected participants are assigned with translate (exposed to L2) and retranslate (L2 removed) text tasks and interviewed to reach qualitative and quantitative data with the case study approach. Our study supports the argument that the previous exposure to L2 before translating from/to L3 from/to L3 positively correlates with production performance. Turkish learners who start learning L3 from L2 sources tend to rely on their L2 knowledge when they need it. They use L2 as a supporting language, and some recurring errors result from cross-linguistic interactions between the three languages. It is strongly suggested that Turkish learners' sources to learn Chinese language were shaped by their motivations and contextual factors determine the quality and intensity of the source language they engage in which, in turn, affect their translation performance.

KEYWORDS: language interactions; language transfer; positive transfer; negative transfer;

1. INTRODUCTION

There are many reasons to study the linguistic behavior of multilingual. Given the world population, it is estimated that there are more bilingual or multilingual people than monolingual people (Hammarberg, 2001). Although many researchers who studied bilingualism claim this assumption, they have not yet become confident with any proven document (Cook, 2003; De Bot, 2002; Grosjean, 1982; Hakuta, 1986). Regardless of opposing theories, we can indeed say that every human being has the ability to learn multiple languages. The number of people who speak two languages or more is increasing every day. Inevitable changes across multilingualism trends have led the Turkish Ministry of Education to put the Chinese language as a selective course in the curriculum of High Schools (MEB, 2004). There are even some private primary and secondary schools offering the Chinese language as a selective course under the name of "Hobby Class." Moreover, naturally, the number of Turkish students who come to China for undergraduate or graduate study is increasing. This study aims to assess the interferences and interactions between learners of two different foreign languages: English (L2) as their first and learning language for L3, and Chinese (L3) as their second foreign language. The main goal here is to examine the positive and negative effects of the interactions between L2 and L3 for Turkish native speakers to elucidate the effects of using L2.

2. LITERATURE REVIEW

2.1 Interference, Transfer, CLI

One of the earliest references to language contact, bilingualism, and cross-linguistic influence comes from Homer's *Odyssey*, where Odysseus tells Penelope about the "mixed languages" of Crete. Due to widespread multilingualism in the ancient world, instances of cross-linguistic influence abound in various ancient texts, ranging from epitaphs and personal letters to legal and commercial documents to religious and literary treatises (Adams, 2002). This negative attitude to CLI referred to as only "transfer" back then, has continued until the twentieth century due to increased global migration. Even some linguists and psychologists have argued that would cause mutual interference. The word "interference" has been used as it sounds more negative (Epstein, 1915). However, after the mid-1980s, some researchers started to see the term "transfer" as a not proper term because it is mainly associated with the behaviorist notion of skills (Lado, 1957; Odlin, 1989; Osgood, 1953; Selinker, 1969). As history progresses, there has been more intense discussion on the phenomenon and the perspective of interactions. Here, in this study, one of the most valuable views is described by Sharwood Smith as; "*The influence of the mother tongue on the learner's performance in or development of a given target language; by extension, it also means the impact of any 'other tongue' known to the learner on that target language.*" (Smith, 1986, p. 198). As a leading study with a similar perspective in literature, Vildomec's work (1963), as reported in Williams & Hammarberg, (1998) can be seen as one of the first studies in trilingualism. In his research, he examined the language production of a large number of subjects. He noticed that in early L3 production, certain function words, such as prepositions, articles, and conjunctions do not come from the first language but tend to come from the second language. And he claimed that this might occur even if the two languages are not phonetically similar. Dulay (1982) propose two possible ways of describing the term "cross-linguistic interaction" According to his study, which one is from a psychological perspective, there is influence from old habits when new ones are being learned. The second is from a sociolinguistic perspective, which describes the language interactions when two language communities are in contact. For example, any Chinese language researcher would witness such occurrence in Chinese language learners' daily speaking activity. Yet, in written form, in translation cases, it would be less frequent as the learner has the chance to see over what they write. That is the justification for choosing "written translation" as collecting data tool to obtain more reliable data.

2.2 Types of Language Transfer

When learners of a second language want to write or speak in the target language, they tend to rely on their first language structure; mother tongue. If the structures are different, then many errors might occur in the target language. Thus this indicates an interference of the first language on the second language (Dechert, 1983). In this research, the languages at issue, Turkish-English-Chinese, all have their characteristic typologies. As a brief introduction of L1, L2, and L3; Turkish, for instance, is a noun before verb type (will be abbreviated as OV) of language, whereas English is classified as a verb before a noun (will be abbreviated as VO) type of language. And Chinese has always been on a discussion as a result of the language's complexity; it has been claimed that Chinese is a typical SVO language synchronically, in terms of text distribution of VO and OV word orders (Sun & Givon, 1985). Opposing to Li&Thomson's suggestion that Chinese had been undergoing a change from SVO to SOV as a result of grammaticalization of serial verb constructions (Li & Thompson, 1986). Consequently, Chinese having arguable typology and being classified in both categories makes Turkish learners confused about word orders, not only for written but also spoken language.

Language transfer refers to speakers or writers applying knowledge from their native language to a second language. Dulay (1982) defines interference as the automatic transfer, due to habit, of the surface structure of the first language onto the surface of the target language. Lott (1983) defines language transfer as "*Errors in the learner's use of the foreign language that can be traced back to the mother tongue.*" Ellis (1997) refers to interference as 'transfer,' which he says; "*The influence that the learner's L1 exerts over the acquisition of an L2*". For positive transfer, the best and most straightforward explanation is that it occurs when the two languages systems' structures yield well and result in correct language production. For example, if L1 and L2 have standard features in many aspects, it will be easier for the learner to acquire L2 accurately. A well-known example is Japanese and Chinese are similar in written form (汉字 Hanzi -漢字 Kanji). Therefore, most Japanese Chinese language learners are successful in learning Chinese characters. However, it is difficult to detect, reflecting the successful implementation of previous knowledge into the target language. And it occurs whether consciously or unconsciously is another question that needs to be looked into. In the field's history, negative transfer was the trend of seeing cross-linguistic interactions by virtue of global immigrations associated with the low moral character until the twentieth century. And cross-linguistic interactions were mainly called "interference" back then. They ignored the fact that it can also be used as a communicative strategy or even as a learning strategy, as later researcher proposed. Such as Ellis's work has shown us positive transfer occurs in many shapes; not only as a communicative strategy but also very frequently as a learning strategy by which the learner uses their knowledge of one language as a resource for formulating hypotheses about the forms, structures, functions, meaning, rules and patterns of another (Ellis, 1997).

3. METHODOLOGY

With this study, answer for this research question was inquired; "*How does knowledge of L2 impact L3 performance, as assessed by grammar, choice of word and word order in written translation?*" in the light of this question this methodological approach was created; in the first stage, it was designed to identify data with a translation assignment and in the second stage, validate the data by re-translation. The second stage was essential for internal and external reliability. Given the variety of the sources and complexity of the phenomenon, different perspectives were sought; the participants' first translation analysis, the participants' second translation analysis, and participants' beliefs interviews were three agents that looked at the same scene through three separate windows. What they saw through their windows might not be the same, and this difference might shape identifying the type of CLI. For to serve this purpose and to collect baseline data, 30 Turkish students were given the self-assessment form which had been/were studying higher education (master or Ph.D. degree) in China. To select the right candidate among these 30 students, their history in China was asked because as the nature of this study being exposed to the target language for some time regarded as a critical variable. After giving the self-assessment forms to 30 participants, four

participants were chosen by their duration of studying English and Chinese languages, learning language for Chinese, and their educational background were considered essential variables. Details about the chosen participants were given in the table below;

Anonymous Name	Gender	Age	The duration of Study Chinese	The duration of Study English
Participant A	Female	33	14 years	6 years
Participant B	Female	32	14 years	6 years
Participant C	Male	28	6 years	10 years
Participant D	Male	35	5 years	12 years

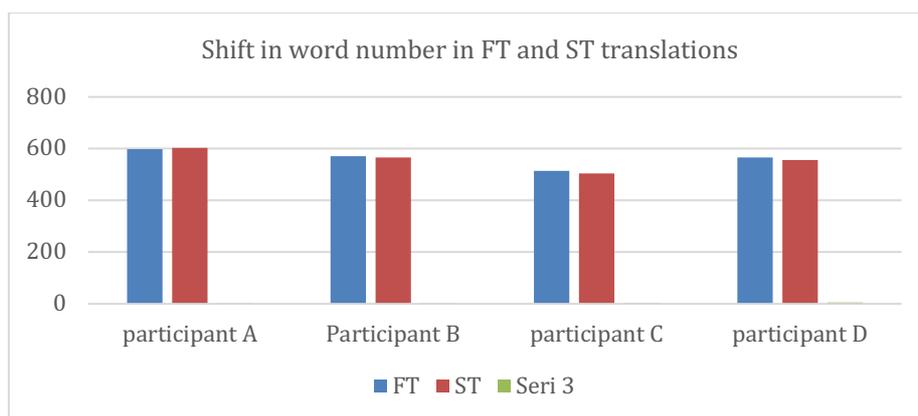
Table 1 Information of four participants

The next step was text translation assignments for the focus group. The data for this assessment has been collected from a short story which was originally written in Turkish length 278 words, including 28 sentences and seven idioms. The participants were asked to translate the story on 11th July 2019 by email for the first time. They were told to translate first to English and then to Chinese. As far as the analyzed text content is concerned, the participants exclusively have dealt with non-literary translations. The material for the corpus is taken from a short story book “*Seçme Hikayeler*” designed primarily for people non-native speakers of Turkish as it would be easier to determine the CLI caused by miscellaneous transfer types. They were allowed to use any kind of sources, including dictionary, to detect the consistent occurrence of interactions despite using aids, such as a dictionary). On 21st February 2020, the participants were asked to re-translate the same short story, only this time, they were not asked to translate it to English and all the L2-related content removed from the text. The purpose of requesting them to do so was to explore how their performance has been affected by ruling out the L2 factor. And the result is presented in terms of occurrences of mother language, first foreign language initiative and reverse/forward/negative/positive, etc., transfers in grammar, word choice, or word order aspect. The researcher interviewed each participant individually after they had completed both first time and second time translations. Each interview consisted of questions related to how and why the CLI might have occurred in their translations, discussed about what happened and has changed in the second time, possible causes of differences. Each question was created according to their performance before and after retranslation. And the possible causes of mistakes they made in translations were also asked to get their own point of view on the matter. The interviews sought to obtain suggestions that could be offered to ease the problem of interactions or the benefits to be used in practice for L3 learners.

4. RESULTS AND DISCUSSIONS

This subsection displays the similarities and differences in all participants’ retranslation. It has been created to summarize all retranslation effects regarding word choice, word order and grammar changes between the first and second time translations. These differences are all demonstrated with graphics and tables below with detailed information, and discussed with participants individually.

The first graphic below presents the number of words used in the first time (FT) and second time (ST) translations.



Graphic 1 - Shift in word number in FT and ST translations

As previously mentioned, the text required to be translated has 278 Turkish words. When the number of words used in FT and ST Chinese translations was compared, a slightly higher score in FT was observed. Participants had a pattern that word number decreased once only exposed to the original text in L1. And an approximate number of words used for 278 L1 words was between 550 to 600. To demonstrate how ruling out L2 (English) in ST translation impacted, the below table was created. It shows how the choice of word, word order and grammar have changed for all participants in ST.

FT	ST	Type of change
那	就	Grammar
想	愿意	Word choice
汤匙	茶匙, 茶勺, 勺子	Word choice
够满足	不够	Word order + choice
相信	觉得	Word choice
几乎	当	Grammar
那些山	那边的山	Grammar
经过	过了	Grammar
考试	测试, 实验	Word choice
吃了一惊	惊讶	Word choice
回到	又出去	Grammar
或者	要么...要么/或者	Grammar + word order
生命	生活	Word choice
在过去	曾几何时	Grammar
还不够	不满意	Grammar
放弃时	失去希望时	Grammar + word choice

应该	需要	Word choice
散步	逛逛	Word choice
没落下了	没漏掉	Grammar
再去拿着勺子逛逛吧	再去一遍	Grammar +word order
回到	走出	grammar
目光	观点	Word choice
眼中	睛里	Word choice
古代的时候	很久以前	Grammar + word choice
时间也没有停	过得飞快	Grammar + word choice
圣人	智者, 明智	Word choice
游览	回到	Grammar + word choice
时间流逝	流逝的时间	Grammar

Table 2 Type of changes in FT and ST

According to repeated measures analysis, the repeatedly used words are shown in Table 2. Given these results, each word was categorized upon its usage and classified as a type of change into three tiers: word order, word choice, grammar (occasionally two or three together).

In individual interview, each participants were questioned about these changes and their possible reasonings. First, according to participant A's interview transcript the table below was presented to show target lexemes from tasks given in FT and ST were zoomed in that correlated with previously presented data analysis. The purpose was to gain insight into the variability that the statistical analysis could not account for. This way, the participants' belief and pattern of using the same incorrect form of translation could help answer the research question of this study.

L1	L2	FT	ST
bir	the	一个	一位
eski zamanların birinde	once upon a time	很久以前	过去时
aradığın cevabı	the answer you need	需的	正在寻找
-----	-----	-----	这一点
ya - yada	or	或者	要么-或者
neredeysse	almost	差不多	几乎
için	so	因为	所以
tutarlı	consistent	始终如一	连贯
ilk	right away	第一时间	立即

Table 3 Examples of correlations from participant A's belief and transfer patterns

The table above showed the examples of the correlation of Participant A's belief and analysis demonstrated in Table 2 for Participant A's FT and ST translations for L3. The examples were also coherent with Participant A's belief on the subject. A study conducted by Bouvy (2000) has showed that learners tend to intra-linguistic comparison of markedness based on lexical norms. Learners assessed the transferability of synonyms in L3 (e.g., 差不多 and 几乎) within a background language (L2) in relation to the target language in question.

As it was put forward with Participant A, some selection of target lexemes from given tasks in FT and ST were zoomed in which correlates with previously presented analysis data for Participant B (see Table 4);

L1	L2	FT	ST
bir	a	一个	一位
Takmış kafayı	wonder	特别好奇	非常想知道
Aradığın yanıt	the answer you're looking for	正在寻找答案	最好的答案
-----	-----	-----	这一点
ya - yada	or	或者	要么-或者
ilk	immediately	第一时间就	一看就
için	so	因为	因此
Gökyüzündeki kuşlar	Birds in the sky	天空中的鸟	空中飞鸟

Table 4 Examples of correlations from participant B's belief and transfer patterns

The table above showed examples of the correlation of Participant B's opinion and previously presented data in table 2, Participant B's FT and ST translations for L3. The example feature for Participant B was that her results and belief were coherent with the consequence of applying aspects of markedness to third language acquisitions (Neuser, 2017). However, this is not to say that such comparisons always take place. For example, participant B might use the first word that came to her mind and assess within language markedness and be satisfied with the outcome not to conduct a CL search, as she confirmed for the example "这一点" which basically did not have a full measure for the original L1 sentence but fit perfectly for L3 translation.

As shown in Table 5 below, some selection of target lexemes from tasks given in FT and ST that correlated with previously presented analysis data for Participant C initiated;

L1	L2	FT	ST
bir	the	一个	一位
bulduğu	Found	找得到	找到的
Tekrar bahçeye çıkmış	went to garden again	走去	回到
biri	One of the	中的一个	之一
ya - yada	or	或者	要么-或者
ilk	immediately	第一时间就	一看就
için	so	因为	因此

Sağlık kurumları	Medical institutions	医疗机构	卫生机构
hep	always	总是	一直
olmak	become	当	是

Table 5 Examples of correlations from participant C's belief and transfer patterns

The table above shows examples of the correlation of Participant C's opinion and his FT and ST translations for L3, sourced from table 2. Given the observed patterns in Participant C's translations and tests, each word presented in the table above was investigated for the source language it was transferred from and the ways in which it was transferred by participants C, which correlates with his interview transcript. However, it needs to be noted that there might also be some effects of partial acquisition as it can be observed for some examples (走去-回到 or 当-是). The feature of Participant C's analysis was compatible with his belief. He used his L2 knowledge more than the first two participants although it led to negative transfer occasionally, as it happened in examples of “总是” and “一直”.

And finally, Participant D's FT and ST lexeme selections were correlated with his belief transcript and presented in the below table;

L1	L2	FT	ST
bir	a	一个	一位
eski zamanların birinde	once upon a time	很久以前	过去时
aradığın cevabı	the answer you need	需要的答案	正在寻找
bilge	wise man	圣人	明智/智者
ya - yada	or	或者	要么-或者
neredeysse	almost	差不多	几乎
için	so	所以	所以
ne	which	哪	什么
ilk	right away	第一时间	立即
dedi	said	说	告诉
dolaşmak	take a tour	游览	回到

Table 6 Examples of correlations from participant D's belief and transfer patterns

The examples of Participant D showed the predominant use of L2 as a source language for L3 translations even from ST results which led to inconsistency in word choice (e.g., 圣人 for FT, 明智 first then 智者 in ST). The feature of Participant D's analysis was that we could see a consistent pattern of choosing L3 words due to L2 interaction. Second language learners might rely on similar processes to judge an item's transferability. Ellis (2006) states that second language learners are “*intuitive statisticians*” known to analyze the target language input for patterns employing unconscious statistical learning mechanisms (Mirman et al., 2008; Newport & Aslin, 2004; Saffran et al., 1999). The individual and group analysis results for participant D were obtained after being filtered out FT and ST system.

Sharing the results with the participants, who was using both L2 and L3 in their professional life, obtaining their points of view on language transfer issues, are among the significant features of this study. Therefore, the connection between the translation accuracy and their comments on the results are presented with linguistic categorization in Table 7 below;

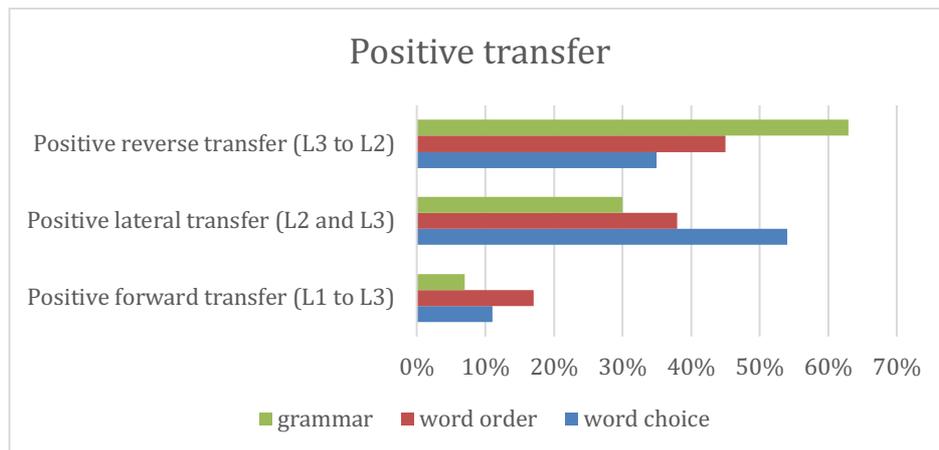
Language	L1		L2		L3	
	M	SD	M	SD	M	SD
Linguistic category						
Word choice	0.14	0.32	0.04	0.24	0.04	0.19
Word order	0.32	0.41	.28	0.60	0.13	0.39
Grammar structure	1.16	1.01	0.54	0.77	0.41	0.70

Table 7- Correlation statistics for proportion of errors in function of the linguistic category for test and translations

The means and standard deviations corresponded to the proportion of error L1-L2-L3 translations and participants' exposition. Regarding the effects of linguistic category on the proportion of errors in the participants' L1, the results indicated significantly fewer word choice errors than word order or grammar structure. The proportion of word order errors was significantly lower than the proportion of grammar structure. Finally, in L1, the proportion of grammar structure errors was the highest of all three linguistic categories studies, whereas the proportion of word choice errors was the lowest. Furthermore, for the L2 language, the same pattern of significance was seen as in the case of L1. Specifically, the proportion of word choice errors was significantly lower than that of errors corresponding to all the other linguistic categories. Likewise, the proportion of word order errors was lower than the proportions of grammar structure errors. Also, the balance of word order errors was significantly higher than in the case of the grammar structure errors. Lastly, in the case of L3 language, the proportion of word choice errors was significantly lower than the proportion of word order or grammar structure errors. On the contrary, the proportion of word choice errors among these categories was the highest one. The participants made fewer word order errors than grammar structure errors. The data suggested that Participant A, L2 exposure mostly had a neutral impact on her translation performance from L1 to L3. However, her word choices might be affected by L2, mostly negatively. Language interactions in her translation generally arose from L1, and her ST translations did not show many differences, which was quiet similar for Participant B. Although she had remarkable translating performance both times, the data demonstrated that she was negatively affected by L2 exposure in particular. These data were primarily traced in ST L3 translations. L2 exposure involved her word choice and word order in most cases for FT and she was more independent and creative in ST. As for Participant C, his data presented in a double bind situation that almost in equal times his translation performance affected positively and negatively when exposed to L2, which are consistent with his belief. There were times he benefitted from L2 for word choice in translations to L1 or L3. For Participant D, L2's insight had a highly positive impact on his performance to translate both L1 and L3. He was affected by L2 grammar; however, the consistent effect was positive transfer.

The tool chosen to collect data for this research is writing. Its distinctive nature of more conscious processes is evidenced in a study by Jarvis (2016a) in which the strategies learners employed to memorize words from an unknown language were investigated using post-task comments. It was found that learners used highly idiosyncratic approaches, often involving personal life experiences, to remember the new words. Equally, participants in this study may have used the greater time available to them in writing to produce more thought-through linguistic choices based on their personal experiences, preferences, and strategies. Such transfer patterns become more challenging to predict than the more automatic processes of speech production; however more accessible to see the transfer is positive or negative. Although most studies focus on negative transfer (Cenoz, 2001; Falk & Bardel, 2012; Williams & Hammarberg, 1998) and the odds of

transfer producing a positive result are closely tied to the typological similarity between the languages in question (Neuser, 2017); however, the languages in the subject in this research are relatively far from each other in the aspect of typology and results have shown that there was more positive transfer than negative transfer as a result of L2 being the sourcing/learning language for L3. The analysis of several instruments with or without exposure to L2 has shown that L2 has a more positive impact on L3 translation than a negative impact. The graph below shows the correlations of the three factors (word order, word choice and grammar) in positive transfer;

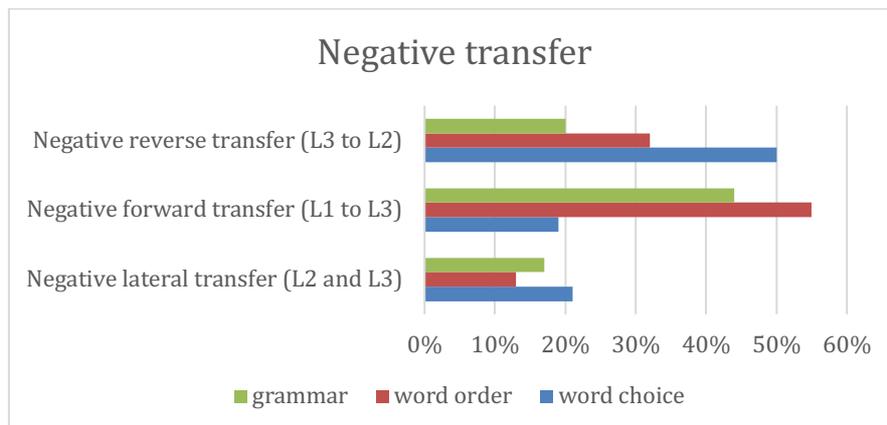


Graphic 2 Proportion of positive transfer types and the three factors

The figures presented in the graph above show the positive transfer types gathered from both translations used to collect data. The number of transfer words collected and was entered into the SPSS program to extract the scores. It was calculated with percentage. The total numbers of positive transfers entered as data were 52 for word order, 33 for word choice, and 25 for grammar. The graph above demonstrated that most of the positive transfers that occurred in this study were from L2 to L3, the factor defined as “grammar” which was also documented by Forsyth (2014) in a bilingual Italian/German population’s written L3 (English) production. In our case study, it can only be explained as it happened because L2 was the source language for L3 learning. Despite the two languages typological distance, the source language of learning L3 determines the effect and the type of transfer. It also has to be mentioned that this high score has occurred in the grammar aspect of L2 to L3 translation/re-translation tasks. And for word order factor, as previously suggested, it was assumed that the greater the structural difference between languages (L1 and L2), the greater the difficulty in the acquisition process, since the possibility of positive transfer is lower (González, 2012). The scope of his study is limited with L1 and L2. From this study, it was proven that the mind of L3 learners always seeking for similarities to benefit from their L2 knowledge before they look for L1 similarities, in the event of L2 being the learning language. For the third factor, participants’ word choice had quite a high score on the graph, from L2 to L3, which could be explained that they used their L2 knowledge to have more creative and accurate translations, which correlates with Vazquez’s (1991) suggestion. He pointed out that relating similarity with easiness and difference with difficulty implies adopting a simplistic attitude towards the complex learning process. It was also proven that “many errors whose origin was sought in the interference were similar to those that children commit in the acquisition of the mother tongue” (Galindo, 2004), which indicated that not all errors were due to the negative transfer of elements and structures of the L1, that is, there are other factors that can affect learning L3.

Since negative transfer involves divergences from norms in the TL, it is often relatively easy to identify yet could be mixed up with errors of overgeneralization or inattention. Although negative transfer tends to be equated with production errors, there are other ways in which an individual’s second language performance

may differ from the behavior of a native speaker (Odlin, 1989, 1996). However, the result is not always an error, but it may obstruct or delay the development of the TL in a certain stage of the learning process. Historically speaking, this was one of the first positive statements for negative transfer. Since the language transfer phenomenon has been researched, the initial approach has been “*instances of language deviation from the norms of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language*” (Weinreich, 1953, p. 1) referring to negative transfer, i.e., learning difficulties and errors due to L1-L2 differences, and more recent studies focused on positive transfer that emerged due to L1-L2 similarities (Alonso, 2002). Cases of negative transfer are also given when the patterns of the two languages do not coincide (Arabski, 2006). Moreover, researchers have taken different views of the role of L1 in SLA (Butler & Hakuta, 2006), almost none considered the impact of L2 to L3 acquisition, in the case of L2 being the source language for acquiring L3 or the impact would be positive. Because the probability of L2 being the SL to learn L3 is virtually going unnoticed. In this case study, three languages from different language families have been investigated through translation and the analysis results showed that there are more positive language transfers than negative transfer, especially in the word order and grammar aspect, whereas there is more negative transfer from L1 to L3 according to the result of this study. Taylan (1984) states that Turkish has been classified as a rather rigid SOV (subject-object-verb) language and we can to a great extent predict the constituent order in certain constructions. However, this word order is not obligatory. According to Hoffman (1992), the arguments of a verb in Turkish as well as other “free” word order languages do not have to occur in “fixed” word order. Although, there are studies supporting this statement, in most cases the place of “verb” is still the end of sentence in Turkish which was proved to cause of negative transfer occurrence in L1 to L3 direct translations, supported with participants’ interview arguments. The graphic 3 shows the negative transfer types gathered from both times;



Graphic 3 Proportion of negative transfer types and the three factors

The number of errors was entered into the SPSS program to extract the scores. It was calculated as percentage. The total numbers were 32 errors for word order, 24 for word choice, and 38 errors for grammar and they were categorized as transfer types from related language pairs.

The high score from L1 to L3 negative transfer in word order seems to suggest that the L1 indeed holds a special place in the multilingual mental lexicon, as the transfer was most probable to originate from L1, even when proficiency and exposure were controlled for, as previously pointed out by Neuser (2017). In accordance with positive transfer impact, in L1 to L3 direct translations, L2 being visually inaccessible causes more negative impact on word order in translations. The same thing happened for grammar since the two factors; word order in connection with grammar language acquisition. These results also support Bardel and Falk's (2012) statement, “*Formally learned L2 and L3 share cognitive features, which the L1 does not share.*” Their reasoning is that we, therefore, see more L2 transfer into the L3. That is also the reason why the three participants, Participant A, Participant C and Participant D have overlooked the similarities

of L1 and L3 had, when they had L2 is visible in FT. The lowest scores for negative transfer from L1 to L3 were observed in the “word choice” factor. The ratings have been mostly affected by Participant B’s scores based on her ST performance which is also coherent with Neuser indication; *“Indeed the status of a language as L1 or L2 has an effect on transfer behavior; however, the direction of the effect is so that the L1 is the most commonly relied upon source language in L3 production.”* Her (participant B) being advanced in L3 writing provided her with opening a different channel for L1 to L3 translation. This sort of L2 status change in L3 translations is expected to happen for the other participants in the case of their being engaged in more writing aspects of L3 interactions.

5. CONCLUSIONS AND IMPLICATIONS

The results of FT and ST testing and translation and interviews showed that being exposed to L2 before testing/translating L1-L3 or vice versa impacts their word choice. Seeing one single word of L2 opens the uncovered window for L3 production in participants’ writing and reading abilities. These findings correlates with Falk and Bardel’s arguments that the L2 status factor is the result of a higher degree of similarity between the L2 and L3, *“Regarding the age of onset, outcome, learning situation, degree of metalinguistic knowledge, learning strategies and degree of awareness in the process of language appropriation”* (Bardel & Falk, 2012, p. 68). Moreover, their grammar knowledge was also affected after removing L2 display. This caused them to be more cautious and less creative about L1 or L3 production in most cases. As Ecke (2001) suggested, *“Due to assumed differences in L1 vs. L2 learning and representation, it would be expected that the more similar representation and processing routes of two or more L2s affect each other more than the (qualitatively different) representation and access routes of the L1.”* And finally, they tend to be more productive about word choice by not being exposed to L2 right before L1 to L3 translations or tests in some cases and it correlates with their beliefs. The particular example for such occurrence is Participant B’s translation from L1 to L3 in ST which led to the significant discovery of this research that the more the focus group became efficient in L3 writing, the more negative transfer occurred. The less they became proficient in L3 writing, the more positive transfer occurred from L2. As a consequence, the results correlate with individual experiences of the focus group. The study of transfer has the potential to offer *“unique perspectives on human cognition”* (Odlin & Yu, 2016) and the ultimate goal of transfer research is *“the explanation of how the languages a person knows interact in the mind”* (Jarvis & Pavlenko, 2008, p. 11). Odlin and Yu (2016) argue that most studies do not directly contribute to this ultimate goal but contribute to what they call enabling goals, which represent the intermediate steps that eventually lead to the ultimate goal. This study evaluated various factors in the Turkish Chinese language learner’s ability to predict the source language of transfer. These findings previously showed both in discussion and overall result chapters contribute to a better understanding of transfer patterns in multilingual learners’ choice of language source and carry implications for theoretical accounts of how the multilingual lexicon is organized and accessed in language production. The multilingual mental glossary is a highly complex, dynamic, and interactive entity, which remains elusive in many ways. This study has provided some additions to the understanding of multilingual language production by finding that exposure to L2 affects language choice in transfer to L1 to L3 status in translation and by discussing how this may be related to the underlying word choice, word order and grammar the multilingual mind. The most notable feature of this research is that it approaches the issue of L2 (the learning language for L3) and L3 transfers in an exploratory approach rather than concentrating on only one of the agents for language transfer. Language transfer is a complex phenomenon, its negativity or positivity, and various studies have been conducted to prove both directions. The methods that have been used to collect data for this phenomenon have mostly been quantitative. The literature has been ignoring the beliefs of the multilingual subjects and listening to their stories, especially academic learners who have been involved in the language learning process for quite a long time, which has enabled them to develop certain beliefs about language transfer issues. They are also becoming acquainted with language transfers, which allow them to approach the problem from the teachers’ perspective. In that

sense, their belief over language transfer provides data for comparison for numerically collected data results and important information from another perspective, which is learner's perspective. Highly educated learners' feedback is a profoundly pragmatic approach to understanding how multilingual minds work to process the languages.

REFERENCES

- Adams, J., Janse, M., & Swain, S. (Eds.). (2002). *Bilingualism in ancient society: Language contact and the written word*. Oxford University Press.
- Alonso, R. A. (2002). *Transfer: Constraint, process, strategy or inert outcome?* CAUCE, Revista de Filología Y Su Didáctica, 25, 85-102.
- Arabski, J. (Ed.). (2006). *Challenging tasks for psycholinguistics in the New Century. Proceedings of the 7th Congress of the International Society of Applied Psycholinguistics*. Publication on CD-ROM. Agencja Artystyczna Para Zenon Dyrzka, Katowice.
- Bardel, C., & Falk, Y. (2007). *The role of the second language in third language acquisition: the case of Germanic syntax*. Second Language Research, 23(4), 459-484. <http://doi.org/10.1177/0267658307080557>
- Bartelt, G. (1989). *The interaction of multilingual constraints*. In H. W. Dechert & M. Raupach (Eds.), *Interlingual processes* (pp. 151-177). Narr.
- Bouvy, C. (2000). *Towards the construction of a theory of cross-linguistic transfer*. In J. Cenoz & U. Jessner (Eds.), *English in Europe: The acquisition of a third language* (pp. 143-156). Multilingual Matters.
- Butler, Y. G., & Hakuta, K. (2006). *Bilingualism and second language acquisition*. In T. K. Bhatia & W. C. Ritchie (Eds.), *The handbook of bilingualism* (pp. 114-144). Blackwell Publishing.
- Cenoz, J. & Gorter, D. (2011). *Focus on multilingualism: A study of trilingual writing*, The Modern Language Journal, 95(3), 356-369.
- Cenoz, J. (2001). *The effect of linguistic distance, L2 status and age on cross linguistic influence in third language acquisition*. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.), *Cross-linguistic influence in third language acquisition: Psycholinguistic perspectives*. Multilingual Matters.
- Cook, V. J. (2003). *Introduction: The changing L1 in the L2 user's mind*. In V. J. Cook (Ed.), *Effects of the second language on the first* (pp. 1-18). Multilingual Matters.
- De Bot, K. (2002). *Cognitive processes in bilinguals: Language choice and code-switching*. In R. Kaplan (Ed.), *The Oxford handbook of applied linguistics* (pp. 287-300). Oxford University Press.
- Dechert, H.W. (1983) *how a story is done in a second language*. In *strategies in Interlanguage Communication*, Eds. C. Faerch and G. Kasper. London: Longman.
- Dulay, H., Burt, M., & Krashen, S. (1982). *Language two*. Oxford University Press.
- Ecke and Herwig (2001). *Linguistic transfer and the use of context by Spanish – English bilinguals*. Applied Psycholinguistics, 18, 431 – 452.
- Ellis, N. C. (2006). *Selective attention and transfer phenomena in L2 acquisition: contingency, cue competition, salience, interference, overshadowing, blocking, and perceptual learning*. Applied Linguistics, 2(27), 164-94.
- Ellis, R. (1997). *The study of second language acquisition*. Oxford University Press.
- Epstein, I. (1915). *La pensée et la polyglossie: Essai psychologique et didactique*. Librairie Payot et Cie.
- Falk, Y. (2015). *Lexical transfer in L3 learning: A cross-sectional study on Swedish*. In M.-P. Safont-Jordà & L. Portoles Falomir (Eds.), *Learning and using multiple languages: Current findings from research on multilingualism* (pp. 155-173). Cambridge Scholar Publishing.

- Forsyth, H. (2014). *The Influence of L2 Transfer on L3 English Written Production in a Bilingual German/Italian Population: A Study of Syntactic Errors*, *Open Journal of Modern Linguistics* 04(03):429-456.
- Galindo, M. (2004). *Principales modelos de análisis de datos en la investigación sobre adquisición de segundas lenguas*. Universitat d'Alacant.
- González, A. J. (2012). *Assessing multilingual lexical incorporation hypotheses through a primed picture-naming task*. *Linguistic Approaches to Bilingualism*, 2(1), 91–107. <http://doi.org/10.1075/lab.2.1.04gon>
- Grosjean, F. (1982). *Life with two languages: An introduction to bilingualism*. Harvard Business Press.
- Hakuta, K. (1986). *Mirror of language: The debate on bilingualism*. Basic Books.
- Hammarberg, B. (2001). *Roles of L1 and L2 in L3 production and acquisition*. In J. Cenoz, B. Hufeisen, & U. Jessner (Eds.), *Cross-linguistic influence in third language acquisition: Psycholinguistic perspectives* (pp. 21–41). *Multilingual Matters*.
- Hoffman, B. (1992). *A CCG approach to free word order languages*. Proceedings of the 30th Annual Meeting of ACL, Student Session.
- Jarvis, S. (2016a). *On the combined effects of crosslinguistic similarity, structural complexity, and semantic complexity on word learnability* [Paper presented]. EuroSLA26, Jyväskylä, Finland.
- Jarvis, S. (2016b). *The scope of transfer research*. In L. Yu & T. Odlin (Eds.), *New perspectives on transfer in second language learning* (pp. 17–47). *Multilingual Matters*.
- Jarvis, S., & Pavlenko, A. (2008). *Crosslinguistic Influence in language and cognition*. Routledge.
- Li, C. N., & Thompson, A. S. (1981). *Mandarin Chinese: A functional reference grammar*. University of California Press.
- Lindqvist, C., & Falk, Y. (2014). *When Germans begin to learn Swedish: Which is the transfer source for function words, content words and syntax?* In L. Roberts, I. Vedder, & J. H. Hulstijn (Eds.), *EUROSLA yearbook* (Vol. 14, pp. 225–239). John Benjamins.
- Lott, D. (1983). *Analyzing and counteracting interference errors*. *ELT Journal*, 37(3), 256.
- Milli Eğitim Gençlik ve Spor Bakanlığı (MEGSB). (1986). Data.
- Mirman, D., Magnuson, J. S., Estes, K. G., & Dixon, J. A. (2008). *The link between statistical segmentation and word learning in adults*. *Cognition*, 108(1), 271–280.
- Neuser, H. (2017). *Source language of lexical transfer in multilingual learners* [Unpublished doctoral thesis]. Stockholm University.
- Neuser, H., & Pfenninger, S. E. (2017). *A quantitative approach to transfer in TLA*. Manuscript in Preparation.
- Newport, E. L., & Aslin, R. N. (2004). *Learning at a distance I. Statistical learning of non-adjacent dependencies*. *Cognitive Psychology*, 48, 127-162.
- Odlin, T. (1989). *Language transfer: Cross-linguistic influence in language learning*. Cambridge University Press.
- Odlin, T. (2003). *Cross-linguistic influence: The handbook of second language acquisition*. Blackwell Publishing.
- Odlin, T., & Jarvis, S. (2004). *Same source, different outcomes: A study of Swedish influence on the acquisition of English in Finland*. *International Journal of Multilingualism*, 1(2), 123–140.
- Odlin, T., & Yu, L. (2016). *Introduction*. In L. Yu & T. Odlin (Eds.), *New perspectives on transfer in second language learning* (pp. 1–16). *Multilingual Matters*.
- Osgood, C. E. (1953). *Method and theory in experimental psychology*. Oxford University Press.

- Ringbom, H. (1986). *Crosslinguistic influence and the foreign language learning process*. In E. Kellerman & M. Sharwood Smith (Eds.), *Crosslinguistic influence in second language acquisition* (pp. 150-162). Pergamon Press.
- Saffran, J. R., Johnson, E. K., Aslin, R. N., & Newport, E. L. (1999). *Statistical learning of tone sequences by human infants and adults*. *Cognition*, 70, 27-52.
- Selinker, L. 1969. *The psychologically relevant data of second-language learning*. In P. Pimsleur, & T. Quinn (Eds.), *The psychology of second language learning* (pp. 35-43). Cambridge University Press.
- Sun, C. F., & Givón, T. (1985). *On the so-called sov word order in mandarin chinese: A quantified text study and its implications*. *Language*, 61(2), 329-351.
- Taylan, E. (1984). *The function of word order in Turkish grammar*. University of California Press.
- Vázquez, G. (1991). *Análisis de errores y aprendizaje de español / lengua extranjera*. Frankfurt: Peter Lang.
- Vildomec, V. (1963). *Multilingualism*. A.W. Sythoff.
- Weinreich, U. (1953). *Languages in contact: Findings and problems*. Mouton.
- Williams, S., & Hammarberg, B. (1998). *Language switches in L3 production: Implications for a polyglot speaking model*. *Applied Linguistics*, 19(3), 295-333.

ORHAN PAMUK'S RECEPTION IN BRAZIL: A MATTER OF TRANSLATION

PAULO STELLA, DANIEL CRUZ

Paulo Stella, PhD in Applied Linguistics and Language Studies, Federal University of Alagoas, **Daniel Cruz**, PhD in Letters and Linguistics, Federal University of Alagoas

ABSTRACT

Orhan Pamuk's book *İstanbul – Hatıralar ve Şehir*, launched in 2003, was published in Brazilian Portuguese in 2007 under the title *Istambul – Memória e a Cidade*. The source text of the Brazilian translation was the English version, *Istanbul – Memories and the City*, translated directly from the original Turkish publication. It is widely known that translations from one language to another produce gains and losses. In the translation chain Turkish to English, and then to Brazilian Portuguese, we aim to reflect upon the reception of the text considering the Brazilian Portuguese edition in comparison to the original Turkish edition. We will follow a critical deductive methodology of analysis, starting from a global perspective, that is, reflecting upon the meaning making process regarding book covers, book flaps, and paratexts. Then we will analyse one excerpt from the first chapter of the book as a representative sample of the translation movement from original language (Turkish) to another (English), and yet a third one (Brazilian Portuguese). Beyond that, we hope to shed some light on the work of translation considering the possible difficulties in the transfer from Turkish to Brazilian Portuguese, two very distinct languages.

KEYWORDS: Translation; reception; Turkish language; Brazilian Portuguese; meaning making;

A RECEIVING CULTURE AND ORHAN PAMUK

Orhan Pamuk has been known in Brazil since 2004 with the translation to Brazilian Portuguese of *Benim Adım Kırmızı* [My Name is Red]. On being awarded The International Dublin Literary Prize in 2003, this book probably called the attention of Brazilian publishing houses. As a consequence, a translation of *Benim Adım Kırmızı* was launched in Brazil in 2004 with the title *Meu nome é vermelho* [literally, My name is red]. On the reference page of the book, we learn that the translation was based on both French and English versions of the Turkish book. This is the beginning of the publicization of Orhan Pamuk's works in Brazil.

Since then, twelve books have been translated to Brazilian Portuguese. However, none of them based on the original Turkish language, as far as our research has shown us. This is the case of *Istambul. Memória e cidade* [Literally, Istanbul. Memory and city], published in 2007, a year after Orhan's being awarded the Nobel Prize in Literature. According to the copyright of the book, the present Brazilian translation of Istanbul was based on the English translation published in North America.

The Brazilian translator, Sérgio Flaksman, is a well-known self-employed translator who belongs to the translation team of the publishing company, a well-reputed publishing house in Brazil. On the publishing house's page on the Internet,¹ we can read the translator's biodata. He has been a literary translator of American and English literature since 1968, when his first translation was published, i.e.: *Breakfast at Tiffany's* by Truman Capote. Since then, Sérgio Flaksman has been involved in literature and translation.

In view of this, the objective of this article is compare the Turkish edition of Istanbul with the Brazilian translation, considering that there is another culture in between both the Turkish original and the Brazilian Portuguese version, i.e., the English version of the book from which the Brazilian one derived. It is widely accepted that translations have gains and losses. According to Benjamin (2000), on reflecting upon translations of great classical literary works, the importance of translations is that they function as preservers of the original text. Original texts are situated in time, this means that they are written in a certain language in a certain time and space. The function of translations is to promote the continuation of a classical literary work through time. Therefore, whenever a translation is made, it is updated in terms of vocabulary and structures viewing the intended contemporary readers, but the essence of meaning is maintained. For the author, the measure of a good translation is set by observing gains and losses in the transfer from one language to the other considering time, space and subjects involved in the process.

Taking this into consideration, it is our firm belief that the Portuguese translation of Orhan's work has the importance of expanding cultural knowledge beyond the borders of the Turkish language as Brazilian readers could get in touch with those cultural aspects not available to non-Turkish speakers. And that is a possible gain. On the other hand, as the translation was not made directly from Turkish, some interference from the English language and respective culture must have occurred. If a good translation is the one that keeps the essence of meaning of the original work, what happens if a translation of a literary work has for its source a text that is already a translation? How can it claim to be a translation of the original? In that case, in relation to the Brazilian Portuguese translation, which one is the original: the Turkish or the English text?

Saldanha and O'Brien (2013) distinguish four approaches on translations studies, a process-oriented approach, a product-oriented approach, a context-oriented approach, and a participant-oriented approach. We will briefly go through all four approaches as they interest us. The process-oriented approach may be defined as a research process that

Seeks to understand translator or interpreter behaviour, **competence, expertise**, the **cognitive processes** that orient these, and the relations between cognition and the translated or interpreted product. Furthermore, since translation is not divorced from social context, process research seeks to understand the effect of the context on the process. Individuals, with their specific traits and ways of processing, are also a central focus. (Saldanha; O'Brien, 2013, p.109) (authors' emphasis)

¹ Reference: <https://www.companhiadasletras.com.br/autor.php?codigo=00599> Access in Feb., 2022.

This approach is a broad area of investigation viewing ways of investigating mental processes related to translator's choices as they interfere with the work outcome. Those choices are related to individual experiences that constitute the cognitive processes. What is relevant to notice here, though, is that these mental processes suffer influences from the external world. Translators are not alone in the world, they are situated in time and in space and because of that they are prone to be influenced by the immediate and the ample contextual values that surround them.

The product-oriented approach aims to reflect on the final outcome, i.e., on the translated text, "the focus is on translation quality assessment and the challenges of conducting research that involves assessment of the quality of the translated product" (Saldanha; O'Brien, 2013, p.51). On investigating the product, researchers are interested in evaluating the quality of the work done, considering the audience or the readers to whom the translated work is oriented.

The context-oriented approach deals with investigations of

External factors affecting individual translators, the circumstances in which translations take place and how translations influence the receiving culture. Examples include political, economic, social and ideological factors, such as the impact of state censorship on translations or how the reception of translations is influenced by a particular intellectual or economic climate. (Saldanha; O'Brien, 2013, p.206)

Finally, the participant-oriented approach has to do with agents other than the translator him/herself that would influence the translations. The idea of the participant-oriented approach is to investigate and try to "explain the interaction between human agents, translated texts and their context of production and reception from a sociological perspective" (Saldanha; O'Brien, 2013, p.151). This approach is more successfully achieved by adopting an ethnographic perspective of research. In other words, it involves interviews with related agents, questionnaires etc.

For our investigation, we will adopt a more integrative approach. This means that we will opt for a product approach at first, but we will not leave the other approaches aside. We will integrate them if explanations or reflections that extrapolate the text are necessary. We call this perspective critical deductive methodology of analysis. That means that we will approach the product text, the Brazilian Portuguese translation in a more general perspective at first, comparing book covers, book flaps, illustrations, paratexts etc. After that, we will concentrate on one excerpt taken from chapter one of the book for more detailed discussion of the translation in terms of structure and vocabulary, in comparison to the original text in Turkish. We will also refer to the English and Spanish translations in order to reflect upon possible interferences that may occur in the transfer from one language and culture to another.

We will focus on an excerpt from the first chapter for two reasons. The first reason is that we intend to do a thorough analysis of the structure and that would exceed by far the scope of an article if a detailed analysis of the whole book were to be made. The second reason relates to a research hypothesis. If a thorough structural analysis is made using one excerpt from chapter one of the book, it may give us a glimpse of the whole, that is, we may infer that similar choices may have been made regarding the whole of the translation.

Besides this introduction, final considerations and references, we divided this article in two more sections. The following one, intitled "Ethics, Translations and the Theory of Reception," which approaches some theoretical aspects of translations that will help us reflect upon the translated work. The analysis of the translated work appears in the section intitled "Translating from one Language to Another: a Reception to the Taste of the Brazilian Reader," in which a comparative and descriptive analysis of the excerpt from the first chapter is proposed.

ETHICS, TRANSLATION AND THE THEORY OF RECEPTION

How can we define ethics in translation? What does ethics have to do with the theory of reception? Bakhtin (1993) explains that ethics and aesthetics cannot be separated from the position that one takes in life. Using the idea of Jannus Bifront as a metaphor, the author says that the event of being, i.e., one's existence, is a double sided construction resulting from two different worlds. On the one side, one faces values circulating in the ideological world. This ideological world may be understood as social and historical collective values that circulate in a given time and space for a socially organized group. Because those values are collective, they make each one's actions meaningful to others and to oneself. The author understands that actions, though individual, are responsive to social and historical values. On the other side, one faces the world of reality, understood as life experience which is connected to one's way of seeing and positioning oneself in reality. This positioning relates to the responsibility everyone takes to themselves in living ethically, and aesthetically, as both ethics and aesthetics shape each one's actions.

As both worlds cannot ever touch each other, the only possibility of joining social and historical values and reality is by the subject who concentrates both sides in oneself. So at the same time that an action is socially responsive, it is also responsive to the immediate reality in which one belongs and for which one is totally responsible. Actions gain meaning because they are oriented to and by the social and the historical values, but they are also individual as they are oriented to the immediate reality. This makes the one who acts responsive to the social and historical demands, and also responsible for the action taken.

This way, meaning making is the capability of any subject of moving through life, taking decisions that may conjure up values and reality. This conjuring up of worlds is not a simple task, because as Vološinov (1973) states, meaning making is the result of a tensive situation involving one and the other. On the one hand, there is the subject with his/her beliefs and experiences and, on the other hand, there is the other to whom the subject responds. Meaning making is the tense result of the interaction between subject and his/her other. As Vološinov (1973, p.102-3) puts it,

In essence, meaning belongs to a word in its position between speakers; that is, meaning is realized only in the process of active, responsive understanding. Meaning does not reside in the word or in the soul of the speaker or in the soul of the listener. Meaning is the *effect of interaction between speaker and listener produced via the material of a particular sound complex*. It is like an electric spark that occurs only when two different terminals are hooked together. (Italics on the author)

The result of the tense encounter between two participants in the interaction process are new meanings for the historical and social values, which have been reworked and renewed because of the constant movement of the axes of time, space and person involved in all kinds of interactions. In other worlds, this movement of constant meaning making is possible not only because life experiences are individual, so each one of us have a specific way of seeing the world, but also due to the constant movement of the axes of time and space and person both for the worlds and their values and for the subject producing meaning with them.

Ethics relates to the position one takes in reality in response to this meaning making production. This means that the one who concentrates values coming from both the ideological and the reality worlds takes a responsive and responsible position in relation to life. On positioning oneself in relation to life, one becomes the other in the interaction process with life and reality. At the same time, life and reality constitute the other in relation to the one that produces meaning with them. This way meaning making turns out to be a constant and tense interactive process that demands ethical positionings of one subject in relation to one's other, life and reality.

Aesthetics comes together with ethics as those positions taken demand a constant reworking of identities. That is, identities are no static, but movable, or in other terms, responsive to the others with whom one interacts. Those identities are aesthetically built at the moment of the interaction, which means that not only one's utterances are aesthetically oriented but also one's posture as an individual in face of the other. In other words, in relation to our various identities, the aesthetical positionings are the distinct identities

anyone assumes in face of the many others with whom one interacts. According to Bakhtin (1993, p.36), on reflecting upon ethical values and aesthetics positionings,

What is important for us is to relate a given lived-experience *to me* as the one who is actively experiencing it. This relating of it to me as the one who is active has a sensuous valuational and volitional-performative-character and at the same time it is answerably rational. All these moments are given here in a certain unity that is perfectly familiar to anyone who experienced his thought or his feeling as his own answerable deed, i.e. who experienced them *actively*. (Italics on the author)

What has translation to do with this ethical and aesthetical position? Translations are the result of constant decision making on the part of the translator. Depending on the way those decisions are taken, and this has to do with ethics and aesthetics, distinct meanings are made in the transfer from one text to another, in the transfer from one culture to another. On reflecting upon the transfer of scientific notions in translations of French linguistic texts to Russian culture during the Soviet period, Uhlik (2008) questions on how to transfer scientific terminologies from one scientific context to another. The author answers by stating that the difficulty of such a task is that the translator is dealing with two distinct world views as for the Soviet context, the scientific discourse is linked to the political discourse, i.e.: behind the scientific presuppositions, there is the “presupposition of an interpretation of the society” (p.49).² This is due to the fact that scientific discourse would have to integrate some linguistic variations of class distinction and semantics of the Russian revolutionary period.

According to Uhlik (2008), the translator is then left with a problem of language stratification due to the popular *mélange* that occurred during that revolutionary period, as popular classes, with their worldviews and dialects, started seizing scientific academic positions. The author describes this movement as a horizontal and vertical dialects mix, i.e., there were horizontal dialects that might be understood as distinctions in pronunciations, for instance; and, there were the vertical dialects that marked social differences manifested by the use of common words and by the attribution of specific meanings to them. Considering that the revolution, in its first phase, had to do with a horizontal knowledge construction, i.e., it had to do with the possibility of anyone to access knowledge in a way or another, translators were left with the dilemma of deciding which words to use in the transfer of the linguistic jargon as that decision should interfere with the responding audience, as it might interfere with the quality of the access of the knowledge on the part of the readers.

Ricoeur (1999) argues that translation is a difficult task, but at the same time pleasurable. Though difficulty and pleasure are not in the same level. For a translation is more difficult than pleasurable, given the hard work and the probation the translator would endure during such a task. The translator has to take ethical and aesthetical decisions when performing the task of translation, when mediating two cultures. According to the author, this is due to the double meaning of the idea of alien, connected to any translation. First, the translator has to be aware of the alien cultural values present in a text, and, second, the translator has also to deal with the alien reader to whom the translation is oriented. Ricoeur (1999, p.6) states that

Translating, in a way, is to serve two masters: the alien about one’s own work, and the readers about their desire for appropriation: the alien author, and the reader living in the same language as the translator. This paradox provokes an unparalleled problematic, doubly defined as a longing for fidelity and a suspicion of treason.³ (Our translation)

This assertion reminds us that the problem of reception would always have to be taken into account when dealing with translations. Bassnett (2017, p.ix), on discussing the term post-translation, considers that translations are plurivocal pieces of work because “many other voices than those of translator and ‘original’

² In French: “les présupposés d’une interprétation de la société.”

³ In French: “Traduire, dit-il, c’est servir deux maîtres: l’étranger dans son oeuvre, le lecteur dans son désir d’appropriation. Auteur étranger, lecteur habitant la même langue que le traducteur. Ce paradoxe relève en effet d’une problématique sans pareille, sanctionnée doublement par un voeu de fidélité et un soupçon de trahison.”

author combine in the actual translation process.” In other words, a theory of reception has to take into account that in a globalized and highly technological world of increased movements of migration, other voices constitute the translated outcome. This way, it should be important to think translation beyond its “self-imposed boundaries, so that the field can reach out to other disciplines and become more open to ideas about translational issues coming from researchers who may not be primarily engaged in translations” (p.ix).

Regarding those voices that constitute a translated text, Gentzler (2017) calls our attention to localized translations. Those are translations from which we hear local voices mingled with traditional or classical texts. He says that “research on translational phenomena need not be inscribed in a single discipline” (p.1) as translations appear in various languages and in a variety of forms of communication.

A theory of reception of translations has to take into consideration the many changes societies have gone through over the years. As a consequence, intended readers of a text, or viewers of a show etc., have to be included in the translation outcomes for they are the party that interest publishers, producers etc., the most. According to Gentzler (2017, p.2), “scholars have documented how texts differ and have shown that translators often make changes, adapt, and rewrite, but explaining why remains problematic.” And he continues,

I suggest that scholars in the future analyze both the initial reception of the translated text and the post-translation repercussions generated in the receiving culture over subsequent years. What are the changes in poetry and politics, art and architecture, education and the environment and what role do translations play in effecting those changes? (Gentzler, 2017, p.2)

TRANSLATING FROM ONE LANGUAGE TO ANOTHER: A RECEPTION TO THE TASTE OF THE BRAZILIAN READER

Brait (2003) teaches us that on analyzing an utterance, one should take in consideration the verbal and visual aspects of it. That means that one should consider the analysis of an utterance as a whole. If it is a written piece of work, a book for instance, one should not only look at the written language, but also at the images, charts, colors, covers, paratexts (paratexts can be defined as extra information presented in the book, such as presentations, introductions, analysis from critics, etc. that help situate the reader in the context of the book production).

To understand this statement, we firstly should reflect upon the meaning of utterance. Bakhtin (1986) states that a concrete utterance constitutes a unity of meaning composed of a locutor, who directs his/her utterance to an interlocutor, who is prone to answer to the utterance. In this composition, the utterance turns into something concrete, i.e.: contextually situated in time and space. In this movement of orientation and response, the concrete utterance has in its construction the germ of the expected response. This means that in the construction of a concrete utterance by a locutor, an image of an expected interlocutor is present.

A question that comes to mind when reflecting upon concrete utterances is how to identify concrete utterances in discursive flows. Vološinov (1973) says that concrete utterances are constructions made by the eye of the observer. The observer is the only one who can distance oneself from the interaction where the concrete utterance takes place to see it from the outside. This is what the author considers to be an excess of seeing, which means that to be able to analyze a concrete utterance, the observer, researcher in our case, has to distance himself/herself from the situation and only then can the utterance be observed and analyzed. As the author states it, “any genuine kind of understanding will be active and will constitute the germ of a response” (Vološinov, 1973, p.102).

It is important to notice that as concrete utterances are part of a speech flows, it is up to the observer / researcher, who possesses the excess of seeing, to where to cut the speech flow to produce his/her analysis. This procedure turns the observer / researcher responsible not only for what he/she produces, but also for

the way research is produced as he/she is responsive and responsible for the contours of his/her own research.

In our case, and for the sake of this article, we understand the speech flow should be the book *Istanbul*, produced in the author's native language, Turkish, and the equivalent translation in Portuguese, and in English and Spanish.

For our perspective of analysis, utterance will entangle the front cover, the false cover, the back cover, the flaps and the first paragraph of the first chapter of the book. We believe that a deep analysis of those parts may give us some hints about the whole book regarding the reception of the book in the Brazilian context.

On observing the front cover of the Turkish editions,⁴ in comparison with the Brazilian and the English editions,⁵ some similarities and some differences stand out. In the case of the Turkish editions, one of them shows a boy in the foreground at about the age of 14 or 15 formally dressed in suit and tie. This boy has a faint smile and very bright and dreamy eyes. In the background, it is a different matter. In one of the covers, we can see the Bosphorus with some fishing boats flouting behind. It seems an old photograph as the image is blurred and the fishing boats seem not to exist anymore in contemporality. The other cover shows the same boy in the foreground with an opaque view of a mosque in the background. This second version of the Turkish book was published after Orhan's winning his Nobel Prize as it comes with the words, "*Nobel Edebiyat Ödülü 2006*" [Nobel Prize of Literature 2006]." In both cases, the photos are white and black.

This perspective differs from the English and Portuguese editions. In the case of the English editions, in the 2003 edition, we can see a color photo of a late afternoon when the sun has gone down. In the foreground we can see the shades of a squared fenced window through which we, as observers of the scene, can peer. From that fenced window we can see what seems to be the Bosphorus with a fisherman and a boat in the yellow and reddish late afternoon waters. The sun is probably setting down across from the scene, behind some hills in the background, as the fisherman and the boat are shaded black. In the hills, behind which the sun is setting down, we can see the contours of a mosque on top.

In 2017, another English edition was published with a different cover. On it, we can read that it is a "deluxe edition," and also that it comes with a "new introduction by the author." The picture differs from the one in the 2003 edition, as it is in a faded reddish color taken from a distance and from higher point in Istanbul. It shows the Golden Horn in the middle ground, a mosque in the foreground and the city of Istanbul in the background. The picture is blurred, and it is quite difficult to discern where it is exactly. The cover also comes with a "winner of the Nobel Prize" inscription just below the author's name.

The Brazilian Portuguese edition differs a lot either from the Turkish and from the English editions when we talk about the front cover. The 2007 edition, to which we have had access shows a boy of about 5 or 6 years old in the foreground. This boy has big and sad eyes, and he looks exactly like the boy in the picture in the first chapter of the book. The difference is that whereas in the first chapter the boy seems to be in a kitchen, in the front cover of the Brazilian edition, the boy is in front of a landscape of the Bosphorus with a mosque at the background. The picture is in a yellowish faded color resembling both sundown and decay.

The Turkish and the English editions come either with the author's name and the book title on the upper portion of the covers, but the Brazilian edition comes with the boy in the middle and upper portions of the cover and book title and author's name can be seen in the lower part. What calls the attention in the case of the Brazilian edition are the boy's sad eyes that are positioned exactly in the middle portion of the cover. It also comes with the following inscription "*Prêmio Nobel*" [Nobel Prize].

⁴ All consulted editions in Turkish, Portuguese, Spanish, and English can be seen in the references section.

⁵ For the Turkish editions, we have had access only to the e-books. As for the Brazilian and English editions, we have had access both to the e-book versions and to the paper editions.

There is one peculiarity in the covers that state a great difference between the Brazilian edition and the Turkish and English editions that is worth mentioning. The subtitle of the Brazilian edition is "*Memória e cidade*" [Memory and city]. In the case of the Turkish and the English ones, the word memory comes in plural.

On reflecting about the reception of the book in the Brazilian scenario, the cover has a lot to say. The little sad-eyed boy positioned in the foreground of the picture occupying about the totality of the cover from top to bottom says a lot about the intended readers. Due to the cultural distance from the Turkish culture and physical distance from Turkey in relation to Brazil, the book cover would have to call the public attention. On picturing a cute and sad boy on the cover, it would make people curious about who the boy might be. As the same boy appears in a picture in the first chapter, it would be quite possible that on browsing the pages, the intended reader would bump into that boy again in the beginning of the story. This would once again enhance curiosity, and probably, make people buy the book. The book title dialogues with the background of the picture as it shows part of the city of Istanbul. It also dialogues with the intended reader as it hints that the background might be the city of Istanbul, where the boy lives or comes from.

Cidade [City] in the subtitle dialogues with the picture of the city in the background. And the word *memória* [memory] in singular dialogs with the boy and the city, as it hints the reader that it is the boy's memory of the city. That is probably the reason why the word memory comes in singular, whereas in Turkish and English it comes in plural. The cover wants to emphasize that it might be the boy's memory of the city and no one else's. The emphasis of the book cover is on the cute sad-eyed boy who will touch Brazilian readers interested in knowing what exactly is that memory of the city the boy has.

The Turkish and English editions, where we can read memories in plural, dialog with the people who took the pictures. In the last pages of the book, the author thanks a number of friends and collaborators who took the photos. He mentions that he himself took some few of them, but not all. His work was to select the photos that brought him memories of the city. Memories, in plural, has to do with this dialog which produces meaning not only for the author himself, but also for the ones who took the pictures. It is our firm belief that the Brazilian edition loses this dialog for giving the reader the impression that the photos had been taken by the author himself, who might be the boy (but, in fact, and probably, is not).

Another interesting reception point worth mentioning is the yellow color on the front cover of book. Symbolically speaking yellow has both a positive and a negative side (Chevalier; Gheerbrant, 2001, pp. 40-42). In the positive side, yellow means power and money. In this case, the yellow color dialogs with the city history as a historical center of trading and business connecting two parts of the world. In the negative side, yellow resembles decadence and points to death and renovation. In this case, yellow dialogs with the sweet boy's sad eyes, i.e.; it entails that there is sadness and suffering in the memories brought by the book as we can see in the picture of the boy.

The memory of a sad boy of a historically powerful city is how Brazilian readers receive this book by its cover. This reception differs greatly from the Turkish perspective of the book cover and the English one, too. As regards memories, in plural, as it is shown in the Turkish and English editions, readers are hinted that the book contains a collection of memories and that those memories may relate to the city of Istanbul. In the case of the Turkish edition, the older boy with an agreeable face and a faint smile, dressed formally in suit and tie, resembles a presenter, i.e.: the boy seems to tell the readers that he is presenting a book of memories.

We can notice different emphases and, consequently, different meaning makings in the three languages. The Brazilian one, emphasizes the little boy's memory hinting suffering and sadness, which deviates a little from the contents of the book. The Turkish edition hints the presentation of the memories of the city by a 14-or-15-year old boy, entailing diversity – which is closer to the idea of the book itself. And the English edition hints the city and the memories that it brings to someone who is looking at the city through the squared fences, probably, the book author, which also differs a little from what the book proposes.

Moving on to the paratextual parts of the book, some other differences and similarities appear. We will start with the book reviews by newspaper critics. The Brazilian edition shows positive critiques in the back cover. There you will find praise on the writer and on the book by Alberto Manguel, the famous literary critic and writer, who lives and works in the USA. We also find positive reviews by the famous American newspapers, New York Times, the Economist, the New York Times Review of Books, and the Observer. The reviews are simple, short, and full of adjectives, such as fascinating, enchanting etc.

Brazilian books come with flaps, which contain opinions and critiques from literary critics and short biographies of authors for the readers to get acquainted with the work. In the flaps of the book *Istanbul*, we find a famous book critic discussing the language used by Pamuk, reminding the readers about the glorious past of Istanbul as Constantinople the head of Bizantine Empire and about the Ottoman Empire, and so on. The critic also mentions the close relationship Istanbulites build up with the Bosphorus. He ends his critique by mentioning what he calls *hüzün*, which is associated with a collective melancholy, a sensation that reading the book will bring the reader to reflect upon. This sensation also dialogs with the sad-eyed boy and the faded yellow picture color on the front cover. The final words in the flap relate to some aspects of Orhan's biography, such as his date of birth, the Nobel Prize Award, and the books translated to Portuguese up to that moment. There is some extra information that is not present either in the Turkish or the English editions, and which refers to the problems Pamuk might have had, according to the critic, due to his political views.

This way of producing the Brazilian paratexts concentrates both the Turkish way and the English way of producing theirs. The Turkish editions bring a brief author's biography in 4 paragraphs, parts of which are in the Brazilian book flap: birth, idioms to which Pamuk's books have been translated etc. The English editions bring a 4 line biographic paragraph mentioning the author prizes and where he lives. Besides that, it also shows reviews from famous English and American newspapers, such as The Observer (London), The Guardian (London), The Miami Herald (USA), The Sun (USA), The Independent (London), Los Angeles Times (USA), Town & Country (USA), The San Diego Union-Tribune (USA), San Jose Mercury News (USA), The New York Book Review (USA), The Financial Times (USA), The New York Times (USA) and The Economist (USA). It is possible to notice that some of the newspapers mentioned in the English versions are also present in the Brazilian back cover.

What is interesting to notice is that the reviews in the Brazilian editions and the English editions from the same newspapers do not match. They seem to have been either chosen from another part of the review or they have been adapted, probably to suit the Brazilian reader from the publisher's perspective. One example of the adaptations worth mentioning is the paragraph from The New York Times review in English in comparison to the Brazilian edition. In English, we read, "far from a conventional appreciation of the city's natural and architectural splendors, *Istanbul* tells of an invisible melancholy and the way it acts on an imaginative young man, aggrieving him but pricking his creativity." In Portuguese we read "*a história de uma melancolia invisível e de como ela age na mente de um jovem cheio de imaginação*" [the history of an invisible melancholy and how it acts in the mind of an imaginative young man – literal translation]. As it is possible to notice both texts are quite similar, but not the same as the Brazilian edition brings just half of the critique mentioned by the American newspaper.

In relation to the paratexts, we can say that the Brazilian editor tries to give as much information as possible for the Brazilian readers. This is because of the cultural distance from the Turkish culture in order to convince the readers to buy the book. At the same time, on bringing excerpts of reviews from American newspapers, the editor wants to shorten the distance between the cultures by mediating the dialog using well-known American newspapers to validate the book. It tries to convince the reader that the book is worth reading by mediating the dialog with a distant culture through the American culture, showing the Brazilian reader how well Pamuk's *Istanbul* was accepted in the USA.

On bringing reviews from American newspapers, instead of Brazilian ones, the editor shows that the book was well-considered in the USA, which in the eyes of the Brazilian average reader is a sign of good quality.

This is true for Brazil as it is considered a dependent or colonized culture, i.e., Brazilians tend to praise American culture as synonym of perfection and success. This feeling is even stronger among Brazilian uneducated middle classes who tend to valorize what comes from abroad; these people, who are considered the target audience by good publishing houses as they are the ones who have the money to buy books, value mostly what is imported from the USA. On mentioning the American reviews on the back cover of the book, the editor adds value to the book as the average reader, middle class reader mainly, will take it as a positive aspect.

This cross-cultural interference is also present in the translation of the book to Brazilian Portuguese as it is based on the American English translation. It is worth mentioning here that Portuguese and Spanish are very close languages. And the Spanish version of Istanbul was translated directly from the Turkish language as we can read in the Spanish copyright. Besides that, Spanish translations are well-known for their extremely good quality. The question that stands here is why not using the Spanish edition as basis for the Brazilian translation? The answer may be simple. It is because a Spanish translation does not add so much value to the book as the American one does.

To go a little deeper into this discussion, we will analyze the first paragraph of the text, comparing the Brazilian Portuguese with the Turkish original. We will also bring the American translation and the Spanish one for the sake of comparing and discussing cultural choices, similarities, and differences.

Chapter one of the book is entitled “Another Orhan,” in which the author mentions a feeling he had when he was a young boy about the existence of another boy like him somewhere in Istanbul. This was strongly reinforced by a picture hanging on the wall of his aunt and uncle’s house, where he had lived for some time, during one of the separations of the boy’s parents. His aunt and uncle used to point to the picture on the wall and say that the boy there looked like the Orhan. This feeling of existing another Orhan was emphasized by the fact that he heard stories about his early childhood from his parents and relatives and believed the stories were someone else’s as he did not exactly remember experiencing those moments at such a young age. As the author explains later in the chapter,

I feel compelled to add or so I’ve been told. In Turkish we have a special tense that allows us to distinguish hearsay from what we’ve seen with our own eyes; when we are relating dreams, fairy tales, or past events we could not have witnessed, we use this tense. It is a useful distinction to make as we “remember” our earliest life experiences, our cradles, our baby carriages, our first steps, all as reported by our parents, stories to which we listen with the same rapt attention we might pay some brilliant tale of some other person. It’s a sensation as sweet as seeing ourselves in our dreams, but we pay a heavy price for it. Once imprinted in our minds, other people’s reports of what we’ve done end up mattering more than what we ourselves remember. And just as we learn about our lives from others, so too do we let others shape our understanding of the city in which we live. (Pamuk, 2017, p.21)

We will concentrate our attention in the introductory first paragraph of the chapter that presents the theme of the whole chapter, i.e.: the author’s sensation about the existence of another Orhan. In Turkish, we read,

İstanbul’un sokakları içerisinde bir yerde, bizimkine benzeyen bir başka evde, her şeyiyle benim benzerim, ikizim, hatta tıpatıp aynım bir başka Orhan’ın yaşadığına çocukluktan başlayarak uzun yıllar aklımın bir köşesiyle inandım. Bu düşünceyi ilk nereden ve nasıl edindiğimi hatırlamıyorum. Büyük ihtimal, yanlış anlamalar, rastlantılar, oyunlar ve korkularla örülmüş uzun bir süreç sonunda fikir içime işlemiştir. **Bu hayal kafamda ışımaya başlayınca neler hissettiğimi açıklayabilmek için onu en belirgin şekliyle ilk hissettiğim anlardan birini anlatmalıyım.** (Pamuk, 2006, p.7) (Our emphasis)

In a literal translation, we can read in the introductory sentence, “Since I was a boy and for a long time, I had the belief in a corner of my mind that somewhere in the streets of Istanbul, in another home exactly like ours, there lived another Orhan, that was my twin, exactly like me.” And the closing sentence can be read like this, “To be able to explain what I felt when that dream started to light on my mind, I will tell you one the first moments that I could notice that more clearly.”

We will bring the Spanish to help us reflect upon the Brazilian translation later:

Desde niño me he pasado largos años creyendo en un rincón de la mente que en algún lugar de las calles de Estambul, en una casa parecida a la nuestra, vivía otro Orhan que se me parecía en todo, que era mi gemelo, exactamente igual a mí. No recuerdo dónde ni cómo se me ocurrió semejante idea por primera vez. Muy probablemente se me grabara como consecuencia de un largo proceso tejido de malentendidos, coincidencias, juegos y miedos. **Para poder explicar lo que sentía cuando aquel sueño empezaba a centellear en mi cabeza voy a contar uno de los primeros momentos en que lo noté de manera más clara**” (Pamuk, 2011, p.9 – our emphases).

On comparing the Spanish translation to the Turkish original, considering the syntactic differences between the languages, we can say that the Spanish translation is very close to the Turkish original. In a literal translation the introductory sentence would be: “Since I was a child, many years have I passed believing in a corner of my mind that somewhere in the street of Istanbul, in a house that looked like ours, there lived another Orhan, who looked like me in everything, who were my twin, exactly like me.” And the closing sentence would be, “to be able to explain what I felt when that dream started to light on my mind, I am going to tell you one of the first moments in which I noticed that more clearly.” We can notice by observing the translation that the choice of words is quite similar to the choices the author himself made in his writing. We will focus our point of view mainly on the words *creyendo* (= *inandım* [believed, believing]) and the *empezaba a centellear en mi cabeza* (= *kafamda ışımaya başlayınca* [when it started to light in my mind]).

The English translation may seem a little different from the original as we can see below.

From a very young age, I suspected there was more to my world than I could see: Somewhere in the streets of Istanbul, in a house resembling ours, there lived another Orhan so much like me that he could pass for my twin, even my double. I can't remember where I got this idea or how it came to me. It must have emerged from a web of rumors, misunderstandings, illusions, and fears. **But in one of my earliest memories, it is already clear how I've come to feel about my ghostly other.** (Pamuk, 2017, p.16) (Our emphases)

This excerpt shows some adaptations the English translator made in the transfer from the original text to the English language. As we pointed out before, our attention will go to the verb ‘suspected’ and to the concluding sentence, where we read about Orhan’s ghostly other. Although the language seems to be well-constructed, the meaning of the sentences do not exactly correspond as the Spanish translations does. The option for ‘suspected’ instead of ‘believed’ produces a variation in the sentence meaning.

This is because ‘believe’ and ‘suspect,’ though close in meaning, lead to different ideas about the same object. According to the Random House Unabridged Dictionary,⁶ believe means “to have confidence in the truth, the existence, or the reliability of something, although without absolute proof that one is right in doing so,” and suspect means “to believe to be guilty, false, counterfeit, undesirable, defective, bad, etc., with little or no proof.” Believe seems more positive than suspect, so it might go better with the meaning of *inandım*. According to the *Türk Dil Sözlük*⁷ [Dictionary of the Turkish Language], this word means *bir şeyi doğru olarak benimsemek* [in a literal translation, it means something that I have for certain].

As for the closing sentence, it is quite difficult to find the equivalent sentence in the Turkish original as it does not correspond exactly to what is written in Turkish. But our attention will go to this ‘ghostly other’ which resembles some haunting figure that belongs to the narrator’s memory. This ‘ghostly other’ connects the idea of Orhan’s ‘double’ as “there lived another Orhan so much like me that he could pass for my twin, even my double.” Whereas in the original text Orhan believed that there was another Orhan somewhere in the streets of Istanbul as a consequence of a long process of misunderstandings, in the English version, Orhan goes through the same process, but in this case, he suspect of a double that would only exist as a

⁶ RANDOM HOUSE UNABRIDGED DICTIONARY ONLINE. < <https://www.dictionary.com/> >. Access on Feb.,28, 2022.

⁷ TÜRK DİL SÖZLÜK. < <https://sozluk.gov.tr/> >. Access on Feb.,28, 2022.

ghostly figure in his mind. It seems to us that in the case of the Turkish text the idea of having another Orhan is naiver, belonging to the memories of a boy. In the English case, it is a resemblance from an adult who once was a boy who seemed to be haunted by a ghostly figure of himself.

We are, in fact, interested in how the translation reached the Brazilian reader. Let's observe the paragraph,

Desde uma idade muito tenra desconfiei que havia mais coisas no meu mundo, para além do que eu enxergava: em algum lugar das ruas de Istambul, numa casa parecida com a nossa, vivia outro Orhan tão parecido comigo que poderia passar por meu irmão gêmeo, até mesmo por um duplo meu. Não lembro de onde tirei essa ideia ou como ela me ocorreu. Deve ter emergido a partir de uma teia de rumores, mal-entendidos, ilusões e medos. Mas numa das minhas memórias mais antigas, já era claro o que eu sentia em torno do meu outro fantasmagórico. (Pamuk, 2007, p.11) (Our emphases)

In a literal translation, we can read the introductory sentence as "since I was very young, I had suspected there was more about my world than I could really see: somewhere in the streets of Istanbul, in a house just like ours, there lived another Orhan, that could pass by my twin, even my double." And in the closing sentence, we can read, "but in one of my oldest memories, it was clear how I felt about my phantasmagoric other." Far from discussing the quality of the translation, as we consider that the translator to the Portuguese language is a very experienced one, we must say that the Brazilian Portuguese translation is quite similar to the English one, and a little distant from the Turkish original. It certainly goes together with the English translator's choices.

Considering the reception of the translation in Brazil, we can say that the mediation by the English translation interfered in the Turkish original meaning of the paragraph, turning the English translation into the original text from which the Brazilian readers received the written text. Brazilian readers received the written text with values that are present in the American culture, such as suspicions, doubles and ghosts. The Turkish culture with beliefs, twins and memories that lit in mind, is kept far from the Brazilian reader.

FINAL CONSIDERATIONS

We could go on and on showing more samples of the problem of reception of Istanbul by the Brazilian readers, but we believe that the discussion we started here may shed some light in the other parts of the book that have the same perspective. We must state that we are not criticizing the quality of the translations as we consider that they could convey the meaning of the book. For us, what is interesting is to think about the many interferences the book has gone through regarding form and contents before getting to the hands of the expected average Brazilian reader.

This expectation may be the answer to the question that comes to our minds. If we consider that the Spanish translation is closer to the original Turkish and as we know Portuguese and Spanish are really close languages, why not using the Spanish translation as the basis for the Portuguese one? We also know that Spanish translations are very well made and so one can really trust them. The answer to this question relies exactly in the expected average Brazilian reader. This reader believes that what comes from the USA should be trusted and is certainly well-made so a translation that is based on the American English can only be good and trustworthy.

When we produce an utterance, we include in it the expected response from our intended audience, reader, interlocutor. On using the English translation as the basis for the Brazilian Portuguese translation, the editor included the expected values from the average Brazilian reader regarding the American quality and trustfulness. These values were emphasized by the reviews presented in the back cover of the Brazilian edition. This certainly would sell more books than the translation from the Spanish language.

As regards the front cover of the Brazilian edition and the flaps, once again the editor tried to include the responsive readers in the production. First of all, by using the picture of a sad boy in the foreground of the front cover to call the reader's attention, and secondly, by bringing a famous art critic, Milton Hatoun, to

comment about the book in the flaps, the editor wanted to give the reader a flash of the Turkish culture by a considered trustworthy critic, journalist and writer. The same happens with Alberto Manguel who opens the reviews.

This makes the Brazilian edition of Istanbul a hybrid edition, concentrating values from the Turkish culture, American culture and Brazilian culture, which, in a way approximates the reader to the Turkish culture, though mediated by American values. This way ethics and aesthetics compose the meaning making of the Brazilian edition.

REFERENCES

Benjamin, W., 2000. On the Task of the Translator. In: Venuti, L. (ed.), *The Translation Studies Reader*. London and New York: Routledge.

Saldanha, G; O'Brien, Sharon., 2013. *Research Methodologies on Translation Studies*. London and New York: Routledge.

Bakhtin, M.M., 1993. *Toward a Philosophy of the Act*. Translation & Notes by Vadim Liapunov. Edited by Vadim Liapunov & Michael Holquist. Austin: University of Texas Press.

Vološinov, V.N., 1973. *Marxism and the Philosophy of Language*. Translated by Ladislav Matejka and I. R. R Titunik. New York and London: Seminar Press.

Uhlik, M., 2008. La discussion sur les langues speciées dans la linguistic sovietique des années 1920-1930 et la reception des idees des linguists français dans cette polemique. In: Meizoz, J.; Seriot, P. (eds.). *Traductions scientifiques & transferts culturels 1*. Lausanne: Université de Lausanne.

Ricoeur, P., 1999. *Sur la traduction*. Paris: Bayard.

Bassnett, S., 2017. Introduction. In: Gentzler, E. *Translation, Rewriting and the Age of Post-Translation Studies*. London and New York: Routledge.

Brait, B., 2013. Looking and Reading: Verbal-Visuality from a Dialogical Perspective. *Bakhtiniana. Journal of Discourse Studies*, 8(2), Eng. 42. Available at:

< <https://revistas.pucsp.br/index.php/bakhtiniana/article/view/16568>> Access on Feb., 22, 2022.

Bakhtin, M., 1986. The Problem of Speech Genres. In: *Speech Genres & Other Late Essays*. Translated by Vern W. McGee and Edited by Caryl Emerson and Michael Holquist. Austin: University of Texas Press, pp.60-102.

Bakhtin, M.M., 1990. Author and Hero in Aesthetic Activity (ca. 1920-1923). In: BAKHTIN, M.M. *Art and Answerability. Early Philosophical Essays by M. M. Bakhtin*. Translated by Vadim Liapunov. Austin: University of Texas Press, pp.4-256.

Chevalier, J; Gheerbrant, A., 2001, *Dicionário de símbolos* [Dictionary of Symbols]. Rio de Janeiro: José Olympio Editora.

Pamuk's Works and translations consulted

Pamuk, O., 2007, *Istanbul – Memória e cidade*. Tradução de Sergio Flaksman. São Paulo: Companhia das Letras.

_____, 2003, *İstanbul – Hatıralar ve Şehir*. Istanbul: Yapı Kredi Yayınları.

_____, 2006, *İstanbul – Hatıralar ve Şehir*. Istanbul: Yapı Kredi Yayınları.

_____, 2004. *Istanbul – Memories and the City*. Translated from the Turkish by Maureen Freely. New York: Vintage Books.

_____, 2017. *Istanbul – Memories and the City*. Translated from the Turkish by Maureen Freely. New York: Vintage Books.

_____, 2011. *Estambul*. Traducción de Rafael Carpintero. Barcelona: Random House.

SHIFT IN MEANING: THE INVISIBLE HAND IN TRANSLATION

BADIA EL HARRAKI

Sidi Mohammed Benabdellah University.

INTRODUCTION

The present paper is an attempt to investigate how discourse is manifested in translated texts from English to Arabic. More specifically, we will show that any analysis of translated texts should take into account three elements, namely the translated text, discursive practice (the translator's production and the audience's interpretation of the translated text, and the general socio-cultural context of the translation itself. In order to understand how translated texts are made and to be able to measure the degree of their equivalence to the original source texts, we should underscore the pivotal notion of 'shift' in translation by displaying the various mechanisms that contribute to an acceptable translation from English to Arabic in our attempt to preserve the same meaning in both languages. The term "equivalence" will be scrutinized to exhibit its different manifestations at the level of the text. As we all know, the effects of discourse go beyond the linguistic content to embrace the social, political and economic dimensions; hence, in this respect it is commonly believed that ideology plays the role of an 'invisible hand' in translation as there are factors which influence translation and lead to the transmission of ideology between different nations and countries. The research question we are mainly concerned with revolves around the issue of whether translators have an array of choices up their sleeve to render faithful meaning or whether they are bound to only one type of translation. In other words, if translators have alternatives, we should be able to characterize the level at which these translation choices are possible. In this respect, an examination of the translation of the article "Asymmetric struggle for the hearts and mind of viewers: Can the media actually trigger sympathy towards terrorists?", written by the Israeli journalist Ifat Maoz in 2010, will clarify the thorny issue of shifts and ideology in translation, enumerate the possibilities available to the translator, and investigate the level at which ideology is transmitted.

1. DISCOURSE ANALYSIS

The scope of discourse analysis encompasses knowledge about language beyond the word, the phrase, the clause, and the sentence to embrace patterns of language across texts, and the relationship between language and the social and cultural setting where it is implemented. It also covers the various ways in which language presents different views of the world and different conceptualizations. The use of language under the influence of relationships between participants, the effects the use of language has upon social identities and relations, in addition to how views of the world and identities are constructed through the use of discourse constitute its basic ingredients and provide a point of departure to attack issues in translation. That is why the social context of language is essential for a thorough understanding of how people communicate as the meaning changes considerably according to who is saying it, when and where it is said, and to whom it is said (Rodney, 2012). In this regard, discourse is closely linked to situated language; this situatedness, in turn, manifests itself in four different ways: within the material world (interpretation is governed by the physical setting of the utterance), according to relationships (the identity of participants,

the degree of intimacy, their power over us, etc...), according to its relation to history (what happened before and what will happen in the future), and according to intertextuality (the relational network of a given utterance or text with other texts) (Rodney, 2012, p. 3). According to discourse analysis, the relationship between the intended meaning and its interpretations is not always symmetrical; that is why discourse analysis is mainly interested in multiple interpretations by the receiver (Reed, 1997, p. 26). As far as the concept of context is concerned, For Van Dijk (1988, p. 29), any discourse analysis marries between the text and the context of use; in other words, the use of a discourse in a social situation is at the same time a social act. This view dictates a thorough consideration of the relevance of the two key elements (society and context) in all analyses.

2. IDEOLOGY IN DISCOURSE

A crucial question in discourse analysis concerns the definition of 'ideology'. 'Ideologies are particular ways of representing and constructing society which reproduce unequal relations of power, relations of domination and exploitation' (Fairclough & Wodak, 1997, p. 275). Similarly, Fairclough (1992, p. 67) defines it as 'significations generated within power relations as a dimension of the exercise of power and struggle over power'. In its relation with language, it was maintained that "language is not powerful on its own – it gains power by the use powerful people make of it" (Wodak and Weiss, 2003, p. 14). The values and ideologies which underlie texts tend to be hidden rather than overtly stated. As Threadgold (1989) observes, texts are never ideology-free nor objective, nor can they be separated from the social realities and processes they contribute to maintaining.

There are many ways in which ideology might be explored in a text. The analysis may start by looking at textual features in the text and move from there to explanation and interpretation of the analysis. This may include tracing underlying ideologies from the linguistic features of a text, unpacking particular biases and ideological presuppositions underlying the text and relating the text to other texts and to the reader's and the speaker's own experiences and beliefs (Clark, 1995).

CDA is a really helpful tool for understanding the relationships within language because of its Hallyidayan view of language where language is inseparable from its socio-linguistic context, its mediation of ideology and its relation to power structures within society. A characterization of the linguistic mechanisms through which ideology is constructed gives CDA an invaluable resource to crystallize the hidden methodology an author adopts in discourse to enclose representations of the world, consciously or unconsciously.

3. SHIFT IN TRANSLATION

The term "shift", as introduced by Catford (1965, p.73), distinguishes between formal correspondence, which exists between source language (SL), and target language (TL) categories that occupy approximately the same place in their respective systems, and translational equivalence, which holds between two portions of texts that are actually translations of each other. For him, a shift occurs if there are "departures from formal correspondence" between a source text (ST) and a target text (TT), i.e., if translational equivalents are not formal correspondents. He has argued that there are two major types of shifts: level shifts and category shifts. On the one hand, level shifts are shifts between grammar and lexis as in the translation of verbal aspect by means of an adverb or vice versa. On the other hand, category shifts are further subdivided into structure shifts (e. g. a change in clause structure), class shifts (e. g. a change in word class), unit shifts (e. g. translating a phrase with a clause), and intra-system shifts (e. g. a change in number even though the languages have the same number system). Generally, shifts in translation are seen as the alterations which result from the attempt to deal with the systemic differences between ST and TT (Baker, 1998).

In order to see whether translators are free in their endeavor to convey meaning in the TT (target text); a grammatical analysis has demonstrated that this freedom is not possible at some levels. At the level of category shift, freedom is denied to the translator at the level of structure shift as inflection and word order are language-specific; therefore, with a lack of formal correspondence between the two languages, the translator is compelled to stick to the main scheme of the target language.

In class shift, which occurs when the translation equivalent of a SL item is a member

Of a different class from the original item, this movement from one class to another class crosslinguistically, like in the other types of shifts, is bound to take place if there is no corresponding lexical category in the TT; otherwise, the translator is free to move from one category to another for stylistic considerations.

As far as intra-system shift is concerned, in cases where Arabic has the same system as English and yet the translator cannot reach formal correspondence, as it is the case with dates where he is obliged to replace numbers with lexical forms, the translator is not free at all. However, within the same category (intra-system shift), the translator may have the possibility to choose between two alternatives as in the treatment of singular/plural forms, but he chooses to comply with the way users of Arabic tend to prefer singular forms instead of plural forms.

In shift by addition, shift by omission, and shift in the meaning of words, translators are free too. As its name suggests, shift by addition occurs when the translator opts for structures that have more words than the original ones in the ST.

In these situations, the translator is free to stick to the same number of words in the ST, or express the same concepts by adding more words.

Unlike shift by addition, shift by omission occurs when the translator opts for structures that have less words than the original ones in the ST.

By far, shift in meaning is the area where translators have more freedom in translating depending on their personal and ideological orientation. It is a potential site for discursive production and interpretation. Since expressive meaning cannot be judged as true or false as it relates to the speaker's feelings and attitudes rather than to what words and utterances refer to, as the translator has the possibility to attack the text from his own perspective. Expressive meaning is the most influential element in translation as it may lead translators to drift away in some crucial cases from the ST and take some liberty in modifying elements to fit them in the context of the target text.

All in all, freedom in translation is more apparent in two areas of translation. First, in level shift, the translator has a chance to opt either for a grammatical or lexical structure because they are both available. Second, in shift by addition, shift by omission, and shift in the meaning of words translators are free too. As we stated before, expressive meaning provides a fertile ground for translators to reshape the ST according to personal, cultural, social, and ideological perspectives. To understand how expressive meaning leads to ideology transmission, it is very important to handle translated texts within a register analysis that takes into account the context and the audience. The translator is never free in the choices he takes as he is tightly caught in the web of culture and ideology.

Taking the producer of the translation into account, his background has a direct influence on his text. Translating the text by keeping the original meanings seems an inadequate solution as translation has to take into account all the variables that participate in the production and the reception of the produced text and the translated one respectively, namely the general context. As a matter of fact, domestication remains a logical technique by making the text conform to the target culture.

CONCLUSION

To sum up, we have reached some important conclusions. First, in order to reach a good translation, it is obligatory to use a register analysis as a component in the overall conceptualization of the movement from the original text to the translated text. Second, the only shift in translation that gives freedom to translators is intra-systemic shift, a part of class shift, shift by addition, shift by omission, and shift in meaning. Third, we have found that expressive meaning is the most influential element in translation as it may lead translators to drift away in some crucial cases from the ST and take some liberty in modifying elements to fit them in the context of the target text (domestication).

REFERENCE

- Baker, M. (1998). *The Routledge Encyclopedia of Translation Studies*. London and New York: Routledge.
- Catford, J. C. (1965). *A linguistic theory of translation*. Oxford: Oxford University Press.
- Clark, R. J. (1995). Developing critical reading practices. *Prospect*, 10(2), 65–80.
- Fairclough, N. (1992). *Discourse and social change*. Cambridge: Polity Press.
- Fairclough, N., & Wodak, R. (1997). Critical discourse analysis. In T. van Dijk (Ed.), *Discourse as social interaction* (pp. 258-284). London: Sage.
- Hatim, B. & Munday, J. (2004). *Translation: An advanced resource book*. London and New York: Routledge.
- Jones, R. (2012). *Discourse Analysis : A resource book for students*. New York and London: Routledge.
- Maoz, I. (2010). "Asymmetric struggle for the hearts and minds of viewers: Can the media actually trigger sympathy towards terrorists?", *Dynamics of Asymmetric Conflict*, 3/2, 99-110. DOI: 10.1080/17467586.2010.531036
- Reed, J. T. (1997). A discourse analysis of Philippians: Method and rhetoric in the debate over literary integrity. *Journal for the Study of the New Testament Supplement, Series* 136. Sheffield: Sheffield Academic.
- Threadgold, T. (1989). Talking about genre: Ideologies and incompatible discourses. *Cultural Studies*, 3, 101-107.
- Van Dijk, T. A. (1988). *News as discourse*. Hillsdale, NJ: L. Erlbaum Associates.
- Wodak, R., & Weiss, G. (2003). Introduction: theory, interdisciplinarity and critical discourse analysis. In G. Weiss & R. Wodak (Eds.), *Critical discourse analysis. Theory and interdisciplinarity* (pp. 1-34). London: Palgrave Macmillan.

EDUCATION AND LEARNING STUDIES

A BIODESIGN EDUCATION PROGRAM PROPOSAL FOR ARCHITECTS

SEÇİL YAĞLI, DİDEM AKYOL ALTUN

Seçil Yağlı, PHD Student, University of Dokuz Eylül, the Graduated School of Natural and Applied Sciences, Department of Architecture, **Didem Akyol Altun**, Prof.Dr, University of Dokuz Eylül, Department of Architecture

ABSTRACT

The relationship that architecture and design disciplines establish with nature is basically shaped under the title of "inspired by nature". For architecture, inspiration from nature can be summarized as observing nature, learning something from it and imitating. This approach has been handled in different ways in different periods and is named in the literature such as biomimesis / biomimetic / biomimicry with similar denominations. For architecture and related design disciplines, contemporary focus point of nature-inspired approaches is biodesign. The biodesign approach, which has come to the fore as a new design paradigm in the 21st century, goes beyond the classical design approaches that imitate or inspire nature; integrates the biological processes into architecture and develops bio-collaborations with living organisms in the design process. In this sense, biodesign can go beyond being inspired by nature in design practices and go as far as the integration of nature with structure.

Within the framework of global problems, nature-inspired and ecological solutions compatible with nature are becoming increasingly important for the discipline of architecture. The biodesign approach, which is closely related to sustainability, ecology, technology and science, and aims to find creative and innovative design solutions by encouraging critical and preventive thinking in human-centered design, is important and valuable for the architecture discipline. In this context, the importance of providing education about biodesign approaches and methods to architects and architecture students becomes important for examining nature with appropriate techniques and including nature in their designs. With this awareness, the importance of biodesign education that can examine nature with appropriate techniques, be inspired by nature, learn from it, and include nature in designs has emerged for students studying in architecture and related design disciplines.

In this direction, this study proposes a "biodesign education program" in the field of architecture that aims to develop an alternative teaching method focused on biodesign and establishes new dynamic links between architecture and other disciplines.

KEYWORDS: Biodesign, Biodesign Education, Architecture Education.

INTRODUCTION TO BIODESIGN APPROACHMENT AND RELATIONALITY WITH ARCHITECTURE

Within the framework of global problems, the discipline of architecture is increasingly shifting from human-centered understanding to ecology and nature-centered understanding. Today, it has been realized that the potential of nature and biology can be used much more effectively in solving existing problems in many fields, including architecture. Biology and related sub-disciplines have encouraged research and innovation in different fields of architecture as a result of better understanding of nature with the effect of developments in computer technologies and scientific advances. Nature and biology provide a good theoretical and practical framework for designers and architects to change their methods and redefine their goals against the negative environmental impacts of the construction industry's productions (Myers, 2012).

For centuries, nature has inspired artists, architects and engineers formally and structurally (Roshko, 2010). Understanding the ways it has developed to examine nature and address environmental challenges, looking at nature and finding solutions are valuable for designers (Yurtkuran, 2013). The relationship that architecture and design disciplines establish with nature is basically shaped under the title of "inspiring from nature" (Avcı Özbakan et al., 2020). The approach, based on inspiration from nature, can be summarized as people's observing nature, learning something from it, imitating it, and interpreting what they have learned and turning it into a design product or space. This approach has been handled in different ways in different periods and is referred to with similar denominations in the literature such as biomimesis / biomimetics / biomimicry. Otto Schmitt first used the term "biomimetics" in the 1960s to describe the transfer of ideas from biology to technology (Schmitt, 2002). The concept of biomimicry came to the fore again with the definition of "nature as a model, measure and mentor" in the book "Biomimicry: Innovation Inspired by Nature" published by Janine Benyus (1997). Benyus states that the solution to many problems faced by humans is already found in nature's accumulation of more than 3.5 billion years. It reveals that biomimicry methods, which she describes as "conscious imitation of nature's genius", offer optimized solutions in terms of sustainability and efficiency in design and construction areas, and also that they include the opportunity to maximize resource efficiency by reducing the negative effects on the environment of buildings (Benyus, 1997).

In the 21st century, when interdisciplinary studies have increased, the concept of biomimetics has undergone a content transformation as a result of the relations of fields such as synthetic biology, genetics and nanotechnology with engineering and design disciplines, going beyond being inspired by the forms or behaviors of living things, it has revealed hybrid synthesis in which nature and living things are intertwined with structure. William Myers calls this approach "biodesign" in his 2012 book "Bio Design: Nature, Science, Creativity". The approach, which has come to the fore as a new design paradigm in the integration of biological processes into architecture, aims to include living organisms as building blocks, material sources, energy generators, digital storage systems and air purifiers etc., as opposed to design that imitates nature or uses biology for inspiration. Biodesign also aims to replace industrial or mechanical systems with biological processes. In this sense, Biodesign is "the cross-pollination of Nature, Science and Creativity" according to Myers (2012).

In many different fields such as biodesign, engineering, design, medicine, electronics, robotics, mathematics, and art, it has become frequently used to express process and result products in which problem solving is handled with a nature-inspired approach. Therefore, today, the concept of biodesign should be considered as a top title that covers interdisciplinary relations, in a way that relates to natural processes. For architecture and related design disciplines, biodesign not only points to a new understanding that includes nature-inspired design approaches but also goes beyond this, including collaborative processes with nature, that aiming to find solutions to ecological problems and to establish correct relationships with nature (Avcı Özkaban et al., 2020).

In the last few years, there has been an increasing interest in biodesign, both in academia and universities, and in the private sector. Although this seems to have developed within the framework of the concepts of

biomimicry and biomimetics, the concept of biodesign is becoming increasingly important in design and related disciplines.

Within the framework of the study, a literature review of the studies discussing the biodesign approach in the field of architecture in the international arena was carried out. In the search made on the Web of Science database (When all databases including Web of Science Core Collection, KCI_Korean Journal Database, Russian Science Citation Index, SciELO Citation Index are included), the number of studies containing the words "bio" and "design" at the same time is 41024. These studies include studies derived from "-bio" suffix such as biomimetic, biomimicry, bio-art, bio-inspired, bio-based. As a research area, it is observed that nearly half of it is in the "Engineering" area, followed by "Chemistry" and "Material Science". Among all studies, only 186 (0.453%) seem to be related to the field of "Architecture". When the search is narrowed to the word of "biodesign", only 330 publications are accessed. Engineering is leading among them, but it is followed by Biochemistry, Molecular Biology and Science Technology. The rate of design and related disciplines in this search is 6.66%. Consequently, when the distribution by years is examined, it can be clearly observed that there is an increasing interest about biodesign concept (Figure 1).

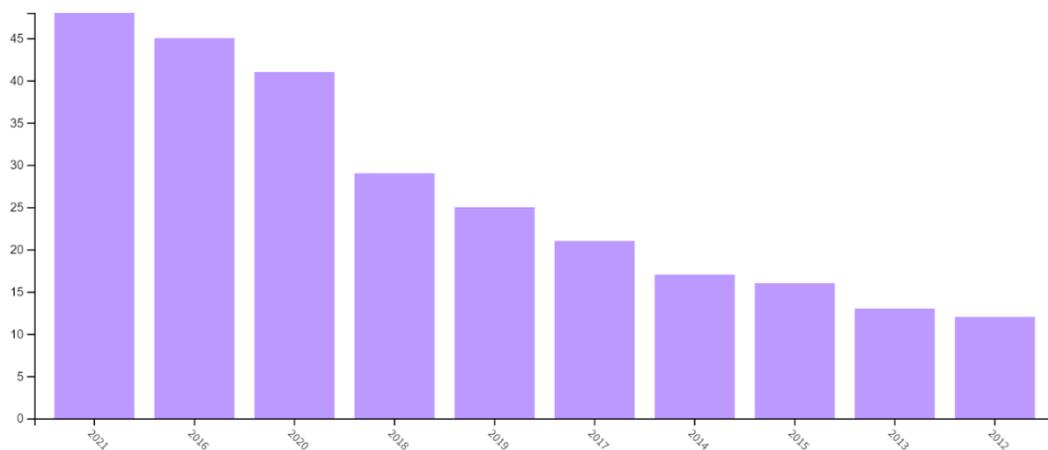


Figure 1. Distribution of studies on biodesign according to the publication years

IMPORTANCE OF BIODESIGN IN EDUCATION OF ARCHITECTURE

Changes in the all educational levels point to a shift towards learning to live with the interests of nature instead of capital. Cortese highlights these connections like that: *“Designing a sustainable future requires a paradigm shift toward a systemic perspective which encompasses the complex interdependence of individual, social, cultural, economic and political activities and the biosphere...”* It is very important for citizenship education in the 21st century that understanding how the natural world works and learning how to mimic it for human technology and activity (Cortese, 2003). In this direction, methods that learned and inspired by nature are becoming more and more widely understood and accepted as a new way of design, and they find a place in the education programs of universities and colleges around the world.

Today, the irreversible damage of the construction and building industry on the environment is an important topic of discussion in many fields. In parallel with these discussions, while the processes for which disciplines such as design, architecture and engineering are responsible are criticized, the integration of these problems into education does not receive sufficient attention. In this context, considering with finite resources and important problems of our planet, we need to review the responsibilities of architectural education. It seems to imperative for us to think and produce architecture and architectural education differently than before.

Architectural education is a special field that has great differences compared to the education style of other disciplines (Ayran, 1995). Vitruvius argued that the architect should have a command of the theoretical

knowledge of different disciplines such as literature, geometry, history, philosophy, music, medicine, law and astronomy; defining architecture at the intersection of science and art, he drew attention to its interdisciplinary character, which includes both theory and practice (Vitruvius, 1993: 4,5). Two thousand years later, this definition is still valid and architectural learning is open to collaboration of many different disciplines. The curriculum of the Bauhaus School of Design, led by Walter Gropius in the 1920s, is based on the trio of science, art and technology. No matter how much architecture and education have changed in the process so far, it is possible to say that today it is still based on similar associations and more interdisciplinary work has become inevitable compared to the past. Interest in the participation of technology and positive sciences in architectural design solutions has increased, the need to establish new dynamic connections with other disciplines has shown its traces not only in professional life, but also in architectural education. Therefore, both the structure of the age that foresees interdisciplinary relations and the ecological problems impose different responsibilities on the designer; this is required additional learning in the education process.

The role of architectural education has been increasingly questioned in recent years for bring up professional architects who can offer sustainable solutions. It is noteworthy that attitudes towards the development of ecologically sustainable design, environmental awareness and scientific research techniques are considered among the 16 objectives in the Architectural Education Charter of UNESCO and International Union of Architects' (UIA) (UIA, 2014).

It is inevitable for today's architects to consider socio-cultural and economic sustainability together with ecological concerns and to be equipped with the necessary knowledge in this sense, within the framework of an understanding in harmony with nature. Architects should be aware of the increasing importance of science and technology, sensitive to climate change, environmental and energy issues, and have a command of architectural ethics. The size of the problems on a global scale also shows the difficulty of dealing with a single profession. It is important that to develop the capacity of architects to be involved in the collaborative design process. In this context the "biodesign approach", which aims at creative and innovative design solutions by encouraging critical thinking; is closely related to sustainability, ecology, technology and science; adopts a design thinking with concerns beyond form and function; has an importance in the education process with a high impact potential in the field of architecture.

With such a perspective, nature-based design processes are included in formal architectural education at different scales in various universities around the world and there are many workshops and trainings on biodesign in informal education. In Turkey, biodesign education for architecture or engineering disciplines is limited to a few courses, and there is no planned curriculum in this field. It is possible to say that the studies on the development of architectural education in Turkey are mainly carried out by the academic environment and the Chamber of Architects of TMMOB. In the 11th (November 2021) of the Architecture and Education Conventions held by the Chamber of Architects, it is stated that the disciplines such as architecture and urban design have major responsibilities in such a world where environmental and climate problems, poverty and inequalities are gradually increasing (TMMOB, 2020). In addition, "increasing interdisciplinary approaches and studies", "development of critical thinking and multidimensional handling of creativity", "supporting original and creative solutions based on scientific knowledge and research" and "synthesizing modern new technological possibilities", "targeting lifelong learning" are among the common problems identified in architectural education. All these overlap with the basic working principles of the biodesign approach, and in this respect, the contribution of a biodesign approach to an architect comes to the fore.

In addition to the education debates in the field of architecture in Turkey, when the thesis studies about architectural education are researched within the framework of the words of "architectural education, technology, science, sustainability, ecology, nature, biology, biomimesis, biomimicry, biodesign" could be seen researches in different depths and dimensions. There are many studies discussing the effect of current conditions on "architectural education". Among these, it is determined that the relationship between

architectural education and technological and scientific developments; the issue of sustainability, ecological and energy-efficient design, building materials with low environmental effects and integration them into the design process, are quite on the agenda.

Apart from these, it is noticed that the words of "nature" and "biology" are rarely used as a notion in the studies in the field of architecture. It was seen that the formal effect of the concept of biomimicry in the building was investigated, biomimicry was generally discussed from a conceptual point of view, and its relationship with architectural education was discussed only in İrem İleritürk (2016)'s master's thesis named "Biomimicry in the context of relationship with nature in architectural education". As a result of this review, it was concluded that the subjects covered by the biodesign approach were partially discussed and not dealt with holistically, and that there was no study on biodesign education in the field of architecture (Table 1). In numerous studies on architecture education, the effects of the biodesign approach, in which interdisciplinary working methods are used, on the architectural design process is seen as an unstudied field.

Table 1. Examples of Academic Study with Keywords “Architectural Education, Technology, Science, Sustainability, Ecology, Nature, Biology, Biomimesis, Biomimicry, Biodesign on Biodesign and Architectural Education in the Literature”

No	Academic Study	Year	Type	Author	University
1	A model proposal that can be integrated with the basic education programming and architectural design program in architectural education	1994	PhD	Sevgi Lökçe	Gazi University
2	Creativity in architectural education; Examination of the basic design-architecture relationship	2004	MSc	Özgür Hasan Çebi	Karadeniz Technical University
3	The place of formal architectural education in the formation of the architect	2004	PhD	Huriye Gürdallı	Istanbul Technical University
4	Architectural education and Turkey in the globalizing world	2006	MSc	Hande Naçkan	Yıldız Technical University
5	The role of critical thinking skills in architectural education: First year design education	2011	MSc	Bengil Yurtsever	Istanbul Technical University
6	The search for a method to improve the design process in architectural education	2013	PhD	Elvan Elif Özdemir	Gazi University
7	A sustainable model proposal in architectural education	2015	PhD	Elif Tatar	Anatolian University
8	Suggestion of a productive method that can be used in the development of the design process in architectural education	2018	MSc	Elif çam	Gazi University
9	Model proposal for technology education in architecture as a component of holistic architectural education	2013	PhD	Fatih Yazıcıoğlu	Istanbul Technical University
10	Computational thinking and architectural education: An evaluation of new formations in Turkey.	2016	MSc	Bilge Müge İçmeli Atalay	Izmir Institute of Technology

11	BIM-based interdisciplinary collaboration proposal in architectural education	2016	MSc	Ghina Alkawi	Mimar Sinan Fine Arts University
12	Integrating sustainability principles into architectural design studio	2018	DR	Kamal Eldin Mohamed	Middle East Technical University
13	Sustainability in architectural education: the impact of education on the perception of sustainability	2019	MSc	Ayça Nilüfer Çalışkuşu	Middle East Technical University
14	A study on the integration of sustainability principles into architectural education	2019	MSc	Sine İbrahimgil	Gazi University
15	Critical evaluation of architecture from an ecological perspective and ecological strategies for architectural design	1998	MSc	İzzet Özkereesteci	Middle East Technical University
16	Examination of ecological design principles in multi-storey office buildings in the context of sustainable architecture	2004	MSc	Bilge Karataş	Yıldız Technical University
17	The effects of ecological approaches on the architectural design process	2005	MSc	Serkan Yılmaz	Gebze Institute of Technology
18	Ecologically sustainable structures and materials	2005	MSc	Umut Tuğlu	Mimar Sinan Fine Arts University
19	Suggestion for criteria guide for ecological improvement of architectural designs	2012	PhD	Mustafa Orkun Özür	Beykent University
20	Examination of the relationship between nature structures and human-made structural systems in 20th century examples and Santiago Calatrava.	1997	MSc	Ayşe Banu Aydın	Dokuz Eylül University
21	Examining the concept of biomimicry as a supporting factor in the design process	2009	MSc	İrmak Kuday	Mimar Sinan Fine Arts University
22	A proposal for a dimensionless parametric interface design in architecture: Biomimetic approach	2009	PhD	Selma Arslan Selçuk	Middle East Technical University
23	Function of biology: Computational biology for evolutionary spatial systems	2014	PhD	Frederico Fialho Teixeira	Istanbul Technical University
24	Rethinking technical biology in Architecture	2014	MSc	Amar Pasic	Istanbul Technical University
25	Biomimicry in the context of relationship with nature in architectural education	2016	MSc	İrem İleritürk	Yıldız Technical University
26	Biomimicry supported space design criteria and examination of these criteria on examples	2016	PhD	Aliye Rahşan Karabetça	Mimar Sinan Fine Arts University

27	The use of analogy in nature-inspired spatial designs: Biomimicry	2019	MSc	Rumeysa Keskin	Burdur Mehmet Akif Ersoy Üniversitesi
28	In the context of biomimetic approaches today the building material usage criteria	2020	MSc	Sıla Yıldırım	Gazi University
29	A biodesign collaborator in architectural design: Mycelium	2020	MSc	Onur Kırdök	Dokuz Eylül University
30	Examination of the aesthetic effect of biomimesis on building formation	2020	MSc	Kadim Yorulmazel	University of Trakya
31	Examination of the biomimicry approach in the process of creating form in architecture	2021	MSc	Taha Şenol Yılmaz	Konya Technical University
32	Bioart and biodesign: The ethics and aesthetics of working with living systems	2021	MSc	Ege Dönmez	Izmir University of Economics

From this point of view, the main framework of this study is to teach the biodesign approach to architects, architecture students and other students in design disciplines to can examine nature with appropriate techniques, inspire nature and include natural processes in their designs. The aim of the study is to develop a base for a program curriculum that can enable to add interdisciplinary relations and biodesign-oriented thinking practices to design development processes. Within the scope of the study, firstly, examples of biodesign education carried out by universities and various institutions-organizations were examined. Based on these needs and studies, a draft biodesign education program that can be used in the field of architecture in Turkey has been proposed.

BIODESIGN NOTION IN EDUCATION OF ARCHITECTURE IN THE WORLD

It has been determined that biodesign approach have been developed and used in various universities around the world with different scales (Table 2). These include graduate programs, as well as certification programs and undergraduate courses. In addition to the studies carried out within universities, it is observed that the concept of biodesign for architecture and related disciplines is taught in the field of informal education through workshops, seminars and certificate programs etc. by private institutions, organizations and institutes in Europe and the USA (Table 3). In Turkey, biodesign education for architecture or engineering disciplines is limited to a few courses, there is no curriculum in this field. It is seen that there are very few informal education studies and also the Turkish Biodesign Team works towards teaching and applying the concept of biodesign (Table 4).

Table 2. Examples of Undergraduate and Postgraduate Studies on Biodesign in Universities in the International Area

University	Country	How to Work in Biodesign	Study on Biodesign	Instructor and Members
University of Akron (UA)	USA	PhD Degree Program	Integrated Bioscience /IB	Program Director Dr. Hazel Barton Multidisciplinary Faculty Staff
Utrecht University	Holland	Master's Degree Program	Bio Inspired Innovation	Program Coordinator Assoc. Prof. Pauline Krijgsheld, Multidisciplinary Faculty Staff

University College London (UCL) /Bartlett School of Architecture	UK	Master's Degree Program	Bio-Integrated Design (Bio-ID) MArch / MSc	Program Director (Architect) Prof. Marcos Cruz and Dr. Brenda Parker, Multidisciplinary Faculty Staff
University of the Arts London (UAL)/Central Saint Martins College	UK	Master's Degree Program	MA Biodesign	Program Manager (Architect) Nancy Diniz, Multidisciplinary Faculty Staff
Arizona State University (ASU)	USA	Master's Degree Program (Online)	Biomimicry	Multidisciplinary Faculty Staff
Newcastle University	UK	Master's Degree Program	Biotechnology and Biodesign MR	Multidisciplinary Faculty Staff
The University of Sydney	Australia	Architecture Major (Major)	Biodesign Major	Program Director Dr. Phillip Gough, Multidisciplinary Faculty Staff
University of Edinburgh	Scotland/ UK	Master's Course	Biodesign /PGBI11112	Dr. Naomi Nakayama
Minneapolis College of Art and Design (MCAD)	USA	Master's Course (Elective/Online)	SD 6610 Biomimetic Design	Denise DeLuca, Program Director for Sustainable Design
University of Southern California USC School of Architecture	USA	Master's Course	599 Biodesign	(Architect and Landscape Architect) Assoc. Prof. Aroussiak
Institute of Advanced Architecture of Catalonia (IAAC)	Spain	Master's Degree Seminar Workshop (Elective)	Bio Design and Nature-Based Solutions	Dr. Chiara Farinea
Institute of Advanced Architecture of Catalonia (IAAC)	Spain	Master Thesis Research Topic (Elective)	New Materials, Biology and Architecture	Thesis Advisors; Dr. Marcos Cruz, Dr. Areti Markopoulou, Kunaljit Chadha, Dr. Nuria Condepueyo
The University of Sydney	Australia	Architecture Major Course	BioDesign Fundamentals- BDSN 2001	Dr. Phillip Joel Gough

The University of Sydney	Australia	Architecture Major Design Studio	BioDesign Studio/ BDSN3001	Dr. Phillip Joel Gough
University of Technology Sydney (UTS)	Australia	Design, Architecture and Construction Undergraduate Course	85840 Biodesign	-
Akron Üniversitesi (UA)	USA	Graduate and Undergraduate Course (Elective)	316 Biodesign	Dr. Petra Gruber
Technical University of Berlin (TU Berlin Summer & Winter University)	Germany	Undergraduate, Postgraduate, Graduate, Professional Summer School Course (Online)	Introduction to BioDesign	Assoc. Prof. Mirela Alistar
University of Akron (UA)	USA	Undergraduate Certificate Program	Biomimicry License Certificate	Coordinator Dr. Peter Niewiarowski, Multidisciplinary Faculty Staff
Los Andes Üniversitesi (Universidad de Los Andes)	Colombia	Undergraduate and Graduate Certificate Program	Biodesign-Learning from nature in a decarbonization era	Architect María Susana Mena Deferme, Architect Michael Smith, Assist. Assoc. Natasha Bloch Department of Biomedical Engineering
Minneapolis College of Art and Design (MCAD)	USA	Professional Development Certificate Program (Online)	Biomimicry Certificate	Denise DeLuca
Dokuz Eylül University	Turkey	Architecture Graduate Course	Design Essays at the Intersection of Science and Architecture (ARC 5148)	Prof..Dr.Tutku Didem ALTUN
Izmir University of Economics	Turkey	Bioengineering Master's Course	Design with Biomaterials (BEN 511)	Dr. Derya Irkdaşdoğu
Izmir University of Economics	Turkey	Architecture Undergraduate Course (Elective /Online)	Design with Nature: Biomimicry in Architectural Design (ARCH 328)	Dr. Filiz Özkan
Istanbul Kultur University	Turkey	Interior Architecture and Environmental Design Undergraduate	Biomimetic Design (IAD0946)	Dr. Aliye Raşan Karabetça

		Course (Elective / Online)		
--	--	----------------------------	--	--

Table 3. Examples of Biodesign Education in the Informal Field in the World

Informal Education	Organisation	Educator	Country
Symbiotic Collaboration / Architectural & Biological Production Workshop	Catalonia Institute of Advanced Architecture, Fab Lab	Architect Aldo Sollazzo, Engineer Jose Starsk Lara	Barcelona, Spain
BAW04 Biomimicry Workshop	University of Alberta, Biomimicry Alberta	Engineer Marjan Eggermont, Designer Carlos Fiorentino	Edmonton, Canada
Transdisciplinary Biodesign Workshop/Biodesign from A to B Algae to Bioplastic	Biomimicry Norway, Norwegian University of Life Sciences NMBU, Vitenparken As Campus	Engineer Michel Wolfstirn, Designer Nina Havermans	Ås, Norway
Mock Studio Biomimicry Workshop	Studio Emergence Design Studio	Architect Seeja Sudhakaran, Architect Khushbu Davda	Mumbai, India
Nature of Biodesign Systems Workshop	HCI Direction DIS 2020, Biopolis Project	Dr. Phil Gough, Architect Dr. Leigh-Anne Hepburn, Architect Dr. Larissa Pschetz, Architect Dr. Carolina Ramirez-Figueroa, Architect Dr. Naseem Ahmadpour, Oron Catts	Sydney, Australia Amsterdam, Netherlands
Biomimicry: Nature Inspired Innovation Summer Workshop	Bioversum, European Biomimicry Alliance(EBA), designforum Vorarlberg	Prof. Dr. Regina Rowland, Cyclic Design Specialist Dr. Sonja Eser	Dornbirn, Austria
Inspired by Nature: Developing STEM with Biomimicry Design Challenges	Biomimicry Institute, Biomimicry Youth Design Challenge	Designer Gretchen M. Hooker	Denver, USA
Biomimicry Design Thinking Workshop	Oneistox	Architect Chetan Shivaprasad	New Delhi, India
Bio-Design Lab: A Weekend Workshop to Imagine Future Bio-Innovation	Edinburgh University School of Biological Sciences, Edinburgh College of Art, ASCUS Lab Art & Science	Carole Collet, Helene Steiner Dr Louise Mackenzie, Larissa Pschetz & Dr Bettina Nissen, Naomi Nakayama & Elise Cachat, Miriam Walsh & Jemma Pilcher	Edinburgh, Scotland, United Kingdom

Table 4. Examples of Biodesign Education in the Informal Field in Our Country

Informal Education	Educator
1., 2., 3., 4., 5., 6., 7. Biodesign Workshop	Turkey Biodesign Team
Ask Nature, It Knows Best, From Biosimulation to Biodesign, TÜBİTAK 4004 Project	Turkey Biodesign Team
Biobeta-TUBITAK 4005 project	Turkey Biodesign Team
Hack'N Break, Biomimicry, Bioinspiration, Biodesign	Turkey Biodesign Team
Hack'N Break 19, Biodesign Brainstorming	Turkey Biodesign Team
Hack4Art: Artistic Mazes with Smart Mushrooms	Turkey Biodesign Team
Intelligent Biodesign Workshop	Yasar University
Inspiration from Nature: Biomimicry	Foundation for the Protection and Promotion of Environmental and Cultural Values Turkey
Nature / Form / Processes Workshop	Izmir University of Economics, Faculty of Fine Arts and Design, Institut Français Izmir, Arkas Art Center
Nature-Based Solutions for Resilient Cities Training	Marmara Urban Forum (MARUF), Head of Environmental Sciences and Policies Department, Central European University (CEU)

A small survey was carried out to make a preliminary assessment of the perspectives of architects and architecture students on biodesign education. Participation in the survey was limited to 36 people. 44.4% of the participants are undergraduate students, 33.3% are graduate/doctorate students, 11.1% are graduate/doctorate graduates, 11.1% are undergraduates (Figure 2-a). The question "whether they would like to receive an education on biodesign", which was asked to the participants in the survey by giving a general definition of biodesign, was answered positively by 91.7% (Figure 2-b). When asked whether they agree with the idea that "The concept of biodesign has gained importance in the field of design with the effect of scientific and technological developments and will gain more importance in the future", 52.8% completely agree, 33.3% agree, 11.1% are undecided. and 1.1% answered as disagree, and there was no participant who did not agree with this opinion at all (Figure 2-c). 38.9% of the participants completely agree, 50% agree, 5.6% are undecided and disagree with the statement "I think that knowing about the biodesign approach will be beneficial in my professional life". No disagreement response was given (Figure 2-d). "I would like to learn the biodesign approach to improve myself." To the statement, 44.4% completely agree, 52.8% agree, 2.8% undecided. There is no disagree and no disagree response (Figure 2-e). Finally, the participants were asked the question at which stage they think biodesign education should be integrated into architectural education, and 63.9% undergraduate education, 19.4% postgraduate education, 16.7% post-architecture professional development certificate education response was given (Figure 2-f). As a result of the data obtained in the mini-questionnaire conducted as a preliminary assessment, it was concluded that the teaching of the biodesign approach in architectural education was met with great interest and enthusiasm. This survey study has two important limitations. The first is that the number of participants is small and the educational background of the participants is not evenly distributed (most of

the participants are undergraduate students). However, preliminary findings support the idea that there is a place to gain knowledge about biodesign within the scope of the target audience of undergraduate and graduate architects, and that there is a demand for an education on biodesign.

It can be seen that unusual and innovative architecture and design situations can create creative niches in traditional architectural education by transferring the knowledge gained in the world of architecture to another dimension on new scientific and technological grounds or by transforming it into another knowledge that will produce new meanings. In our age, it is expected that these new situations and interdisciplinary knowledge management will play a more active role in the teaching of architecture in addition to the traditional in studio/workshop-oriented conventional architectural education, which is shaped by the contribution of various disciplines (Özgenel, 2019).

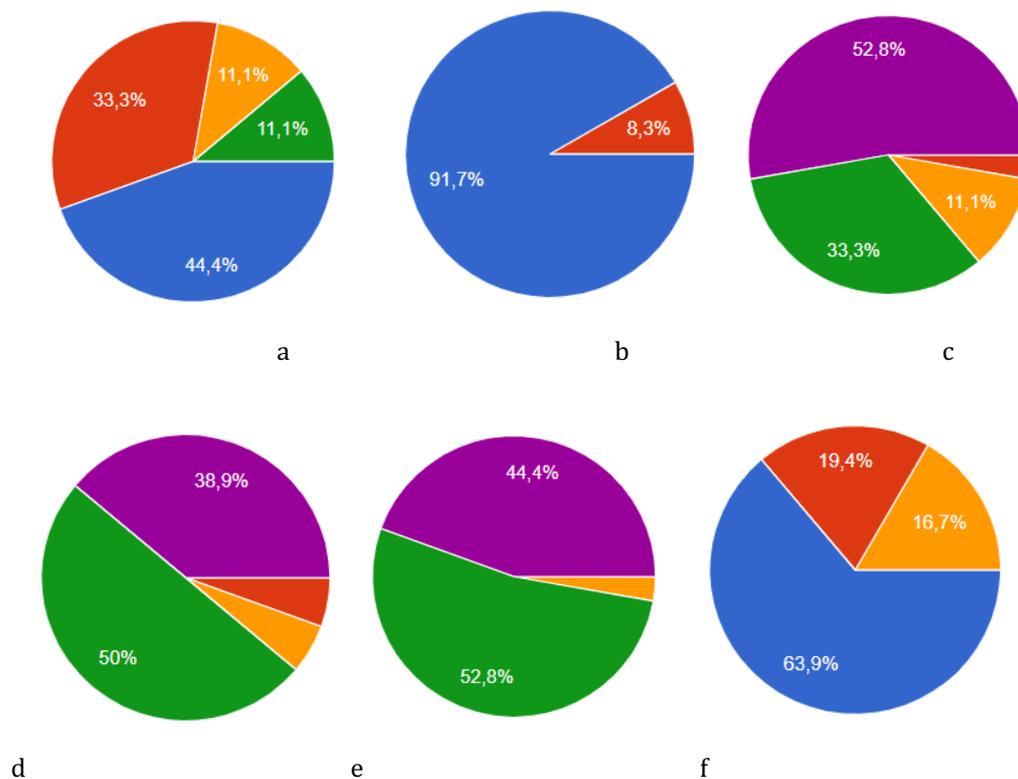


Figure 2. Biodesign Education Preliminary Survey for Architects

A BIODESIGN EDUCATION PROGRAM PROPOSAL FOR ARCHITECTS

The architect's area of expertise is related to many disciplines and a wide variety of specialized knowledge. Especially in the 21st century, as in many professions in the world, the profession of architecture has become a dynamic discipline by being influenced by the expectations and changes of the society (Brady, 1996). The 21st century brings new challenges and opportunities for architecture as a profession. It is thought that the "Biodesign Education Program for Architects" proposed in this framework can be an important method for architects and architecture students to take a more active role under the mentioned problems and conditions. The aim of the curriculum developed in this direction is to propose a teaching model that will

contribute to the professional development of architects and architecture students, in which the biodesign approach can be used as a tool in architectural design on an international and national scale.

While increasing the number of other fields with which the architectural profession is related, it has also made the knowledge of specialization in practice more specific (İlerisoy, Aycı, 2019). Biodesign is an approach that develops a special depth of expertise in the discipline of architecture. For this reason, it is envisaged that Biodesign education can be given to architects at different levels, but it should be developed as a separate certification program instead of integrating it into the existing formal education system. Considering the requirements of the aforementioned era, international examples and national-scale goals in education, the Biodesign Education Program proposed for the field of architecture is structured to enable the architectural students and architects participating in the program to develop a design vision that combines their professional knowledge and expertise in design, biology and engineering. The basis of the Biodesign Approach is the phenomenon of nature and multidisciplinary problem solving.

PROGRAM LEARNING OBJECTIVES AND OUTPUTS

The Biodesign Education Program proposes the use of biodesign as a means of incorporating the inherently life-facilitating principles of biological life systems into design processes, to move towards a more holistic, sustainable future. Biodesign explores bioinformed design strategies as a driver for sustainability. Participants are expected to create alternative and new innovative design proposals for the emerging bio-circular economy. These studies redefine the use of energy, water, air, waste and materials. It incorporates the life-sustaining principles inherent in biological life systems into the design process. The program will introduce students to topics relevant to the field, from multidisciplinary design background to whole systems thinking, biodesign principles, biological systems, bio-computational design, digital and bio-fabrication techniques. They will apply these principles to design new sustainable materials, products, services, systems and architectural proposals. The program has a strong emphasis on ethical issues and learning by doing. Theoretical, global, cultural and socio-environmental contexts will enhance the development of participants' personal biodesign agendas.

The Biodesign Education Program basically aims to develop a project compatible with natural processes by guiding students to solve a design problem using the biodesign approach. In this direction, it includes the processes of learning by doing as well as theoretical knowledge. The process expects participants to be proactive, responsive and collaborative in learning.

The learning outcomes of the program are as follows:

L01: To be able to understand the concept of biodesign and its related theories, methods and technologies

L02: To be able to identify design problems that will have an impact on sustainability and human health on a universal scale and to formulate related solutions

L03: To be able to develop design solutions compatible with nature and to use the biodesign approach for this purpose

L04: To be able to work effectively in an interdisciplinary team environment and to integrate information from different perspectives into an interdisciplinary problem understanding.

L05: To be able to associate scientific research with design production and development.

L06: To be able to explain scientific concepts to a wide audience using abstract models.

Program Outline

The program is planned to consist of 3 phases designed with a participant/student-oriented perspective:

Phase 1: Obtaining Information (Theoretical Lessons - Informing by Experts)

Phase 2: Knowledge Generation (Submission of Individual Research and Biodesign Project Proposals)

Phase 3: Biodesign Project (Studio Studies-Development of Group Biodesign Project)

The first stage constitutes the foundations of the biodesign approach.

This phase includes a series of lectures, presentations, laboratory investigations, nature tours and inductive reasoning under the guidance of various experts in design, biology and engineering disciplines. First of all, the Biodesign Approach will be introduced to the participants in terms of background, concepts and basic information. In this introductory course, lecture, question-answer, brainstorming teaching techniques will be used. Afterwards, Biodesign methods, techniques and tools, design examples and case studies will be analyzed and transferred. The relationship of the biodesign approach with science, technology, sustainability and ethics will be explained, and it will be ensured that the participants understand the processes in which nature and living organisms are involved, and practice thinking on the design processes that include them. Phase 1 is supplemented by reading and discussion of suggested resources.

In the second stage, a process in which the participants are more active is envisaged, and the participants focus on their own learning and development by doing research. It is envisaged that they work in groups of at most three people. After each group has defined their problem, they will collect and map information about it, do resource analysis and present a biodesign portfolio. The problem definition can be by choosing a theme or problem presented by the trainers, or it can be a suggestion they have developed within the framework of their own creativity. Ideas in this process will be presented visually in different environments. Participants will develop their biodesign studies within the framework of the criticisms of instructors from different disciplines through the preliminary research portfolio presented. The aim is not to solve the problem completely, but to encourage participants to reflect on the weaknesses and flaws in their proposals. Participants will be encouraged to be proactive and seek relevant external expertise or collaborations. In this way, it will be ensured that they enrich their learning against external stakeholders by testing their project ideas. While this phase will be the highlight of self-directed work, there is also peer-learning with joint presentations and discussions. Each group will be fed by the trainer(s) with referrals to relevant resources and experts. At the end of the process, each of the groups is expected to reach an idea that can be developed and applied after feedback.

The third stage focuses on the practical learning of the developed and matured proposal at the idea level and the development of prototypes. The final design proposal will be presented visually and orally with a poster containing all the relevant steps of the design process and the implementation scenario. Participants will be prepared to further develop their suggestions and receive weekly feedback from trainers throughout this process. This process includes a range of teaching and learning strategies, including discussions, reflection and exercises, and student presentations.

The final products will be evaluated in terms of concept (authentic value, scientific research and precision, functionality in problem solving), presentation (verbal, visual creation and prototyping) and product (manufacturability and applicability, affordability, suitability for the target user group, ethical value, sustainability- nature and environmental impact).

RESULTS AND DISCUSSION

Our age offers radical changes in every field with its positive or negative effects and demands. It is not possible and rational to stay out of these changes. With the 21st century, it is clear that disciplinary formal education programs should be supported in line with new understandings, taking into account the emerging innovations in order to raise individuals who are suitable for the human, society and philosophy of life of the 21st century. Education program support studies should be carried out by taking into account our social

reality and the existing resources of the current education system. In this context, the proposed biodesign education program aims to support the current architectural education in line with the expectations of the century. This study aims to encourage research and development in the field of architecture and education with the aim of providing education to architects and architecture students so that biodesign approaches and methods with high impact potential in the field of architecture can examine nature with appropriate techniques, be inspired by nature and include nature in their designs. It is envisaged that the proposed biodesign training program will be developed by eliminating the necessary deficiencies as a result of testing the draft and evaluating the pilot applications.

REFERENCES

- Avcı Özkaban, F., Akyol Altun, T. D., Tokuç, A., Andiç Çakır, Ö., Köktürk, G., Şendemir, A. 2020. *A New Dimension in Architecture's Relationship with Nature: Biodesign*. Yapı Magazine, Issue 104, Pg. 48-53.
- Ayran, N., 1995. *General Directions for the Future of Architectural Education*. Architecture and Education Forum 1: What a Future, Cenkler Printing House, Istanbul.
- Benyus, J. M., 1997. *Biomimicry Innovation inspired by nature*. New York, Marrow.
- Brady, D. A., 1996. *The education of an architect: Continuity and change*. Journal of Architecture Education, 50(1), 32-49.
- Cortese, A. D., 2003. *The Critical Role in Higher Education in Creating a Sustainable Future*. Planning for Higher Education. 15-22.
- Gil, J.P., Ganges, L. S. Y., Canseco, R. A., Soto, J.L.L., Nistal, J.G., Guerra, V. J. 2016. *Interdisciplinarity in Architecture: Towards a Genuine Cross-Disciplinary Education*. Conference: International Conference on Education and New Learning Technologies, Project: Transdisciplinarity in the teaching of architecture, urbanism and cultural heritage.
- Gruber, P., 2011. *Biomimetics in Architecture, Architecture of Life and Buildings*. Vienna: Springer Verlag/Wien.
- İlerisoy, Z.Y., Aycı H. 2019. *An Evaluation on the Field Selection of Architecture Final Students*. Journal of Education and Social Studies/JRES, Volume 6, Issue 2, 192 – 214.
- Myers, W., 2012. *Bio Design: Nature, Science, Creativity*. New York: Thames & Hudson, Ltd.
- Özgenel, L., 2019. *6 Architects and Academicians' Thoughts on the Architectural Education Model*. Yapı Magazine, 7 February 2019 /in Main Page, File, Opinion, Slider, Compiled by: Yasemin Şener Çobanoğlu, Architect. <https://yapidergisi.com/6-mimar-ve-akademisyenin-mimarlik-egitim-modeli-uzerine-dusunceleri/> Access date: 20.03.2022.
- Roshko, T., 2010. *The pedagogy of bio-design: methodology development*. WIT Transactions on Ecology and the Environment, Vol 138, © 2010 WIT Press, doi:10.2495/DN100491.
- Schmitt O., 1969. *Some interesting and useful biomimetic transforms*. Third Int. Biophysics Congress, p. 297.
- Tavzan, C., Tavzan, F., Sonmez, E., 2015. *"Biomimicry in architectural design education"*, Procedia – Soc Behav Sci 2015;182:489–96.
- TMMOB Chamber of Architects, 2020. Turkey Architectural Education Policy.
- Vitruvius, P., 1993. *Ten Books on Architecture*. Trans. M.H. Moran, Şevki Vanlı Publications.
- Web of Science. *The words "biodesign" or "bio-design" or "bio design" were searched together*. <https://www.webofscience.com/wos/woscc/advanced-search>. Access date: 20.03.2022.

Yazıcıođlu, F., 2013. A Model Proposal for Technology Education in Architecture as a Component of Holistic Architectural Education (PhD Thesis). Istanbul Technical University, Institute of Science and Technology, Istanbul

Yurtkuran, S., Kirli, G., Taneli, Y. 2013. Learning from nature: biomimetic design in architectural education. *Procedia – Soc Behav Sci* 2013; 89:633–9.

UIA Accord, 2014. *UIA Accord on Recommended International Standarts of Professionalism in Architectural Practice*, Durban

UNDERSTANDING GEOMETRICAL SHAPES' ROLE IN DESIGN STUDIO CREATIVITY PROCESSES

DR. ODETA MANAHASA

Dr. Odeta Manahasa

omanahasa@epoka.edu.al

Department of Architecture, Epoka University

ABSTRACT

Shapes are ambiguous. The ambiguity increases when students of architecture confront and discuss their established knowledge about geometrical shapes. These geometrical shapes are discussed in this research in the way the students think, and how the discussion in studio is constructed. Students consider basic geometrical shapes as *Fundierung* of their static knowledge and the discussions develop on the dynamism of 'seeing' as *Fundierung* in the process of creative design.

This research refers to the painting "Ma Jolie" which was given as a 2D exercise to architectural students. The tools used in this study to bring calculation, through different shape rules, into the design fields are shape grammar and computation. This research focuses on how students use formal language to analyse this painting.

This research supports the idea that such exercises help students develop their understanding of shapes and their complexities. "Seeing" and "knowing" are the domains where the creativity of students is discussed and focused.

KEYWORDS: *seeing, design studio, knowledge, geometric shape*

INTRODUCTION

Shapes: as difficult they are to be defined, as easy they are described by everyone. They are that set of geometrical figures that everyone is acquainted with and use them from kindergarten to lifelong experiences. Their importance is widely accepted. All of us remember when shapes are introduced to us as children, through labels such as triangle, circle, square, and so on, though it is questionable whether this is a good way to teach children shapes: shapes as pre-given symbols. Teaching children how to think with shapes is completely another crucial topic, but this exceeds the objectives of this paper.

The true importance of shapes is that they are part of everything. Shapes are everywhere and surround everything. They are both clearly existed and present in their current state, as well as complex and ambiguous in the way we want to see them.

Shapes are dynamic! There is always another thing to see. The question is whether the shapes are seen as so? Generally, we share the same opinion and accept them as they are taught. This is because they are stored in the memory as such. To amass them in the memory there exist rules, which by the time turned to "postulates". For instance, saying that "a triangle consists of three lines" no one questions this kind of labelling. Once having learnt this, such shapes are used to describe things. For example, coins are like circles, stating the problem that such kinds of labelling create a relationship dependent on what people see. This is explained by the meaning of "to found", reinterpreted by Carlo Rota into the *Fundierung* Husserlian concept. This is explained by the meaning of "to found" reinterpreted by Carlo Rota to the *Fundierung* Husserlian concept. Accordingly, he explains *Fundierung* as a relation between different strata (Rota, 1997). *Fundierung* is the hiddenness of the coin as an instrument when labelling or making it similar to a circular shape is accomplished. The *fundierung* is what affords us the activity of seeking to see it as a circle. To refer to Merleau Ponty(1963) to whom "*Fundierung*" is the relation between concepts that are already situated. The concepts found themselves. That is where the danger lies. We are looking directly at the medium, and we need to make use of it and forget about the *fundierung* relation. The coin-circle example states that what people see is being founded on the "postulates" they have in mind. People forget about the *fundierung* relations. Thus, there is a close relation between seeing and knowing.

There are infinitely many *fundierung* relations between seeing and knowledge in shapes that look like closed circles where the beginning and end become unidentified. Shapes are continuous and undergo rapid transformations. There is always something new to see, and you do not know what you are going to see "until you have seen it" (Ponty, 1963).

It is possible to talk about the same relation in part-whole relationship and shape recognition. Here, the detection of shapes as shapes known beforehand, on an example given to Basic Design architecture students, points to the cycled *Fundierung* relations.

UNDERSTANDING SEEING AND KNOWLEDGE

In the researches that are related to the senses and the relationships between them, seeing is not a new topic. A number of researchers (Gibson, 1950, Ponty, 1956) have revealed a broad study by clarifying the senses and their relation to perception, so contributing to the broad field of vision. Many studies express that the eyes are of primary importance for grasping images that help perception and lay the foundation of knowledge. Leonardo Da Vinci, for example, is known for his conviction in the sense of seeing and defining it as the main sense for knowledge accumulation. In the same way, Merleau Ponty defines as visible everything that is grasped by the eyes (Ponty, 1963). In other words, in Ponty's definition, it is apparent the function of seeing, meaning that seeing as a function is being found by the sense of seeing. That is what George Stiny expressed in his book, where he made a generalization and stated and supported the idea that everything begins with seeing. Though it looks easy to comprehend, and as Ponty claims, "we think we perfectly know what seeing is", seeing is one of those keystones of the foundations of meaning. It is exactly, the power of "seeing" that pushed Susanne Langer to study the process of meaning. Using Rota's terms, it is

the facticity of seeing that founds the Langer's research on meaning (Langer, 1951). On the other hand, seeing is a function itself. It is founded in knowledge.

To have a better understanding of the ambiguity in function- facticity paradigmatic quality, a closer look at Rota's *Fundierung as a Logical Concept* helps. Hence, seeing can be seen in two aspects. First, the event of seeing and secondly, the function of seeing, the later founds looking at shapes and accumulating knowledge. Knowledge about shapes depends on the shapes themselves and the seeing process. Once the designer decides about the ambiguity of shapes, what to do and how to use the seen shape, it is not seeing a process to which attribution should be directed, but what the designer gets from it. There is a continuous dependency.

In an example that Rota gives on seeing and viewing, some triangles drawn on a board are viewed only by knowledge. Rota says that the function of viewing is reduced to the facticity of seeing. Thus, according to him, the knowledge about the triangle drawn founds the viewing of it. In this case, there is a shift from facility to function.

If we were to schematise the process of drawing a triangle, borrowing the technique from shape grammar, could it be like the following?

think → draw
draw → see
see → view

If yes! What about thinking?

George Stiny (2006) states that "thinking is seeing, seeing is using the eyes", which is a process of reduced function to a mechanical act. Meanwhile, Susanne Langer states: "thinking begins with seeing". In this case, could it be added to the above drawn schema: seeing?

see → think
think → draw
draw → see
see → view

Thus, seen in the *Fundierung* relation it can be said that seeing founds thinking. With a simple mathematical logic, it can be said that thinking does coincide with viewing. In other words, thinking and viewing share the same facticity: seeing.

In overall, it is like the Kant questioning: "What can we know" and Stiny answering: "We know what we can see". Then Rota asking: "what can we see?" And Ponty answering that: we see through knowledge that lays its foundation in perception.

SHAPES BETWEEN SEEING AND KNOWING

Seeing and knowing are complex issues, but they can be better understood through the study of shapes. Shapes and their study help creativity and creative thinking. They are open to change and they are open to interpretation. Designers can treat them as they need to. According to Stiny (2006), one method of treating

them is to use rules based on shape calculation. Creative thinking is a byproduct of this process. Since the rules are infinite and their interpretation is left to the designer, their variety offers endless possibilities that are compared to the shapes' possibility. Here, what gains importance is the ability to see the opportunities the shapes offer? It is like shape emergence, part-whole relationship. Nevertheless, as Stiny (2006) states, "shapes are to see" The point is, how to see? A direct answer could be sagacity and learning; they are a duo of concepts that Stiny quotes from William James. The sagacity is "keenness to see". To see in the terms of *Fundierung* relations sagacity is how Stiny states it; "incorporation of interpretation, manipulation, and even manipulation, of things we see" as one of the most powerful values of design. (Yuce Gun, 2012)



Figure 1: Identifying the triangle

Sagacity is definitely more than the event of seeing. For example, someone looking at the figure 1 directly identifies triangles without any effort.

Sagacity means, specifying the shape(s), exploring, selecting among alternatives and developing rules. It is not merely an identification of  or of a half hexagon.

Sagacity is like "seeing" is what Deleuze (1988) calls "line of flight". It gives the opportunity to "be able to think otherwise". It is in the "line of flight" that Deleuze comments on the existence of the plurality of relations and opens the way to transformations. There is always more. There are more lines in our lives, more to see and interpret. This helps and guides the designer in creative thinking, because seeing facilitates the generation of rules. Moreover, sagacity is what Stiny (2006) identifies as "calculating with shapes".

Generally, people are good observers. They react in relation to things by the means of comparison and calculations. When Stiny discusses visual calculations, he asserts that in order to see and understand what a visual calculation is, ordinary calculations must be examined. Thus, the mind is doing an ordinary calculation, even though it is doing it by images. Someone sees what she/he wants to see and then processes the calculation. When generating ordinary mathematical ones, the mind uses the mathematical symbols that everyone already knows about. Later, it is easy to automatically give results. With the visual calculations it is completely another thing. In Stiny's (2006) words, someone who starts calculating visually allows anything she/he sees "to enter the process of calculating", consequently, "doing visual calculating you automatically get symbolic calculation for free" (Yuce Gun, 2012).

To make judgements and to achieve comparisons, as Gibson quotes from Stevens, an individual should execute the whole knowledge he/ she controls (Yuce Gun, 2012).

Once Langer (1951). has considered knowledge a production of seeing. Her claim that "we can merely think of a house, but know one when we see it", means that the artificial symbol of the real house is already registered in our mind. Langer also has offered such an idea when she introduced her new concept of symbolism in philosophy. She supports the idea that someone has an image of the object in mind that founds seeing it. "What you get is what you see" is turned upside-down to "What you know is what you see. Everyone has drawn or still draws a house like the one in the figure 2.

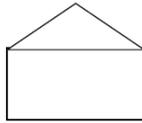


Fig.2 Sketch of a house

As already understood, this is a jump to the representation of the seen and known objects. Langer (1951) says that the only thing that the representation should share with the reality is “the arrangement of the elements”. Accordingly, representing is an arrangement of elements, or otherwise, symbols that our memory stores. This is not always as such, because the “structures” of representations may change upon perception. Langer continues; “The abstractions made by the ear and the eye—the forms of direct perception—are our most primitive instruments of intelligence.” (Langer, 1951). For that reason, seeing, perception, “arrangement of elements” or how elements hold together to make out a whole, gains importance for knowledge accumulation.

PART-WHOLE- (SUB) SHAPES- RECOGNITION

Starting with the Polish logician Lesniewski, who made a change in “Mereology”, the class- membership relation is replaced by the part-whole relation” where the whole is everything taken together (Hintze, 1995) or as Henry Leonard and Nelson Goodman (1940) label wholes; “individuals”. Up to that time, Lesniewski had done a categorisation of class and set in mathematics. Henning Hintze, in his paper, Merits of Lesniewski Type Nominalism sums up the Lesniewski definition of class as the sum of all things that are denoted by name and the sum of all things as set. This mathematical approach, together with Boolean algebraic operation, help the designer to clarify the properties of the relation. Stiny meanwhile, gives the closest definition of what design work is. He defines individuals as “definite entities without definite parts”(Stiny, 1982. The logic Leonard and Goodman (1940) had pointed out is similar to that of Stiny. Whilst individuals have no predefined parts, “it offers no idea on subdivisions” nor on arrangements of elements.

The decomposition into parts is important in the visual task of shapes, and shape recognition. Hoffman and Richards (1983) underline the subshape’s significance firstly for being easier to perceive the whole shape due to its impossibility of some shapes to be seen at once. Secondly, parts help in the representation of shapes that are not geometrically rigid, and “we see when we look at shapes”. At this point, it is important to see the linkage that shape detection has with shape grammar. After having detected an initial shape, designers reinterpret that shape in different modes in order to use it in their design according to the context. In the shape grammar the same approach is seen: the innumerable possibilities that computer offer help the designer. Meanwhile, there are problems in the subshape detection in the computer medium that are already accepted. A designer, on the other hand, can evaluate and make use of first the analytical and then the generation side of grammar. Eyes found shape recognition, which gives the designer a sense of security and decision about the current interpretation of the designed shape. Keles at.al. define current interpretation under the perceptual whole, which in other words, is shape perceived by the designer due to the shape’s boundary elements. (Keles et al., 2012)

Seeing the shapes, which are individuals, does not mean that they are understood and perceived or that they should be perceived because wholes in cognition and psychology are Gestalt, which is “more the sum of its elements. It is possible to switch between different Gestalts when looking at an image because parts of the perceived wholes are not absolute; different contexts induce different parts.” (Keles et al., 2012).

“MA JOLIE”

The goal of this paper is to understand the seeing-knowledge-seeing *fundierung* relation in shapes and how this union helps in creative design thinking. The first senses of seeing and perceptual values are put forward, along with their close relation to knowledge. Then shapes, subshapes, perception, recognition, and seeing-knowledge tie are accommodated within the frame of this study.

What follows is the description basic design assignment based on “Ma Jolie” (My Pretty Girl) (Fig.3) Picasso's painting was used to research and confirm the previously mentioned issues. This painting belongs to an analytical cubist style known for its abstract representation and use of geometric shapes and straight lines as well as overlapping shapes. Based on 4 students’ works this study will try to bring a comprehensive order to the process and the results of the assignment. Shape exploration and shape overlappings were the assignment's starting point and goal. Understanding their applications in a two dimensional composition. For this reason, the assignment was divided into steps.

It was drafted as follows:

“You are asked to investigate the distributed Picasso's cubist painting and explore different geometrical shapes present in it by paying attention also to the used technique. You are advised to use transparent sheets and coloured pens. (Duration 30 min) Then with three of the shapes explored you are asked to build a 2D composition in 35cmX50 cm cardboard by cut and paste technique. (Cutting out the shaped explored and pasting them)

Be careful of the shapes as they are interacting. (Material, Grey and Black cartridge paper)”

Students learn about the work of Picasso, and at the same time, they learn from their own work in progress. It is the analyze of the painting from which they learn about ways of designing and about the ways of developing their own work. To see how the student approached, shape grammar will potentially help to schematize what the student actually did. Expressing the designer’s steps and the shape rules they work with, in education period, has substantial importance. Stiny had 7 points where he explained the importance of these rules in design, 2 of them look more appropriate to education.



Fig.3 "Ma Jolie" Pablo Picasso, http://www.moma.org/collection/object.php?object_id=79051, 16.12.2012

One is that rules help to deconstruct students’ ideas, offering them better exploration and opportunity to change and manipulate their designs, and the other is about the plurality of answers rules can provide to a

single question (Stiny, 1980). And as Ozkar (2010) states “Basic design exercises seem especially suitable for observation in shape computation formalism, as they deal with less complex forms and relations”.

Working on the process of design, the students could have used the terms borrowed from shape grammar. By exploring the shapes present in "Ma Jolie" in fact, they should try to analyse the existing design language that Picasso has displayed and create a new design language for their own design. A method is to decompose the given design style. Students were asked to do so, by using the transparent paper to trace the shapes that could identify and project the possible shape relations.

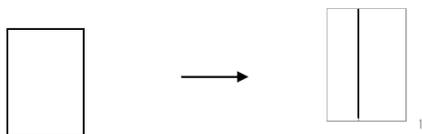
On the other hand, the students were asked to produce a new design with three elements in a bounded area. Such given constraints play a role of a guide for the new design to be generated.

The discussion below lies on the same ground. It shows some of the rules that the student of basic design Eneida Berisha has used. Using the bounded area of 35cm to 50cm cardboard, she tried to achieve part to whole shape relations, the incorporation of which were free by choice, number, and scale. Though the students were encouraged to see shapes and then use them by adding, Eneida came up with the other way around. She saw and defined the shapes of her new composition as triangle, square, and rectangle and immerge them by decomposing the limited given shape. Through this approach, as she commented, she could execute a technique present in Picasso’s painting, overlapping. Yet, I think it is more embedded in the whole shape.

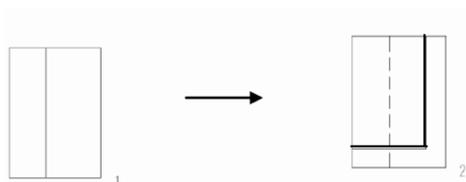
As it is noticeable, the student puts on the left side of the rule the rectangle of 35cm x 50cm in dimensions, using portrait position, similarly to Picasso’s usage in “Ma Jolie”.

Firstly:

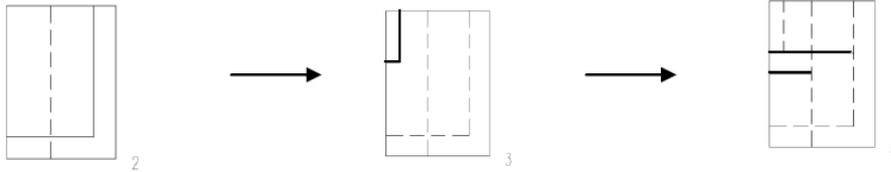
The student had chosen to divide the bounded area by drawing a line firstly 2/5 of the paper.



Her choice was influenced by the dimensions 35cm given. She had a limited background shape, and once more she decreased the working area into 14cm x 50cm and 21cm x 50cm rectangles. Among many possibilities, she had chosen to divide, so as to increase the constraints of her composition. It is through this method that Eneida proceeds to the next steps of the composition.

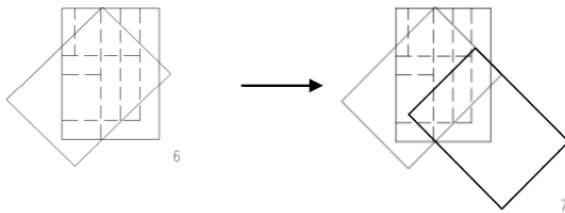


She provides another border within the restricted, given background area. The new embedded shape helps and limits the student. It helps her by decreasing the area to be designed and limiting the infinite ways of seeing the shapes. Setting it up more clearly with the language of the shapes: trying to achieve only rectangles shows that Eneida probably has seen rectangle as one of the basic geometrical shapes that everyone knows.



In the next step, the student had to make divisions again. Alternatively, she could have chosen to use the rule of shifting the bounded area. Since her idea from the beginning was to use the wholes to create subshapes, Such an approach could have made clearer her aim of creating shapes that she had recognized from the painting as sub shapes of the given bounded area.

After finishing the divisions, she suddenly decided to rotate the whole bounded shape. Applying such a rule is significant for this assignment because "Ma Jolie" shapes also show a turn. Eneida gave another explanation in class.



She said she was in need of triangular shapes because they were present in Picasso's painting. She could have pasted triangles over them, but she had chosen to use the same technique with the other rules; using the whole bounded area. The final step was to cut cartridge paper and paste it into the final generated shape. This step required making use of the rules she had explained so far. She admits that it is an inconvertible and creative experience. It "isn't routine-it exceeds what memory hold and training requires" (Stiny, 2010)



Figure 4: The final composition by Eneida Berisha

In summer, Eneida divided the painting into elements to be implemented in the composition. Despite the fact that the shapes are already present in memory, the technique and rules used are far from ordinary basic Boolean operations. There is a visible distinction between the familiar shapes such as triangles and rectangles that Eneida recognized and the rules that she implemented to achieve the final product. She had divided the given bounded area, approaching in a subtractive manner to the composition. The grid she achieved at the end of the first set of rules helps the student to alternate pieces and guide her to achieve relations and better manage and use the background. Moreover, it offers her new relations between parts and wholes.

The second assignment was proposed by Enkela Krosi. Her approach is different from the previous student's work. What they have in common, and not only with the previous student but with the whole group of works in the class, is that they recognized the same shapes from "Ma Jolie". Indeed, there was no pre-defined vocabulary for the composition, but it was the students that had to explore one themselves.

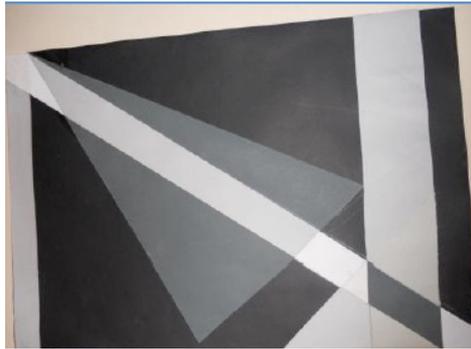


Figure 5. Enkela Krosi's final composition.

In Enkela's case, the initial shape of her grammar is a rectangle, and the given rectangular shape background. The use of grammar to complete the composition (fig5) is shown in fig.6.

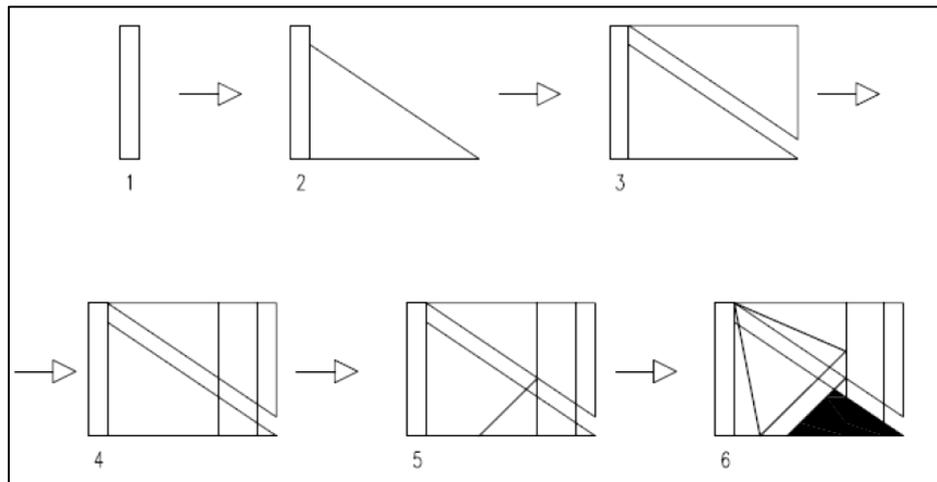


Figure 6. The rules Enkela has implemented in designing her composition.

She uses the constraints by adding 2 triangles on the two sides of the diagonal of the background. Once adding these shapes, the student expressed her unpleasantness in her generated design. In this situation, the student subtracts the hatched triangle in rule number 6. (fig.6)

The student here intended to use the explored shapes (triangle, rectangle) as a descriptive method for "Ma Jolie". Enkela herself stated that the two triangles that face the diagonal of the given limited shape are taken from the diagonal line of the canvas for the student visible in Picasso's painting. She said that she didn't have anything in mind while she was adding the final triangle (rule 6); she was only thinking about how to create an abstract cubic painting and trying to imply that the painting is transparent. Obviously, the try and error method in design results in exploring, analyzing, and synthesizing the ideas, but she could have been working on more schemas for her to achieve a plurality of relations. This could have given her the possibility to be more confident about her work.

The third proposal is Haxhire Dhiari's work. (Fig. 7) Even though it is a simple composition, it illustrates her rules and decisions very clearly. Her thoughts are founded more on her known geometrical shapes rather than on what she was supposed to explore in the given painting. She *founds* her work on the geometrical features of the given bounded area.

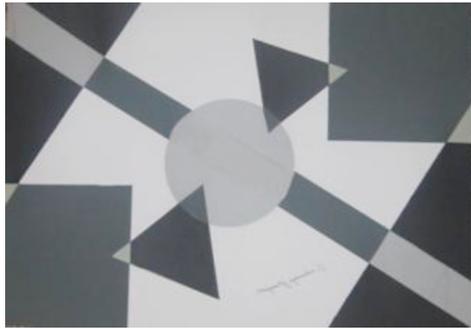


Figure 7: Haxhire Dhiari's final composition.

Meaning that, the square, the triangle, the circle, and diagonals together with the dimensions of the background are the *facticities* of the function (composition).

Let's see her schema and understand her organization and conceptual thinking. The major difference from the other students' compositions is the position of some elements that are independent from other elements.

This consideration is seen especially in rules numbers 5&6 (fig.8). She could have been approached differently! Actually, that is what *founds seeing*; looking differently and enriches conceptual thinking.

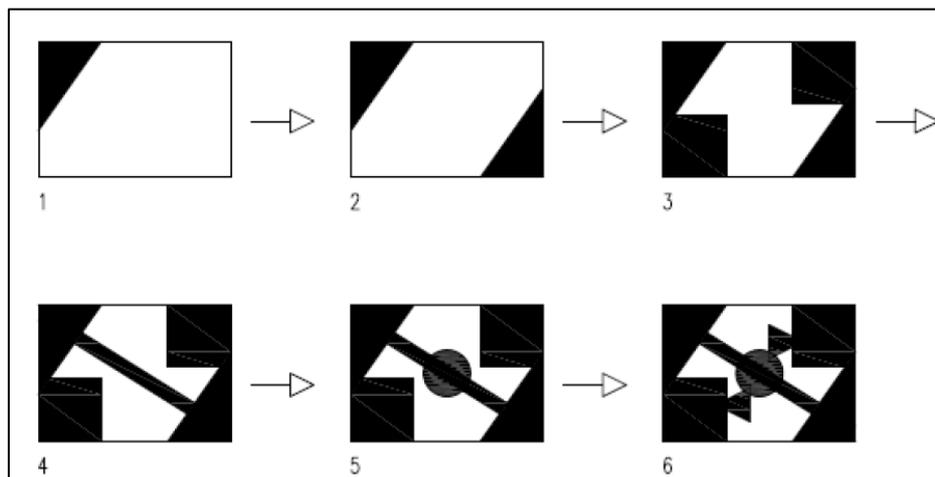


Figure 8: The rules Haxhire has implemented in designing her composition.

If the number of shapes in this composition could have been increased, the additional basic features such as diagonal lines (more than the background diagonal), and the possible product would have been grown. Furthermore, she could have been kept constant in the number of elements but performed more Euclidian transformations.

All students when explaining their composition start with the sentence: "I have begun my composition by gluing this shape here and there."

This situation indicates once more the students' position of not knowing exactly what the final composition will be.



Figure 9: Melania Keci's final composition

For example, the last composition presented here, belonging to Melania Keci (fig.9), is described by her as follows: "I saw a triangle in Picasso's painting, starting from nowhere, passing through a line that looked like the diagonal of the canvas." She started by locating rectangles and generating them from the geometry of the cartridge paper frame. Then, she decides where to locate triangles such that they are going "through" (overlapping) rectangles. The same idea was for the location of the circles. (fig. 10)

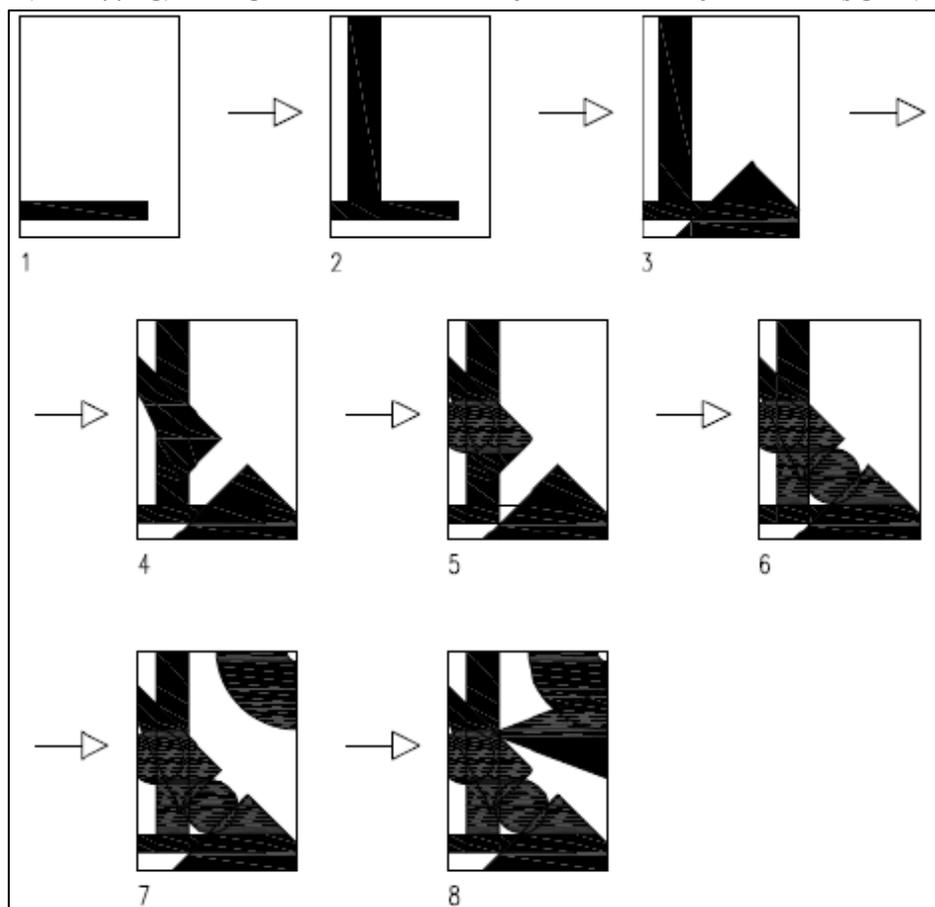


Figure 10: The rules Melania has implemented in designing her composition.

The examples explained here are only a few, but the rules and ways to represent them may be uncountable. When the first student sat up a large sum of rules and a complex layout by applying the technique of dividing

the paper frame and then adding composition elements, the others, directly approached by the addition structure. All of them had different ways of achieving part-whole relations.

When I observe the assignment in steps, I notice that in the exploring phase, they all came up with basic geometrical shapes among the infinite shapes that someone may see in "Ma Jolie". This may be so for two explanations. It may be so because of knowledge *founds seeing* or may be related to our (me and my friends') assignment composition, where was asked from students to look out for "geometrical shapes".

Yet, the next step reveals the opposite; seeing *founds* knowledge. Students develop the design step by step through seeing, they calculate with shapes founding the creative thinking.

CONCLUDING REMARKS

This research was an investigation into "seeing and knowing" as two concepts connected in the *Fundierung* relation and its footprint in creative thinking. After exploring that seeing *founds* knowing *founds* seeing, I looked at how this stratific and paradigmatic relation operated in an example from the Basic Design course of the architecture department.

In the assignment, I realized that students were unable to reflect on unknown shapes. As previously mentioned, the reasons could be the formulation of the assignment or the influence that students have on each other in the studio environment. Still, each work showed differences in interest, skills, and creative thinking. I saw that some students preferred subtractive, while others preferred additive structure. Some of them proposed complex schemas, others more basic ones. Being aware of the rules gives them a hand in every step of it, so that they can see new things and develop new schemas. This assignment was proof of a good balance between seeing and knowing.

REFERENCES

- D.D. Hoffman & Richardson. W., *Parts of Recognition. A.I. Memo, No.37.* (1983).
- Deleuze, G., *Foucault (S.Hand, tran.)*. Minneapolis: University of Minnesota Press, 1988
- Gun, O. Y., *An Open Conversation with George Stiny about Calculating and Design. Dosya 29*, (2012, November), 6-11.
- Haver Y. K., Ozkar M., Tari S., "Weighted shapes for embedding perceived wholes". *Environment and Planning B*, (2012), 360-375.
- Hintze, H., "Merits of Lesniewski Type Nominalism", *Logic and Logical Philosophy*, (1995), 101-114.
- Langer, S., *Philosophy in a New Key*. Ohio: The New American Library, 1951
- Leonard H S. & Goodman N., "The Calculus of Individuals and its Uses." *The journal of Symbolic Logic Vol.5, No.2*, (1940), 45-55.
- Merleau-Ponty, M. *The Structure of Behaviour*. Boston: Beacon Press, 1963.
- Ozkar, M., Visual Schemas: Pragmatics of Design Learning in Foundation Studios. *Nexus 2010: Relationships between Architecture*, Porto.
- Rota, G.-C. *Indiscrete thoughts*, F. Palombi (ed.), Berlin: Birkhauser , 1997.
- Stiny, G., Kindergarten grammars: designing with Froebel's building gifts. *Environmental and Planning B*, (1980), 409-462.
- Stiny, G., *Shape: Talking about Seeing and Doing*. Cambridge, MA: MIT press, 2006.
- Stiny, G., "Shapes are Individuals." *Environmental and Planning*, 1982, 359-367.
- Stiny, G., What Rule(s) should I use? *Nexus 2010: Relationships between Architecture*, Porto.

MULTI-SPHERE COMPARATIVE CASES STUDY OF ICT, EQUALITY, AND 21ST CENTURY COMPETENCE IN HIGHER EDUCATION INTERNATIONALIZATION RESILIENCE : DIACHRONIC IC MAP FRAMEWORK BASED ON ORGANIZATIONAL CHANGE THEORY

YIRAN MA

**Northeastern University
China**

ABSTRACT

The study aims to build a multi-sphere conceptual framework including innovative relationships, dynamic, strategy, and streamlining issues of globalization of higher education resilience, based on comparative cases study involving faculty's perception of virtual internship programs in Singapore, Pakistan, Indonesia, and America via semi-structured interviews, and university faculty's bullying and neoliberalism phenomenon in terms of mixed methods for administrative sphere, along with professors' and students' skills in a post-pandemic era for a personal sphere. By using a mixed-method including data analysis by Qualtrics (qualitative), SPSS (quantitative), and AntaConc corpus-assisted (critical discourse analysis), this study hopes to design a comprehensive and innovative conceptual framework in the form of an Innovation Configuration (IC) Map combined with networking theory and Organizational Change Theory with three stages (unfreeze, change, reinforced) for mapping and guiding individual and organizational goals in higher education globalization for resilience in the post-pandemic era.

KEYWORDS: HE globalization, post-pandemic resilience, ICT virtual internship, SDG 4 organizational change theory, networking theory, Innovation Configuration Map

1. INTRODUCTION

This study explores how higher education institutions, Non-Governmental Organizations (NGOs) and the emerging information and communications technology (ICT) technology in the post epidemic era can enhance educational equality, cultivate the common identity and form sense of social responsibility of world citizens through student-centered, Outcomes-Based Teaching and Learning (OBTL) pedagogy, higher education management, and 21st century competence for both professors and students in virtual teaching, in order to improve resilience of globalization of higher education after the coronavirus pandemic and realization of the Sustainable Development Goals 4 (SDG 4) of United Nations, including equal access to affordable technical, vocational and higher education, eliminate all discrimination in education, education for sustainable development and global citizenship, expand higher education scholarships for developing countries, and increase the supply of qualified teachers in developing countries.

Thus, a bold reimagining of higher education demands that comparative and international perspectives inform policymaking, teaching, and research such that we are not held captive by nationalism, Neoliberalism, and immobility during the pandemic.

TECHNOLOGY CHANGES TERTIARY EDUCATION CHALLENGES

Countries worldwide face three megatrends shaping the global economy: population shifts, global integration, and technological change (particularly, information and communication technology [ICT] and related new digital technologies). Together, these factors pose both opportunities and challenges as they shape the types of jobs available and the demand and opportunities for education and skills acquisition—and tertiary education, in particular.

While the capacity to pivot quickly to remote delivery was admirable and, in many ways, astonishing, the weaknesses in terms of equity, financing, and management, to name just a few factors, exacerbated by the pandemic's impacts, must now lead to more conscientious resilience planning for tertiary systems. Fortunately, facing the border close, traveling ban, and quarantine, global virtual internship programs can decrease facilities costs associated with traditional classrooms, travel expenses, and other miscellaneous costs regardless of time and space barriers.

Therefore, there is a need to explore how ICT enhances students' engagement, motivation, and learning outcomes of cultivating their twenty-first-century competence, including creativity, problem-solving, intercultural communication, and collaboration skills.

VIRTUAL INTERNSHIP IN ASIA AND AMERICA

Especially for the resilience of the globalization of higher education in the post-pandemic era, virtual internship for international academic collaboration and exchange has become an optimal strategy. The global virtual academic internship cases in this study will address the learning needs in Pakistan, Indonesia, and Singapore via the NUST program, three American North Carolina Universities by GEARS program and the lifestyle of the digital generation to enhance and develop twenty-first-century learning skills, which include real-time communication, immediate feedback, and mobility in learning equipment for an open, active, creative, collaborative, and motivated learning environment (Khlaisang and Mingsiritham, 2016; Tick 2013; Weiss et al. 2006).

REASONS FOR INNOVATING CONCEPTUAL FRAMEWORK AS AN AIM

Firstly, in the transformation age of the globalization of higher education after the coronavirus pandemic, along with the resilience challenges of UN SDGs, there is an urgent and shared need for identifying a more appropriate higher education internationalization theory, which can accommodate the approaches, strategies, and rationale. Also, through recent empirical research, the former theories are hoped to be

examined and analyzed to tell whether they could match the approach, rationale, and strategy for the Internationalization of higher education.

Furthermore, Systems and institutions can turn the challenges faced during the pandemic response into opportunities to become more innovative, adaptable, and resilient to future shocks. Tertiary education systems/institutions must embrace agile frameworks that promote using the shock as an opportunity for reflection, assessment, and evolution to maintain a commitment to their essential function and identity; that is, there must be adaptation without capitulation. As the history of tertiary education has shown, universities and colleges are among the most resilient institutions on the planet because their value and function remain essential to society.

2. RESEARCH BACKGROUND

Coronavirus Pandemic and New Forms of Globalised HE Transformation

At the institutional level, operational strategies using for international integration of research, teaching, services for international students, and policies for administration (Zolfaghari et al., 2009). The strategies for Internationalization are generally adopted as living documents or policy statements to encourage the active participation of all relevant parties in higher education internationalization (de Wit, 2013). Consequently, Knight (2015) supports that Internationalization can be a robust strategy to enrich international, intercultural, and global dimensions in teaching and research, knowledge transfer, and community services around and within the higher education environment.

Moreover, the strategy for the globalization of higher education transformed to online form during the coronavirus pandemic. In the face of the education institutions' closures, the HEIs across the globe re-strategize and redesigned their program delivery and assessment (UNESCO 2020). Going by various national government directives to their educational institutions to sustain teaching and Learning amidst HEIs closures

occasioned by the COVID-19 pandemic (Zhang, Wang, Yang, & Wang, 2020), HEIs administrators were left with no option but to adopt a virtual education model.

According to the American Council on Education, technology is used innovatively to enhance global learning, communication and social skills; research; and collaboration through interactions with students, faculty, and staff abroad. This might be facilitated through collaborative international online Learning (COIL), research partnerships, virtual exchange, guest speakers, or administrative collaboration. Moreover, Faculty and staff mobility is recognized as an asset. Faculty and staff have opportunities to teach, conduct research, participate in virtual exchange and collaboration, and attend domestic and international conferences. Administrative and funding mechanisms and promotion and tenure policies support employee participation in outside programs (e.g., Fulbright, externally hosted training). Also, mobility refers both to the outward and inward physical movement of people (students, faculty, and staff), programs, projects, and policies to off-campus communities and other countries to engage in learning, research, and collaboration. Technology has expanded the opportunity for mobility to include the academic engagement of all learners beyond their domestic borders. This might be accomplished through collaborative online international learning (COIL) or virtual exchange, research cooperation, faculty and staff exchanges or expertise shared virtually, internship and service experiences, and virtual partnerships.

Therefore, this pandemic is an opportune time to internationalize the curriculum to include a plurality of epistemologies and leverage technology for academic exchanges and research collaborations.

Agility and Transformation Lens as HEIs' Nature

Agility is an institutional willingness and capacity to evolve structures and practices in response to or, ideally, in anticipation of disruptive forces. Institutions that are comprehensive, mission-driven, strategic, and adaptable demonstrate core stability and capacity to not only be resilient but to grow—to transform—in adverse situations. They leverage current resources and innovative, entrepreneurial thinking to explore creative solutions in times of crisis.

For instance, during the transformation period in crisis, critical staffing and structural support are in great need, which should include:

1. A committee or task force that leads Internationalization and carries the implicit directive of the president or provost so that members prioritize their responsibilities and their work is taken seriously across the administration and campus units.
2. International leadership reports directly to the chief academic officer or president and, ideally, regularly interacts with and advises the institution's top leadership.
3. Adequate human and financial resources that account for ongoing assessment, communication, coordination across campus units, and agility to respond to shifts in the higher education and global landscapes.

Thus, the transformation lens is a strategic, coordinated, intentional process through which higher education institutions align and integrate policies, programs, initiatives, and individuals. This process enhances the institution's local and global value proposition and empowers it to serve better its mission and increasingly diverse students, faculty, and staff. This lens emphasizes that Internationalization is not static but an ongoing journey of transformation, discernment, and growth.

3. BACKGROUND

International Comparative Education: Exploring Regional Differences and Solutions to Regional ICT Higher Education

The success rate of program delivery through virtual classrooms and laboratories for teaching and learning varies according to countries and institutions (Crawford et al., 2020).

Therefore, the case comparative study of NUST and GEARS programs will explore two main aspects: (1) What are the differences in ICT teaching philosophy, policy support, and infrastructure allocation between Asia, and the United States? (2) How to promote the international equality of HE among regions and reduce the quality education gap? Besides, various factors should be taken into the comparison account, as the disparities in the success rate of program delivery during the pandemic hinged upon several factors, which included the existing infrastructure in HEIs, location- rural-urban dichotomy, students' socio-economic background, and the level of instructor's online pedagogical mastery (AAU, 2020; Thakkar & Joshi, 2018).

UN SDGs Connected to Asian Empowerment Practices

Furthermore, the SDGs present a new agenda for providing an enhanced space to introduce, move forward, and normalize inter-and trans-disciplinary approaches to knowledge acquisition and learning outcomes and absorb some deep insights from Asian civilizations that have been given little attention in the past.

Fortunately, ICT was used in higher education in ASEAN countries. The use of virtual education to overcome barriers in teaching and learning in the ASEAN community has been previously documented (Khlaisang et al., 2014). Its use is also in line with the ASEAN Socio-Cultural Community (ASCC) policy, which, starting in 2015, aims to create a caring and shared people-centered regional community to improve the standard of living for ASEAN people. It also aims to promote the ASEAN Identity, along with the focus on developing

cognitive skills, which are higher-order thinking, such as creative thinking, problem-solving, critical thinking, and innovation (Oleksiyenko et.al., 2021).

Policy Support for ICT Higher Education: AI as an Example

Given the global disparity in internet access and other supporting infrastructure for virtual learning, the United Nations is assiduously working towards achieving global virtual program delivery and assessment through UNESCO. UNESCO (2019), in its Beijing International Conference on Artificial Intelligence and Education report's preamble 11 and 16, states as follows:

11. Consider introducing new models for delivering education and training in different learning institutions and settings that can be enabled by using AI to serve different actors such as students, teaching staff, parents, and communities.

16 Apply or develop AI tools to support adaptive learning processes; leverage the potential of data to evaluate the multiple dimensions of students' competencies, and support large-scale and remote assessment.

Educational Policy for 21st Century Students' Competence

The UN's Sustainable Development Goals (SDGs) might make a new angle to inform the university's transformation of liberal arts education. There are specific SDGs that indeed resonate at a relatively deep level with the values of liberal arts education, including ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all, making human settlements inclusive, safe, resilient, and sustainable, providing access to justice for all and building effective, accountable and inclusive institutions at all levels (UN 2015, Oleksiyenko, et al., 2021).

Seeing higher education exclusively as a process leading to a set of competencies is overly reductionist, but developing learners' competence is an integral part of the mission of higher education.

Digital Generation's New Educational Requirements

At present, instructors in higher educational institutes face the challenges of teaching the digital generation. Students of this generation expect to make full use of academic resources, and with the development of social networks and the more widespread use of mobile devices, they can take on more challenging assignments which require continual and immediate feedback. This is in contrast to traditional and conventional teaching methods, which do not allow for such feedback, making them less effective in this respect (Khlaisang and Songkram 2013).

Furthermore, the study should explore better pedagogic strategies for virtual instruction, primarily focusing on virtual internships' unique features. In this context, 'Zoom fatigue' has also become all-too-real, as people face exhaustion running meetings online, with blinking screens and random time lags (Sklar 2020).

Therefore, scholars agree that virtual program delivery and assessment require a new set of pedagogical skills (Adnan, 2018 & NíShé., Farrell, Brunton, Costello, Donlon, Trevaskis, and Eccles, 2019).

Alliance as a HE Internationalization Strategy in a Crisis Age

Strategic alliances through networking is an essential tool to establish relationships and gather market information and recent development in higher education internationalization worldwide.

Alliances play a dynamic role in higher education institutions' cooperation and collaboration in higher education and other international activities (Khalid, Ali, Islam, Khaleel, & Shu, 2017), such as student and staff exchanges, consultation, and joint research. Strategic alliances under the term networking provide an avenue for sharing knowledge, technology, best practices, resources, and equal power (Girdzijauskaitė & Radzevičienė, 2013) to enhance the quality of higher education and produce marketability graduates.

The NUST and GEARS internship programs in this study are examples of international networks of alliances during the coronavirus pandemic. Both internal and external partnerships and networks can be local or international, primarily transactional, or generate new ideas and programs that span all partners. These relationships—essential to comprehensive Internationalization—bring different viewpoints, resources, activities, and agendas together to illuminate and act on global issues. They provide global and intercultural experiences for faculty, staff, and students; expand research capacity; enhance the curriculum; generate revenue; diversify knowledge production; raise the visibility of institutions domestically and globally. Regardless of the relationship format, ethical standards of practice; commitment to mutual benefit; and decision-making, sustainability, and awareness of historical and systemic injustices (e.g., north-south power dynamics, partisan town-gown relationships) are paramount. So are articulated institutional guidelines, policies, and procedures for selecting partners, sustaining relationships over time, keeping records, and reviewing the entire institutional partnership portfolio. Partnerships can originate either "top-down" or "bottom-up," but effective ones derive their strength from bridging these two poles over time.

4. SIGNIFICANCE OF THE STUDY

Significance of the Facilitating Strategy for HE Internationalization

The definition of Internationalization of higher education, as proposed by Knight (2015) that covers the functions of the national government, higher education institutions, and foreign higher education, is widely accepted and valid for networking in Internationalization.

More significantly, there is a strong connection between internationalization theories and the conceptualization of the Internationalization of higher education in terms of definition, approaches, rationale, and strategies.

Besides, the approaches, rationale, and strategies for Internationalization are supported by the networking perspective in the internationalization process, which has advanced and been innovated as a management tool for higher education internationalization (Girdzijauskaitė et al., 2018).

Therefore, the network theory of Internationalization can be seen to be feasible and appropriate for the Internationalization of higher education.

The Uniqueness of Academic Virtual Internship

Virtual internships are, in theory, less costly and more flexible, making them accessible to a broader range of students and professionals (Franks & Oliver, 2012; Bayerlein, 2015; Madeiros et al., 2015). Researchers posit that virtual internships could be more easily integrated into an academic program, allowing students to apply new knowledge in real-time (Chesler et al., 2015). This is especially useful for students who enroll in online courses (Conroy & Khan, 2009). However, while several scholars have proposed theoretical models touting the benefits of virtual work, there has been little to no empirical analysis conducted based on model programs (Hora et al., 2020).

This applies not only to modalities for teaching and learning, where a stronger emphasis on blended learning and more and better opportunities for online learning will be a desirable result, but also to a stronger emphasis on continuity of operations, student support, and welfare, including preparing for any possible future crises.

Importance of Theoretical Framework as Research Output

Internationalization requires priority in an institution's strategic plan. This is an explicit commitment by institutional leaders or national higher education managers to systems with centralized governance. A more

specific internationalization strategy includes iterative improvement, assessment, and implementation provisions. A critical part of developing institutional commitment is organizational self-reflection.

Thus, a proposed conceptual framework as the research output will be helpful for national governments and higher education institutions to achieve the goal of Internationalization and enhance the quality of higher education.

The process of building a conceptual framework in this study as an output is a diachronic process of “theory-practice-theory” with multiple sectors’ continuous self-reflection concerning theory, practice, and improvement of practice to get an advanced practice.

In addition to identifying assets, opportunities, challenges, and barriers through data gathering and dialogue, and institutional community discerns essential questions about their commitment to global engagement.

In conclusion, strategic plans based on a compelling conceptual framework will provide a roadmap for implementing goals and policies that align with an institution's response to these questions. Formal assessment mechanisms reinforce that commitment and hold leaders accountable. Policies that align with and systematize the institutional commitment ensure that equitable global engagement extends beyond a public statement, is sustainable and provides agility for growth and improvement.

5. SCOPE, AIMS, AND OBJECTIVES OF THE STUDY

This is a diachronic and comparative cases study regarding the resilience of the post-pandemic learning system and reimagining the future of Higher Education. As the detailed content shown in Table 1, this study is a diachronic comparative cases study involving multiple cases belonging to various spheres in HE.

Table 1. Contents of Multi-Sphere Diachronic Research Cases *Source: Author*

	Virtual internship	Faculty Bullying In HEI	21 st -century competence for COVID-19 resilience of teachers and students in higher education
Sphere	Technical	Administrative	Personal
Region	NUST program: Singapore, Pakistan, Indonesia & GEARS program: America	America (three North Carolina State Universities)	Reflection on the above cases & HKU alliances, humanism education via liberal arts education

Focus	Teachers' preparedness and competence	ICT and HEI management of cultural diversity and gender equality for coronavirus stigmatization and racial discrimination, HEI's Neoliberalism competition, status anxiety & utilitarianism in HEI	The Effects of Faculty Incivility in Higher Education, HEI management of cultural diversity and gender equality for coronavirus stigmatization and racial discrimination, HEI's Neoliberalism competition, status anxiety & utilitarianism in HEI	Innovative educational ideas for 21 st HE through liberal arts education for Multiple Intelligence
Stakeholder	Staff, students	HEIs' leaders, faculty	Staff, students, HEI, Policymakers	

method	interview	Questionnaire, interview	HKU graduate tracking study, interview, field research
Education Theory changes (3 stages: theory-practice-theory)	Waiting to be filled as a diachronic-gained research result: This study's contributions to a context-based and region-based theoretical framework in the Internationalization of higher education's resilience in a post-pandemic era. The steps, evaluation approaches, and rationales are as follows:		
Efficiency Changes (3 stages: theory-practice-theory)	(1) The study steps will be divided into three stages in the diachronic research cycle of "theory-practice-theory" based on the "Organizational Change Theory":		
Merits	The "Unfreeze" stage: characterized by "melting" old behaviors and beliefs, resulting in the creation of awareness coupled with a sense of urgency on the need to change the <i>status quo</i> and adopt a new <i>modus operandi</i> among organizations staff members.		
Demerits			
Framework Suggestions:	The "change" stage: the intended change is effected, and the new <i>modus operandi</i> is fully introduced and the status quo abandoned.		
innovative relationship dynamic strategy streamline	The "reinforced" stage: the change has been formed and reinforced. Several change theories and models have been		
	"Five evaluated approaches" of the case study are from Knight (1999) to the globalization of higher education: the program, rationale, ad hoc, policy, and strategy approaches		
	"Four vital rationales" of the case study are from Knight (1997) for Internationalization of higher education process: socio-cultural, political, academic, and economic		

The three spheres present critical building blocks with which tertiary education leaders and institutions can reframe and strengthen their systems for a more significant impact on learning, growth, innovation, and social development. The brief introduction is as follows:

I. Technical Sphere

NUST Virtual Internship Program:

The National University of Science and Technology (NUST) in Pakistan is ranked among the top 400 There are universities worldwide and the top 100 universities in Asia (QS World University Rankings 2019/2020). The NUST internship program for international students (NIPIS) lasts for four weeks each summer online during the coronavirus pandemic under the mentorship of industry leaders and professors. Ithis study, the author will take advantage of her former research experience in the NUST virtual program to explore the faculty's perception of cross-border virtual internships via semi-structured interviews involving six professors from Singapore, Indonesia, and Pakistan who have taken part in virtual internships instruction.

GEARS academic virtual internship program:

Administered by the NC State University Global Training Initiative (GTI), GEARS is a 4 to 8 week-long academic, research, and cultural exchange program that enables domestic and international students to experience campus life and academic research at universities across North Carolina. Due to the COVID-19 pandemic, the 2021 Winter and Summer GEARS program was virtual. Students and Professors communicated by video conference and email, and projects were worked on remotely. All students turned in an electronic version of an academic poster with an accompanying video or audio presentation.

II. Administrative Sphere

NC State Universities: The Effects of Faculty Incivility in Higher Education

With the 394 faculty sample from three North Carolina Universities, this study addresses five research questions to articulate the extent, nature, impact, reporting and perceived consequences of faculty versus faculty incivility in the university setting. The purpose is to build a foundational understanding of the phenomenon of faculty versus faculty incivility in the university setting and establish the significance of the effects of this incivility to warrant further investigation into solutions.

III. Personal Sphere

A Reflection on Faculty and Student Feedback on Pedagogy Transformation & Transformative Global Competence in the post-pandemic 21st century

In the cases of NUST and GEARS virtual internships, this study will focus on the interviews about mentors' perception of their instruction techniques in virtual internships, along with the evaluation of diachronic feedback questionnaires from both students and professors participating in Asian and American virtual internships.

Moreover, the research will do a tracer study of graduates from the University of Hong Kong (HKU) during the coronavirus pandemic in 2019, combined with diachronic field research about the pedagogy, administration, education concepts transformation strategies at HKU to investigate the influence of COVID- 19 on the graduates, as well as their global employability, empathy, and intercultural communicative competence and other 21st century skills as global citizens.

6. Literature Review

Technical sphere: Global Academic Virtual Internship, ICT Empowerment in NGO

Frameworks of International Internships and Internationalization in Higher Education

Various internship programs are often complex, diverse, and context-specific that require a strategic approach; thus internship framework supports the internee during the lifecycle of the internship (James, 2020). For small universities with limited resources, one component of the practicum framework requires at least two internships and mini-consulting projects with international implications for real-world issues. It is recommended to do an international internship to improve competency (Johnson & Jordan, 2019).

The internship learning framework has ten-course objectives starting with awareness of the professional responsibilities and ending with evaluation. During the first third of the traineeship, the students will work in a classroom setting. Meetings will be conducted before and after each session, and weekly reports should be submitted. The second was on-site experience engaging in internships activities and assigned readings and related tasks. The third phase incorporates inculcating student learning into the course (Schwartz,2010).

Administrative Sphere: Bullying among Faculty in Higher Education and HEI Management

Bullying During COVID-19 and Equality in HEIs

The impacts of the COVID-19 pandemic entangled with other significant factors affecting higher education, including post-truth culture, racial discrimination, gender inequity, and obsessive performativity. Therefore, there is a need to have reflections rooted in critical thinking, which is essential for continual development and leadership in the field.

At the same time, given that they are situated in different parts of the world, these reflections establish a dialogue that responds to and reinforces the need for global cultural exchange and engagement of intellectual leadership (Hayhoe and Pan 2001; Mundy and Zha 2012).

Bullying, Status Anxiety, and Neoliberalism :

Moreover, this study will investigate the relationship between faculty bullying, status anxiety, and neoliberalism culture in HEIs. In order to decrease competition-aimed bullying, HEI leaders should explore solutions to inequality-driven anxieties in academic research among faculty management and promotion mechanisms. In a neoliberalism- atmosphere in academia, how can we break the escalating production and reproduction of inequality-driven status anxieties in the field? Another critical factor is moving away from the factory-style publications promoted by the positivist hierarchy-oriented education research paradigms. For instance, more integrity-oriented international peer-review, both in publications and research grant applications, is an essential solution. A more dynamic engagement with qualitative research and narrative

analysis is increasingly essential if we reconsider stale discourses and enhance diversity. Journal editors and reviewers can think more critically about the power structures of calculability-oriented comparative education and its contributions to nurturing pride, vanity, and bullying.

Personal Sphere: Faculty's and Students' ICT Competence and 21st-century skills

Building a Quality of Empathy & Engagement in Civic Life as a Task of HE

Part of the task of higher education is to help students understand society's problems and recognize the ethical issues they will face. Nevertheless, knowledge is not enough by itself. We have to encourage quality of empathy for the problems of society and those who suffer from them. We must develop a commitment to live by ethical and civic principles and engage actively in civic life.

Therefore, local and community collaborations play a vital role in enhancing civic life and facilitating the realization of UN SDGs, involving solving poverty, improving infrastructure construction, including diverse races and genders into civic life, and other complex social, cultural, and economic questions related to the resilience of higher education.

In terms of the American Council on Education recommendations, organizations, governments, and individuals in the local community often have deep international or cross-cultural connections, backgrounds, and knowledge. They can provide research partners for faculty and experiential learning opportunities for students. Academic institutions can partner with immigrant and diaspora populations, ethnically and racially diverse subcommunities, primary and secondary schools, civic organizations, and globally connected businesses. Individuals from such groups and organizations are invited to institution-hosted initiatives and partners in knowledge production, learner development, and civic engagement programs. That is why this study will examine the responsibilities and challenges in the different spheres of higher education, involving technical, administrative, and personal.

Intercultural Education, Empathy and Common Identity

In this study, the cases of teacher training partnership programs in the two virtual internship programs of NUST and GEARS show their efficiency in intercultural communication and cross-cultural collaboration. Firstly, the partnership and strategic alliance components influence the academic rationale for staff and student exchanges, research collaboration, teaching, and curriculum and courses development (Wihlborg & Robson, 2018). Lastly, the multilateral governance and bridging mechanism support the political rationale. These two components encourage relationships among nations for inter-institutions agreements and cross-border higher education (Knight, 2008).

Cultivating Multiple Intelligence through Liberal Arts Education for Holistic Skills

This study will also have a diachronic graduate tracking and field research about the liberal arts education and holistic human education concept at the University of Hong Kong.

A prominent Harvard educational philosopher, Howard Gardner, has significantly impacted education in the last two decades. His theory of Multiple Intelligences (MI) has transformed some fundamental beliefs about teaching and learning. MI schools are now being developed nationwide with national associations and foundations support. According to Gardner's Theory of Multiple Intelligences, each human being is capable

of seven relatively independent forms of information processing, with individuals differing from one another in the specific profile of intelligence that they exhibit. (Gardner and Hatch 1989)

The contribution of Gardner's theory is the pluralistic view of the mind; it invites us to recognize and nurture varied human intelligence. Some individuals finish schooling without feeling like an expert in any area; this can lead to low self-esteem and lifetime problems in achievement. Applied MI theory can provide students with a period in their schooling to feel expert, increasing self-esteem among a broader group of students.

The potential of multiple intelligence theory to build the intelligence of all members of society is aligned with the current emphasis on universal higher education. The theory suggests that all individuals have natural talents refined in higher education. It challenges the notion that only linguistic or mathematically talented people will benefit from higher education. Whether more persons can benefit from higher education is often debated in policy circles, and MI theory could inform these debates.

However, even though higher education institutions would appear to be closely aligned with Gardner's theory already, there are nonetheless important implications for higher education concerning the trends of today's context: 1) access, 2) diversity, and 3) accountability and assessment.

7. Research Question

Technical Sphere: NUST Virtual Internship Program

Virtual Internships in a Post-pandemic Era: Perspectives from Asia Professors

This is an international comparative case study by conducting semi-structured interviews with the professors who have instructed virtual internships as mentors from Pakistan, Indonesia, and Singapore.

The interview questions focus on the professor's perspective on their ICT competence, digital literacy, digital-pedagogical transformation in virtual internships, their nations' support, and training of virtual internships after the coronavirus pandemic. Therefore, the study will interview the professors with the questions as follows:

Main Question 1: How does the Asian faculty perceive the importance of online international academic internships for the internationalization of higher education and global research universities' multiple-form cooperation in a post-pandemic era?

Main Question 2: How do the Asian faculty perceive their preparedness for an online international academic internship regarding their national policy support for the digital transformation of higher education and challenges in post-pandemic teacher education?

Administrative Sphere

The Effects of Faculty Incivility in Higher Education

The literature about workplace incivility rarely includes faculty, though incivility in this environment can cause serious harm to faculty, staff, students, and the community. Therefore, this study will examine the questions about the extent, nature, impact, rate of reporting, and the perceived consequences of workplace incivility among university faculty.

Personal Sphere

The purpose of this interview is to explore Asian and American faculty's perception of the importance of online/virtual international internships for internationalization and instruction experience in the context of the virtual internship. The interviewees are faculty, but the interview questions (Appendix 2) and answers will reflect the circumstances of faculty and students. At the same time, typical questions concerning students' perception of the virtual internship will also be investigated through anonymous questionnaires.

a) Teachers

Active learning: Student-centered Teaching Method (virtual internship)

For virtual teaching, interaction becomes a challenging task for teachers to get timely feedback and responses. Fortunately, active learning via a student-centered teaching method involves activities that develop a new learning environment and interactive learning that will enable students to use every skill; speaking, listening, reading, thinking, and writing. It also encourages them to participate in activities to solve problems by self-learning.

The teaching focus under this method requires a clear learning plan regarding both content and activities,

such as using authentic content and activities, such as Problem-Based Learning, Project-Based Learning, and Case-Based Learning activities. By so doing, the systematic design of a learning plan provides clear-cut

steps of instruction would be provided, and instructor and learner roles are observed (Songkram 2012; Khlaisang, 2012a, b).

Teachers' Cultural Diversity and Intercultural Awareness

Education must focus on teaching learners to recognize and understand the society and culture of each of the other ASEAN countries. Accordingly, education must be managed to recognize and understand the region's various social and cultural aspects.

Students

b) Students

Student Phobia for Virtual Learning (for NUST, GEARS Interviews)

According to several former studies, apart from lectures' lack of requisite skills, students expressed anxiety as negatively impacting virtual learning success rate and effectiveness in developing countries.

It could be inferred that students in HEIs in developing countries were unfavorably disposed to virtual learning owing to the unfounded fear of failure.

For knowing this problem, the interview questions of faculty's perceptions towards students' concepts of the virtual internship include:

How do you know your students understood the material in a virtual internship? How do you design the assessments used in your internship? What are your goals when designing an assessment for this internship? What do you feel your internship assessments provide to the students?

Do you think assessments should reveal students' changed conceptual understanding of the virtual internship? Can you give me an example of an internship objective and its corresponding assessment?

Learners' Readiness as a Key Factor in Virtual Learning (for NUST, GEARS Interviews)

Pushpanadham (2019) believes that learners' readiness is crucial in determining the success of digital/virtual education. Students were apprehensive about the possible negative implication of virtual education on their learning outcomes.

The research question for the above two aspects is the degree of students' acceptance and readiness for virtual teaching.

Students' Holistic and Humanism Education (for HKU Graduates Tracer Study)

Besides, for the HKU's case study of students' holistic human education, the research question will be "How does humanism education, Multiple Intelligence development via liberal arts education, and HE alliance for graduate intercultural competence building for HKU graduates tracking study. Also, as this will be a semi-structured interview, the open and general questions about the virtual internship program are designed to get an in-depth interview regarding faculty's detailed narration of their virtual instruction stories.

8. Theoretical Framework

The conceptual framework is significant for higher education internationalization is, firstly, it can be used at national and higher education institutions level. Secondly, it is applicable for public and private higher education providers and can facilitate policy and action plans development. Finally, it can assist nations to increase international students and enhance cross-border higher education.

I. Organizational Change Theory and Diachronic Research Process

Organizational Change Theory will inform the study within the confines of a simple qualitative research approach. The diachronic research process of this study is underpinned by Schein's (1996) extension and elaboration of Lewin's (1947) Organizational Change Theory (OCT), also referred to as "Change as Three Steps" (CATS). Lewin's OCT comprises three steps: i) Unfreeze, ii) Change, and iii) Freeze. According to Lewin, firstly, the "Unfreeze" stage is characterized by "melting" old behaviors and beliefs, resulting in the creation of awareness coupled with a sense of urgency on the need to change the status quo and adopt a new strategy among organization staff members. Secondly, the "change" stage is where the intended change is effected, and the new strategy is fully introduced and the status quo abandoned. The last stage is where the change has been formed and reinforced. Several change theories and models have been developed (Mayne, 2015; Serrat, 2017).

Organizational Change Theory as a Framework for Deployment of Virtual Learning in HEIs

During the pandemic, institutions in developed countries practicing blended program delivery and assessment could transit seamlessly to e-learning. At the same time, the process appeared to be overwhelming or practically impossible for other institutions in developing countries due to their overdependence on face-to-face teaching and learning approaches. This lacuna could be bridged by applying Lewin's (1947) Organizational Change Theory.

II. Networking Theory

Concept and Example

There are three vital rationales or motivations for networking in Internationalization. These are resource and knowledge sharing, mutual learning, and strengthening positions against competitors in the market (Girdzijauskaitė & Radzevičienė, 2014). This process always happens in higher education internationalization because it involves various activities, projects, and programs internally and internationally. Vital networking between nations and higher education institutions is required to internationalize higher education. Therefore, it could be deduced that the network theory of Internationalization is the most appropriate for higher education internationalization at the national and institutional levels. Thus, that is why the nations involved in the massive Internationalization of higher education emphasize the development of policies and action plans for international cooperation in higher education (Kristensen & Karlsen, 2018).

Moreover, institutional networking between local and foreign higher education institutions is the fastest way to implement the internationalization approaches and strategies (Mader et al., 2013)

For the networking programs in this study, NUST, GEARS include various networking components, expansion, partnerships, and strategic alliances that could explain and support the approaches to Internationalization (program, rationale, ad hoc, policy, and strategic approach). These components can also assist the higher education system in implementing imperative internationalization activities such as conferences, joint research, curriculum and courses development, and staff and students exchanges (Kristensen & Karlsen, 2018).

Merits of Networking for HEIs

The higher education institutions can also build their international profile through international networking (Girdzijauskaitė & Radzevičienė, 2013) to benchmark the quality of higher education, program accreditation, and curriculum standard. The multilateral governance structure of network theory is most relevant and appropriate to enhancing international cooperation between higher education institutions.

Besides, it also creates a strategic and multilevel partnership between partners that can maximize the approach, rationale, and strategies for the Internationalization of higher education (Kristensen & Karlsen, 2018).

Thus, the connection between internationalization theory, networking via international virtual internship programs in Internationalization, and higher education internationalization are explored to identify a suitable conceptual framework.

IC Map: Mapping and Guiding Individual & Organizational Goals in Higher Education

From the above three theories, it can be found that the conceptual framework suggests the approach, strategy, and rationale for Internationalization are explained by networking in Internationalization through international expansion, market penetration, international integration, multilateral governance, bridging mechanism, partnership, and strategic alliances.

To meet the standards of an effective and efficient conceptual framework, building an Innovation Configuration (IC) Map can be an optimal choice, especially for long-term diachronic studies in a multi-sphere dynamic form, which specifies behaviors and expectations related to implementing a curriculum, intervention, or evidence-based practice and categorizes these behaviors on a spectrum from ideal to less than ideal. As a tool for teacher reflection and self-assessment and can guide facilitators when observing and providing feedback to teachers, the development and use of an IC Map can be beneficial for educators in any content area or region.

Diverse Stakeholders in IC Map

When analyzing rationales, it is necessary to consider the diverse stakeholder groups within higher education: government, education, and private sectors. The Government Sector includes the different levels of government ranging from supra-national bodies to national, regional, and local. Within the government sector, many different stakeholder groups have a vested interest in the international dimension of higher education. The most obvious is the education departments. Other government units, such as foreign affairs, culture, economic development and trade, and science and technology, all are interested in the international dimension of higher education.

Therefore, the Education Sector in the IC Map (Figure 1) of this study includes the different types of institutions (colleges, institutes, polytechnics, universities) that make up a system; the scholarly research and discipline groups; the professional and membership associations; the students, teachers and researchers, and administrators; and other advocacy or issue groups.

Innovation Configuration for Multi-sphere Diachronic study for HE Internationalization

(based on Organizational Change Theory)

Technical sphere: NUST, GEARS virtual internship, UNESCO-IIOE ICT empowerment		
reinforced	change	unfreeze
1)optimize conceptual framework for virtual education 2) Improve realization of UN SDGs related to resource, energy and quality education	1)teacher education of digital teaching 2)ICT training and resource empowerment	1) Lack in virtual teaching pedagogy 2)Lack in ICT skills, Short of ICT infrastructure
Administrative sphere: Effects of Faculty Incivility three North Carolina State Universities		
reinforced	change	unfreeze
build a foundational understanding of the phenomenon of faculty versus faculty incivility in the university setting, and to establish the significance of the effects of this incivility to warrant further investigation into solutions	addresses five research questions to articulate the extent, nature, impact, reporting, and perceived consequences of faculty versus faculty incivility in the university setting	Collect first-hand questionnaires about the feedback from faculty, analyze and disclose the profound equality and diversity implication behind the data
Personal sphere: teachers& students 21st c development , HKU graduates tracer study		
reinforced	change	unfreeze
optimize conceptual framework for policy making about 21 st century skills in the post-pandemic era	Apply the newly-required competence into HE curriculum, i.e. liberal arts education and humanism education	Get feedback from faculty and students to evaluate the less advantaged and out-of-date pedagogy or curriculum

Figure 1. IC Map of this study *Source: Author*

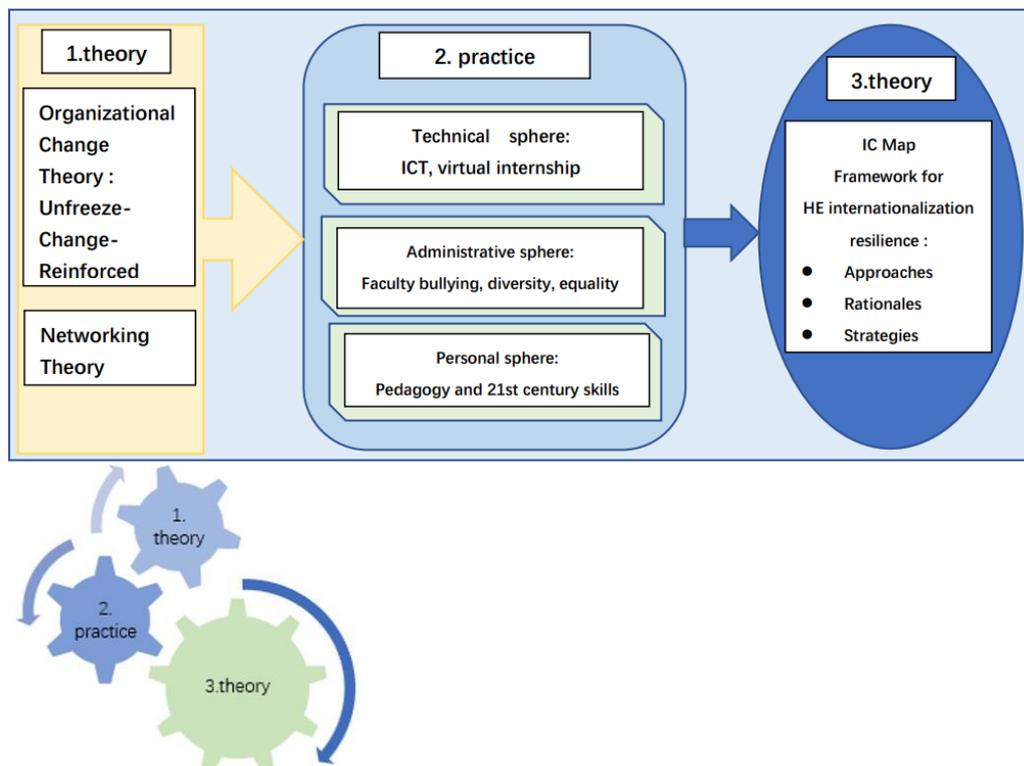


Figure 2. A conceptual framework for this study *Source: Author*

The Conceptual Framework (Figure 2.) for this study implies that the approaches, rationales, and strategies for higher education internationalization are satisfactorily and substantially supported by the network theory of Internationalization and networking in internationalization elements and motivations. Therefore, it seems appropriate to propose a conceptual framework as shown in Figure 4 for higher education internationalization through networking and Internationalization.

9. Methodology

I. Technical Sphere

Virtual Internships in a Post-pandemic Era: Perspectives from Asian Professors

This study's interviewees are selected by convenience sampling. The researcher contacts her familiar professors in her close countries and does interviews on a contextual basis. Thus, these case studies combined semi-structured interviews and ethnographically inspired methods (Garsten, 1994, 2003).

Besides, Brislin (1980; Brislin et al., 1973) holds that cross-cultural study could boost the researcher's learning and make him/her more sensitive to variations in human behavior. At the same time, this research method shows an ethnographical perspective as the researcher in this research is from Asia and familiar with Asian thinking patterns, which can facilitate generating the in-depth interview questions and better disclose the rich intentions behind the linguistic information. Studies of people with similar

professions in different countries have been used to highlight both cultural differences (Hofstede, 1980, 1991) and similarities (Garsten, 1994; Salzer, 1994). Therefore, this study involves interviews among professors from Singapore, Indonesia, and Pakistan, which could provide a more comprehensive conclusion by taking multiple social-context perspectives into consideration.

In-depth semi-structured interviews elicit narratives that can be highly meaningful since they change pre-set questions into storytelling invitations (Hollway & Jefferson, 1997), which could also be regarded as a form of natural 'talking' (Griffiee, 2005). The interviewees are given maximized autonomy to play the role of storytellers to make sense of their vivid teaching experience. There are many qualitative methods that are developed to have an in-depth and extensive understanding of the issues by means of their textual interpretation and interviewing is one of the most common types (Creswell, 2007). The semi-structured in-depth interview questions in this research focus on the professor's perspective on virtual internships, their nations' policies and training of virtual internships, and after the coronavirus pandemic, their perspectives on needs and transformation for virtual internships. Besides, the focus in this interview is mainly developed on the basis of relevant literature review in order to find out the most significant questions. Also, due to the current coronavirus pandemic bringing about social distance and border close, the interviews were conducted through face-to-face online meetings.

Furthermore, following the guidance by Kvale (1996), who proposes seven phases of conducting in-depth interviews: setting the theme, designing, and interviewing. When it comes to the next stage after the designing, the main six pre-set 'guiding' questions in the real interviews with open-ended, neutral, clear, and familiar expression, in a sequence beginning from easy, context-setting moving to more difficult and in-depth questions.

Moreover, to keep the interview data be completely recorded in time, instead of hand-written answers, the researcher transcribes the audio recordings based on their own cultural context and institutional situations into texts after the interviews and finally analyzes the results from in-depth perspectives in terms of multiple dimensions concerning the globalization of higher education, intercultural online academic exchange, and ICT teacher education.

Also, the researcher observes the social and non-verbal cues of the interviewee and interpreted their further intentions to facilitate the interview. During the interview process, with a friendly and non-judgemental attitude, the researcher stays focused on both the core goals of the interview and the salient characters of the interviewee's previous answers. Meanwhile, the researcher is trained professionally to be both flexible and responsive to face unanticipated responses. Therefore, except for exploring the six 'guiding questions' listed above, follow-up and probing questions were also asked according to the interviewee's responses. Prompts used by the researcher like repetition, verbal agreement, waiting, echo, explanation, etc., also boost interviewees to elicit more details about the core questions. Further clarifications have broadened and deepened the final analysis of the interview data. In conclusion, interviewing in this research is iterative, with data collection and analysis being implemented simultaneously, changes have also been bought to the guiding questions as the interview continues. Questions that are not effective may be replaced with other questions and additional probes can be added to explore new topics that are introduced by participants in previous interviews (DiCicco-Bloom and Crabtree, 2006).

II. Administrative Sphere

The Effects of Faculty Incivility in Higher Education

The study adopts mixed methods: A survey was developed by adapting the survey used by the Workplace Bullying Institute for multiple years by giving a questionnaire to 394 faculty samples from three North Carolina Universities to be more specifically aimed at the experiences of faculty employed in universities. Qualtrics software (qualitative) and SPSS (quantitative) were used to analyze data.

III. Personal Sphere

HKU: Graduate Tracer Study

Graduate tracer studies are planned to explore the 21st-century competence qualification for employment of the students graduated from the University of Hong Kong, especially focusing on their resilience and benefits in terms of HKU's global alliances for their COVID-19 employment resilience.

One tool that has worked well across countries in providing a focus on the outcomes of tertiary education studies is graduate tracer studies, which provide survey data on the experiences of graduates (in terms of employment, further study, and satisfaction with their education experiences) at set intervals after completion of programs or degrees.

It is a common phenomenon that higher education institutions are often in the dark about what happens to their graduates. Thus, a much more robust evidence base about employment outcomes of graduates and employers' perceptions was needed to feed into the discourse on the quality and relevance of tertiary education. Regarding the graduates from HKU could be an empirical tracer study for exploring innovative strategies for

graduates' global employability.

Therefore, this study will conduct graduate tracer studies among graduates from HKU between the COVID-19 period from 2020 until now. The overarching objective was to allow policymakers and educational practitioners to obtain a comprehensive understanding of the quality and relevance of programs and access and equity issues, also in a comparative perspective among subsectors. The results of the tracer studies were disseminated through workshops, meetings, and printed publications. The results, which often confirmed anecdotal evidence with complex data, became an essential point of reference for setting policy priorities and fostered discussions on improving the employability of graduates within the sector.

IV. Diachronic Study

The whole process of this multi-sphere cases study is in a diachronic research way. Melin (1992) claimed that the internationalization process at both conceptual and practical levels is complex, diverse, and not stable. As a result, he suggested long-term comprehensive research and fully understood the process of Internationalization.

Besides, by constantly summarizing the research results and phased findings into practical suggestions, applying them to educational practice, and observing and collecting data from practice for a long time from a diachronic perspective, we can analyze the innovative model and theoretical framework of internationalization recovery of higher education in the post epidemic era with high validity and reliability.

Thus, the diachronic study for this research could obey the active status of the changing status quo and the updated education policy context.

Therefore, with a "theory-practice-theory" circle as a patterned diachronic study in this research, more than anything else, we need to develop a culture in universities of continuously evaluating how much our students are learning, discovering where they need to do better, and then experimenting with new methods

that will meet the weaknesses that we have identified. In that way, we can gradually improve in the only way human beings ever improve through a process of conscious and enlightened trial and error.

10. Supposed Results

I. Technical Sphere

Transformation of Skills in Virtual Pedagogy

On the innovation of professors' pedagogy in GEARS, NUST programs, instruction ought to be student-centered, and taking an American phenomenon as an example, professors are not trained as educators. Their graduate training does not tell them anything about how students learn about how advances in cognitive science have changed the way people think about how students learn and why they do not learn, about the relative effectiveness of different methods of instruction, or the history and the development of the curriculum in the United States.

Therefore, this study focuses on the interviews about mentors' perception of their instruction techniques in virtual internships, along with the evaluation of diachronic feedback questionnaires from both students and professors participating in Asian and American virtual internships.

This might also involve exploring their intended social meaning and impact and exploring their knowledge, abilities, and competencies. Pedagogically this paradigm-shift approaches the notion of 'Purpose Learning, whereby students declare a mission in learning and couple their knowledge pursuit with the purpose that fuels it (Stanford University 2013). Besides, HEI leaders can try to help their faculty understand the real problems. That is the classic responsibility of leaders in any organization.

Infrastructure Facilities of E-learning

Also, for the case study of NUST and GEARS virtual internships, bridging the ICT gap between developing and developed countries might come with two solutions: (a) inevitability of training and re-training for lecturers and students, and (b) provision of virtual learning enabling infrastructure. The model and adoption of e-learning and appropriate pedagogies was a function of the availability of arrays of infrastructural facilities. These include the type of online educational platforms, the capabilities of both desktop and laptop computers, the availability of smartphones, and the internet bandwidth. It can be inferred from these statements that despite the availability of infrastructural facilities, their configurations deserve closer attention as the capacities of the devices and bandwidth required for virtual learning should be of a high standard.

II. Administrative Sphere

In order to contain the faculty bullying phenomenon in HEIs, the HEI management culture of morality and the status anxiety in the competition should be paid attention to.

Morality in HEIs' Management and Competition Culture

Purification of HEI ideological guidance and the construction of teachers' morality and career belief in scientific research:

The growth-driven, money-raising enterprise is imagined as an unshakeable performative fortress enduring the quakes of social revolutions, escalating violence, and geopolitical upheavals. Thus, status anxiety is used as emotional leverage in shaping academic existence.

Results Gained Formerly About the Effects of Faculty Incivility in Higher Education Research (three NC State Universities, America)

The findings of faculty bullying in three NC State Universities are supposed to focus on diversity, equity, and inclusion in HEI management and culture building, which addresses the role of institutions, individuals, and Internationalization in racial, economic, and social justice. It means going beyond numerical diversity to ensure that students and employees of all backgrounds feel that their campus is equitable, welcoming, inclusive, and supportive. Inclusive and equitable campus climates have a meaningful, positive effect on student persistence and success and faculty and staff engagement. They play a crucial role in realizing higher education's potential to address education and social equity gaps beyond the institution. Justice-oriented Internationalization is critically self-reflective.

It requires institutional and international leaders to consider who is part of planning and decision-making actively. It recognizes the vital importance of internationalization at home that all students deserve and have access to a global education that prepares them for a modern, diverse workforce. It cultivates Internationalization that is anti-colonial, anti-racist, and globally and locally inclusive. Through teaching, research, or civic engagement, equitable institutions promote historical and global understanding of systemic discrimination and injustice. They and their leaders account for national, economic, demographic, sexual,

sociopolitical, gender, physical, linguistic diversity, and neurodiversity. Overall, they recognize their institution and its constituents as agents in the broader local and global context.

III. Personal Sphere

Build a “Deep Relationship” from Psychological Perspective

In the post epidemic era full of diversified problems and challenges, the Internationalization of higher education needs teachers with an open mind, humanistic feelings, and multicultural tolerance. So, how to promote teachers to continuously expand their international vision and global competence in their field? According to Maslow's hierarchy of needs theory, the self-satisfaction factory is the highest level of human psychological needs. Positive psychology also combines the concept of self-efficacy and advocates individuals to start from internal motivation, constantly overcome challenges, and accumulate confidence to form a virtuous circle of positive feedback. Therefore, only by encouraging different stakeholders of higher education to establish a “deep relationship” with HE globalization can we cultivate a sound mind, interact with students, dare to deal with the threat of COVID-19, and turn it into a beneficial opportunity. Just as this epidemic has brought about the development and innovation of online Internationalization of higher education, it has seen more possibilities, crossed more barriers, and created more opportunities for the Internationalization of higher education, such as realizing the transformation of teachers' digital skills, breaking through the difficulties of ICT technology in higher education practice, combating stigma and racial discrimination, booking cross-cultural communication barriers, and paying attention to social-emotional skill learning. Teachers and students, universities, governments, and organizations need to adjust their mentality and concepts in the face of the Internationalization of higher education impacted by the epidemic, dare to find the opportunities contained in the crisis, and work together to cultivate world citizens in the 21st century to promote the recovery and progress of the Internationalization of higher education in the post epidemic era.

11. Conclusion

Internationalization is higher education's intentional engagement with that reality. It not only impacts an individual institution but the way an organization and its people relate to their local, national, and global community. Anchored by the United Nations' Sustainable Development Goals (SDGs), Internationalization is a means for understanding and advancing human and technical connectivity; fostering local and global interdisciplinary research and teaching; supporting social, economic, and civic development; and propelling higher education forward as an equitable and agile public good.

Also, equitable and intentional mobility should be paid more attention to from the comparative analysis results of Asia (NUST virtual internship), and America (GEARS virtual internship). On one hand, policymakers in the post-pandemic age should include inclusive accessibility. All students have physical or virtual global education opportunities: funding and financial aid support all types of learners across the disciplinary spectrum. Technical infrastructure and training are available for all students, faculty, and staff to succeed in virtual and off-campus spaces. Assessments continually explore whether in-person, off-campus, and virtual mobility opportunities are equitable and inclusive for students, faculty, and staff from all backgrounds. Special consideration is given to environmental sustainability and the social, economic, and cultural impacts of off-campus mobility.

On the other hand, tenure and promotion policies state that international work and experience, and efforts that significantly advance institutional equity and inclusion practices should be considered in tenure and promotion decisions. Incentives and rewards encourage faculty and staff to engage with the local and global

communities. Successful institutions or departments use various approaches, such as financial incentives; opportunities to teach and research globally; recognition through publicity, awards, or notable titles; fundraising or grant-making assistance; and support for employee participation in outside programs (e.g., Fulbright, externally hosted training).

Under the background of the post epidemic era and the prevalence of Neoliberalism and utilitarianism in academia, higher education plays a new role and innovative way to promote the sustainable development goals of the United Nations. Among the 17 UN SDGs, the study will continue to focus on the objectives most closely related to SDG 4 and how the education policies of relevant NGOs and the emerging ICT technology in the post epidemic era can promote educational equality, popularization of higher education, cultivate the common identity and sense of social responsibility of world citizens through the innovation of teaching methods, educational management and educational ideas in the classroom practice of higher education in different regions of the world. Educational achievements in maintaining regional democracy, promoting interaction between colleges and communities, cultivating empathy and cross-cultural communication, empowering teacher education and cultivating other 21st century skills related to holistic education. How to improve teaching and learning remotely in terms of pedagogy and technology, and how to ease the financial impact. While these issues are of immediate importance, there is also a pressing need to explore how to reinforce the resilience of universities in the face of this pandemic situation, and more importantly, how the university sector may contribute to boosting the resilience of individuals and society as a whole in a post-pandemic era.

Bibliography

Alsup, J. (2006). *Teacher Identity Discourses. Negotiating Personal and Professional Spaces*. New Jersey: Lawrence Erlbaum Associates, Inc.

Beijaard, D., Verloop, N., & Vermunt, J. (2000). Teachers' Perceptions of Professional Identity: an Exploratory Study from a Personal Knowledge Perspective. *Teaching and Teacher Education*, 16, 749e764

Benefits of an International Virtual Internship Program. (2012, March 02). <http://jumpstart-hr.com/benefits-of-an-international-virtualinternship-program/>

Brislin, Richard W. (1980), 'Introduction to social psychology', in H.C. Triandis and R.W. Brislin (eds), *Handbook of Cross- Cultural Psychology, Volume 5*, Boston: Allyn and Bacon, pp. 389–444.

Brislin, Richard W., Walter J. Lonner and Robert M. Thorndike (1973), *Cross- Cultural Research Methods*, New York: Jon Wiley and Sons.

Cohen, J. L. (2010). Getting Recognized: Teachers Negotiating Professional Identities as Learners Through Talk. *Teaching and Teacher Education*, 26, 473e481.

Creswell JW. Thousand Oaks, California: Sage Publications; 2007. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*: International Student Edition.

DiCicco-Bloom B , Crabtree BF . The qualitative research interview. *Med Educ* 2006;40:314–21.doi:10.1111/j.1365-2929.2006.02418.x

Gardner, H., & Hatch, T. (1989). Educational Implications of the Theory of Multiple Intelligences. *Educational Researcher*, 18(8), 4–10.

Garsten, Christina (1994), 'The apple world: core and periphery in a transnational organizational culture', doctoral dissertation, *Stockholm Studies in Social Anthropology* 33, Stockholm: Department of Social Anthropology, Stockholm University.

Gokturk, S., Kaymaz, O. S., &Bozoglu, O. (2018). Experimenting with Internationalization in troubled times: the critical case of Turkish higher education. *Journal of Higher Education Policy and Management*, 40(6), 566-582.

Griffiee, D. T. (2005). Research tips: Interview data collection. *Journal of Developmental Education*, 28(3), 36–37.

Hofstede, Geert (1980), 'Motivation, leadership, and organization: do American theories apply abroad?', *Organizational Dynamics*, 1 (Summer), 42–63.

Hofstede, Geert (1991), *Organisationer och Kulturer: Om Interkulturell Förståelse*, Lund: Studentlitteratur.

Hollway, W., & Jefferson, T. (1997). Eliciting narrative through the in-depth interview. *Qualitative Inquiry*, 3(1), 53–70. doi:10.1177/107780049700300103

James, N. (2020, May 25). Internship Framework: Student Preparedness Project. <https://www.adelaide.edu.au/learning-enhancement-innovation/blog-the-learning-cog/internships-framework-student-preparedness-project>

Johnson, J. E., & Jordan, M. L. (2019). The Development of Undergraduate International Business Practicums in Small Business Schools: An Experiential Learning Framework. *Journal of Teaching in International Business*, 30(1), 6-32.

Knight, J. (1997) A Shared Vision? Stakeholders' Perspectives on the Internationalization of Higher Education in Canada, *Journal of Studies in International Education*, 1, Spring, pp. 27-44.

Mundy, K., and Q. Zha, eds. 2012. *Education and Global Cultural Dialogue: A Tribute to Ruth Hayhoe*.

Dordrecht: Springer. [\[Crossref\]](#), [\[Google Scholar\]](#)

Oleksiyenko, A., Blanco, G., Hayhoe, R., Jackson, L., Lee, J., Metcalfe, A., ... & Zha, Q. (2021). Comparative and international higher education in a new key? Thoughts on the post-pandemic prospects of scholarship. *Compare: A Journal of Comparative and International Education*, 51(4), 612-628.

Rodgers, C. R., & Scott, K. H. (2008). The Development of the Personal Self and Professional Identity in Learning to Teach. In M. Cochran-Smith, S. Feiman Nemser, D. J. McIntyre, & K. E. Demers (Eds.), *Handbook of Research on Teacher Education* (pp. 732e755). New York: Routledge.

Salzer, Miriam (1994), 'Identity across borders: a study in the "IKEA- World"', dissertation, *Linköping Studies in Management and Economics 27*, Linköping: Linköping University.

Sklar, J. 2020. "'Zoom Fatigue' Is Taxing the Brain. Here's Why that Happens." *National Geographic*.

<https://www.nationalgeographic.com/science/2020/04/coronavirus-zoom-fatigue-is-taxing-the-brain-here-is-why-that-happens/> [Google Scholar]

Schwartz, R. C. (2010). A potential framework for an internship learning program in sport management.

UNESCO.(2019). Internationalization of Higher Education Policies and Practices in Central Asia and the Asia Pacific.

<https://en.unesco.org/news/internationalization-higher-education-policies-and-practices-central-asia-and-asia-pacific-0>

United Nations (UN) General Assembly. 2015. *Transforming Our World: The 2030 Agenda for Sustainable Development*.

Wortham, J. (2013, February 02). Virtually There: Working Remotely.

<http://www.nytimes.com/2013/02/03/education/edlife/virtual-internships.html?mcubz=0>

CAPTIONS OF VISUAL MATERIALS

Table 1. Contents of Multi-Sphere Diachronic Research Cases Source: Author

Figure 1. IC Map of this study Source: Author

Figure 2. A conceptual framework for this study Source: Author

TERRORISM AND POLITICAL VIOLENCE STUDIES

THE FALL OF KABUL. HOW WAS “THE BIGGEST FOREIGN POLICY FAILURE SINCE SUEZ” EXPLAINED TO THE BRITISH PUBLIC?

JOSEPH MACADAM

Runshaw College, Leyland, UK

INTRODUCTION

Britain's latest war in Afghanistan began in the wake of the '9/11' terrorist attacks on the United States. It continued for 13 years with the last combat troops leaving the country on 26 October 2014.

UK Prime Minister Boris Johnson reflected on the stimulus for the UK involvement in Afghanistan in the House of Commons on 18 August 2021 as follows "It is almost 20 years since the United States suffered the most catastrophic attack on its people since the second world war, in which 67 British citizens also lost their lives, at the hands of murderous terrorist groups incubated in Afghanistan. In response, NATO invoked article 5 of its treaty for the first and only time in its history, and the United Kingdom, among others, joined America in going into Afghanistan on a mission to extirpate al-Qaeda in that country, and to do whatever we could to stabilise Afghanistan, in spite of all the difficulties and challenges we knew that we would face".

By 7 December 2001 Kandahar the Taliban's last stronghold was captured and an interim government was declared. The North Atlantic Treaty Organisation (NATO) created the International Security Assistance Force (ISAF), backed by the United Nations (UN). Following a period of reconstruction, British Forces provided the bulk of a quick reaction force due to a deteriorating security situation. By 2004 a reorganised Taliban began copying the tactics of Iraqi insurgents and in January 2004 the first British soldier was killed by a suicide bomber.

In April 2006, the British redeployed in strength, focusing on Helmand Province in the south. Over 3,000 troops were sent to help with reconstruction efforts. They operated out of Camp Bastion, a specially built base in the desert near the provincial capital, Lashkar Gah. But operations were far more intense than expected. John Reid, Secretary of State for Defence, commenting on the British deployment to Helmand, April 2006 stated 'We're in the south to help and protect the Afghan people to reconstruct their economy and democracy. We would be perfectly happy to leave in three years' time without firing one shot.' Sadly, this was not to be, as what was planned as a short-term security and reconstruction mission turned into a full-blown war.

There followed several years of ebb and flow with British forces denying the Taliban opportunities to gain territory or disrupt free elections in Helmand. At its peak, there were 137 UK bases and around 9,500

British troops in Helmand Province alone. Camp Bastion grew to the size of the UK city of Reading. Its perimeter wall was more than 20 miles long. Its 2.2-mile runway was used to ferry troops and supplies in and out - along with casualties. At the height of the fighting, there were more than 600 flights a day. Along with requiring further financial resources, the human cost of the mission to Afghanistan rose rapidly. 2009 would be Britain's bloodiest year in Afghanistan, with 109 deaths. On 6 July 2011, British Prime Minister David Cameron announced the withdrawal of 500 British troops, cutting total numbers to 9,000 by September 2012. He also signalled his intention to end all British combat missions in Afghanistan by December 2014. The British combat mission ended with the handover of Camp Bastion to Afghan forces on 26 October 2014. British troops remained in Afghanistan from that point in a training and advisory role in support of the Afghan National Army (ANA) based in Kabul and Helmand. (National Army Museum, 2022)

The Trump administration signalled its determination to pull American forces out of Afghanistan completely, and engaged the Taliban in formal negotiations, culminating in the February 2020 Doha "Agreement for Bringing Peace to Afghanistan". The Afghan government however collapsed before the 31 August 2021 withdrawal deadline. By mid August 2021 the long-signalled withdrawal of US forces from Afghanistan led to a sudden and unexpected military collapse to the Taliban. This was described as Britain's "biggest foreign policy failure since Suez" by Conservative MP Tom Tugendhat, chair of the Commons Foreign Affairs committee (Tugendhat, 2021).

THE GREAT GAME: A HISTORY OF UK FORCES IN AFGHANISTAN

"The Great Game" was the name given to a political and diplomatic confrontation over Afghanistan and adjacent territories that existed for most of the 19th century and beginning of the 20th century between the British Empire and the Russian Empire. Britain feared that the eventual acquisition of British India and its warm-water ports was the goal of Russia's expansion into Central Asia, while Russia was wary of British ambitions in Central Asia. As a consequence, Britain put a high priority on the contested ground of Afghanistan situated as it was between the two great empires.

Between 1839 and 1842, British imperial forces fought a bitter war in Afghanistan. Initially successful, the campaign ended with Britain withdrawing from the country having suffered one of its worst military disasters of the 19th century. In 1837 the East India Company was keen to ensure that a pro-British emir was on the throne of Afghanistan. After a string of missteps however, in January 1842 the British garrison in Kabul withdrew, some 4,500 British and Indian troops, along with 12,000 camp followers, marching out of the city, only to be ambushed and massacred at Gandamak Pass.

In 1878-80, British-Indian forces fought a war to ensure that Afghanistan remained free from Russian interference. In 1876, Russian ambitions worried London once more when the Emir of Afghanistan was visited by a Russian diplomatic mission. When he then refused to accept a British envoy, the Viceroy of India, Lord Lytton, decided to act and in November 1878, three British columns, consisting of 40,000 men, invaded. Treating Afghanistan as a vassal state, once regime change had been achieved to crown a more pro-British leader, the British-Indian force withdrew.

In May 1919, conflict broke out between British India and neighbouring Afghanistan. Within weeks of his succession, Amunullah Khan the new Afghan Amir declared full independence and proclaimed 'jihad'. By

encouraging revolt on the neighbouring North-West Frontier of British India, he hoped to seize territory. In this he did not succeed but the Treaty of Rawalpindi in August 1919 that brought the war to an end did recognise full Afghan independence and finally gave the Afghans the right to conduct their own foreign affairs (National Army Museum, 2022).

THE SUEZ CRISIS

Tom Tugendhat was not the first British politician to invoke the spectre of the mid 20th century 'Suez crisis' as shorthand for an episode of British humiliation upon the world stage. In 1956 Britain's relationship with its empire had already begun to change. The crisis, in which Britain participated with Israel and France in a short-lived and ill-judged illegal invasion of Egypt on the false pretext of protecting the Suez canal, merely confirmed Britain's dependence on the support of the United States in international affairs. British Prime Minister Anthony Eden resigned, having been accused of misleading parliament. British could never act as a great imperial power.

In his comparison, MP Tom Tugendhat described the mid-century Suez adventure as follows: "The operation to seize the canal in 1956 symbolised the end of Britain's global ambition and refocused us on NATO and alliances. It showed conclusively that the US could limit our actions and change our policy...We also remember Suez as a turning point. We could no longer bask in our imagined status and were given a rude awakening to the reality of the postwar world" (Tugendhat, 2021).

Charlotte Lydia Riley in a piece for The Guardian in response to Tugendhat's editorial wrote "Suez is traumatic as the moment when Britain was forced to accept that it was not as powerful as it once had been. In simple terms, the nation was forced to choose between its empire and its relationship with the US; it tried to choose the former, but was forcibly reminded that the latter held all the cards" (Riley, 2021).

Perhaps the defining moment of the crisis was when US President Eisenhower had threatened to destroy the British economy by selling the American-held sterling bonds if British troops were not withdrawn from the canal zone (ibid). Despite this painful rebuke to Britain's prestige delivered by the US government over Suez, the Anglo-American 'special relationship' was, in time, revitalised and continued to endure, albeit with Britain now as the very much more junior partner.

Over 60 years later, the US embassy website currently describes this "special relationship" as follows: "The United States has no closer ally than the United Kingdom, and British foreign policy emphasises close coordination with the United States. Bilateral cooperation reflects the common language, ideals, and democratic practices of the two nations" (US Embassy, 2022)

Explaining the events of August 2021 to the British public

Official UK government figures show that a total of 457 British military personnel died in Afghanistan whilst serving with the Army, Royal Air Force, Royal Marines and UK Special Forces (Dempsey, 2021). The average age of British casualties was 22. Over two hundred soldiers were killed in their twenties and 31 teenagers were among the death toll (Townsend, 2010). Britain was the second largest provider of troops after the US and British troops were more than twice as likely to be killed in Afghanistan than their US

counterparts (Borger, 2021). According to the Brown University Costs of War project, UK spending on the war has been calculated as in excess of \$28 billion (Watson Institute, 2021).

The Islamic Republic of Afghanistan ended on 15 August 2021. That afternoon, President Ashraf Ghani fled the capital city by helicopter to neighbouring Uzbekistan (Heritage, 2021).

The House of Commons and House of Lords were recalled to debate Afghanistan on 18 August 2021 following the sudden collapse of Kabul to Taliban forces without a fight. This was only the 11th recall of parliament in over a decade and the first to address issues of foreign policy since debates on Syria and the use of chemical weapons in August 2013, and the use of force against the Islamic State in September 2014.

The session began at 09:38 when the UK Prime Minister Boris Johnson opened the debate when he rose and said "I beg to move that this House has considered the situation in Afghanistan". The debate was closed at 17:00 by The Secretary of State for Foreign, Commonwealth and Development Affairs and First Secretary of State, Dominic Raab. The lengthy, sombre and emotional session contained content that Lisa Nandy (Wigan) (Lab) described in the chamber as "among the most harrowing I can remember in 11 years in Parliament" (Hansard, 2021).

Her Majesty's Government's position was put to the house - and the wider country - first. On behalf of the government, Prime Minister Johnson began by paying tribute to British service personnel saying "The sacrifice in Afghanistan is seared into our national consciousness, with 150,000 people serving there from across the length and breadth of the United Kingdom, including a number of Members in all parts of the House".

Having outlined the rationale behind committing to military action in support of the United States following the 9/11 attacks in the US which had been planned and directed from Afghanistan, Johnson asserted that "[British armed forces] succeeded in [their] core mission, and the training camps in the mountain ranges of Afghanistan were destroyed. Al-Qaeda plots against this country were foiled because our serving men and women were there, and no successful terrorist attacks against the west have been mounted from Afghan soil for two decades. Alongside this core mission, we worked for a better future for the people of Afghanistan. The heroism and tireless work of our armed forces contributed to national elections as well as to the promotion and protection of human rights and equalities in a way that many in Afghanistan had not previously known. Whereas 20 years ago, almost no girls went to school and women were banned from positions of governance, now 3.6 million girls have been in school this year alone and women hold over a quarter of the seats in the Afghan Parliament. But we must be honest and accept that huge difficulties were encountered at each turn, and some of this progress is fragile".

Johnson went on to offer a significantly different explanation for the collapse of the ANA's will to fight from the supreme commander of US forces. In a networked address to the American people on 16 August in response to events in Kabul, US President Joe Biden had said the following "The truth is: This did unfold more quickly than we anticipated. So what's happened? Afghanistan political leaders gave up and fled the country. The Afghan military gave up, sometimes without trying to fight," (whitehouse.gov, 2021). In contrast, on behalf of HM government, Johnson paid fulsome tribute to "the bravery and sacrifice of the Afghan army" saying "we should never forget that 69,000 of those Afghan army troops gave their lives in this conflict" (Hansard, 2021).

Johnson instead highlighted the actions of the US, implying that the public US decision to withdraw had fatally undermined the position of its allies in the region, saying "So when, after two decades, the Americans prepared to take their long-predicted and well-trailed step of a final extraction of their forces, we looked at many options, including the potential for staying longer ourselves, finding new partners or even increasing our presence".

Turning to the rapid collapse of Afghan resistance to the Taliban in response to a question, the PM said "I think it would be fair to say that the events in Afghanistan have unfolded faster, and the collapse has been faster, than I think even the Taliban themselves predicted. What is not true is to say that the UK Government were unprepared or did not foresee this, because it was certainly part of our planning". However he acknowledged that regarding the assessment of the relative strengths of Taliban and Afghan forces he said "It is pretty clear from what has happened that the collapse of the Afghan forces has been much faster than expected".

Johnson then went on to admit that a sober assessment of options without US force were minimal. "As for our NATO allies and allies around the world, when it came for us to look at the options that this country might have in view of the American decision to withdraw, we came up against this hard reality that since 2009, America has deployed 98% of all weapons released from NATO aircraft in Afghanistan and, at the peak of the operation, when there were 132,000 troops on the ground, 90,000 of them were American. The west could not continue this US-led mission--a mission conceived and executed in support and defence of America--without American logistics, without US air power and without American might".

In answer to a question from former leader of the conservative party and PM Theresa May (Maidenhead) (Con) regarding when he first spoke personally to Jens Stoltenberg, the Secretary-General of NATO, to discuss with him the possibility of putting together an alliance of other forces in order to replace American support in Afghanistan, Johnson replied (perhaps somewhat casually) that he spoke to Secretary-General Stoltenberg "only the other day about NATO's continuing role in Afghanistan", going on "but I really think that it is an illusion to believe that there is appetite among any of our partners for a continued military presence or for a military solution imposed by NATO in Afghanistan. That idea ended with the combat mission in 2014. I do not believe that today deploying tens of thousands of British troops to fight the Taliban is an option that, no matter how sincerely people may advocate it--and I appreciate their sincerity--would commend itself either to the British people or to this House. We must deal with the position as it now is, accepting what we have achieved and what we have not achieved".

The clear implication of this appeared to be to - at least in part - deflect blame for the unfolding debacle onto the non-US members of NATO for their implied unwillingness to partner the UK in seeing the job through after a US departure.

In closing, Johnson turned again to the sacrifices made by the dead and wounded of the campaign: "Our United Kingdom has a roll-call of honour that bears the names of 457 servicemen and women who gave their lives in some of the world's harshest terrain, and many others who bear injuries to this day, fighting in what had become the epicentre of global terrorism. Even amid the heart-wrenching scenes we see today, I believe they should be proud of their achievements, and we should be deeply proud of them, because they conferred benefits that are lasting and ineradicable on millions of people in one of the poorest countries on earth, and they provided vital protection for two decades to this country and the rest of the

world. They gave their all for our safety, and we owe it to them to give our all to prevent Afghanistan from once again becoming a breeding ground for terrorism. No matter how grim the lessons of the past, the future is not yet written. At this bleak turning point, we must help the people of Afghanistan to choose the best of all their possible futures. In the UN, the G7 and NATO, with friends and partners around the world, that is the critical task on which this Government are now urgently engaged and will be engaged in the days to come".

THE BACKLASH

In the period between the flight of President Ghani and the recall of parliament, politicians who had served in Afghanistan led the chorus of disapproval. On 16 August 2021 Tom Tugendhat, chair of foreign affairs select committee in a Times comment coined the phrase "Britain's biggest foreign policy disaster since the Suez crisis of 1956" and stated that the situation in Afghanistan had "gone from being a withdrawal to a rout" commenting "six decades after Suez, we remain impotent in the face of US policy" (Tugendhat, 2021). Tugendhat said these events "revealed the nature of US power and our inability to hold a separate line". He bemoaned the fact that the modest US forces based in the nation, which pale into insignificance compared to other long standing worldwide commitments by the US (in, for example, South Korea) could not be made up by other NATO countries saying "The redeployment of 2,500 US troops, half as many as it takes to crew [an aircraft] carrier, ended 20 years of British effort in Afghanistan" (ibid).

On a broadcast news interview with UK politician Nigel Farage, Tugendhat said the effect of recent events upon veterans who had served in Afghanistan were "like tearing [a dressing] off a wound" and reawakened a lot of issues. He said it was a "very, very difficult time" and advised distressed veterans to get in touch with mental health charity Combat Stress or the Royal British Legion, and to "get help and [not to] suffer alone" (GB News, 2021).

In another interview with the BBC he firmly blamed the outcome on senior Western leaders saying "We have abandoned the Afghan people and this is the result. This is the decision that President Biden and other NATO leaders have taken" (BBC, 2021).

In response to what at times seemed a coordinated campaign from military veteran Conservative MP's, the government response was to reiterate that most British troops had already exited alongside American soldiers in July, after the U.K. government decided it did not wish to remain in the country without U.S. support. "Clearly, once the U.S. decision was made, our view was that it would not be right to act unilaterally in this as an occupying force," a spokesperson for Prime Minister Boris Johnson said (Dickson, 2021).

In an interview with the US publication Time, MP and Afghanistan veteran Johnny Mercer said "This withdrawal was literally like pulling the rug from under the feet of the Afghan security forces. Learning those skills and the will to fight takes a long time. It's a decades-long project, and ultimately we have chosen defeat. If we can't do anything without the Americans, then we have a serious problem. Clearly the Americans bear the largest share of the blame, but we were the second biggest troop-contributing nation to Afghanistan. In my view, Biden has made an appalling mistake. We clearly have to find a way to operate without [the U.S.] ... in Britain's interests, not just as a 51st state." (Perrigo, 2021)

"U.K. foreign policy is missing in action," tweeted Tobias Ellwood, Conservative MP and former soldier, in reaction to the news. He called the crisis "our biggest foreign policy failure in a generation." (Ellwood, 2021)

Ex-servicemen reported deep concern about events. Quoted in the Daily Mirror an anonymous former SAS commander characterised Britain's decision to pull troops out of Afghanistan as a betrayal of the locals who risked their lives -alongside [British] soldiers (Cardy, 2021).

The highly decorated officer warned that the Afghan special forces he helped to train could be wiped out within weeks as the Taliban press their advantage saying they have been "sold down the river by the British and US governments" and the entire Western military operation had been a "total waste of time, effort and lives. It's not the enemy that gets you killed but a bad plan. And we had a very, very bad plan" (ibid).

Families of service personnel were asked for their opinions on events in central Asia and as expected the response to the collapse of Afghanistan was mostly pain and outrage. In an article in the Times of London on 17/8/21 titled "Their sacrifice has been for nothing, say families of British soldiers killed in Afghanistan".

Private Richard Hunt, 21, of the 2nd Battalion, Royal Welsh Regiment, became the 200th British victim of the campaign when he died of injuries sustained in an explosion while on patrol in Musa Qala, Helmand province. His mother, from Abergavenny, Gwent, said: "I went to the churchyard to lay flowers on his grave for the anniversary and burst into tears. It is all such a waste. Twenty years of sacrifice in blood and treasure has come to nothing. All that has been achieved has been so quickly dissipated. Their sacrifice has been for nothing" (Brown, 2021).

"Richard did not particularly want to go but he had been ordered and said he wanted to look after his mates. He also wanted to make a difference to the lives of the Afghanistan people. He told me the Afghans did not trust the British to stay, and we haven't. We have tried to do some good and all we have done is to make it worse."

"Richard would be sick to his back teeth that the Taliban has taken over the country so quickly," she said. "So many British lives were lost in Afghanistan and so many others have returned with horrible injuries both physical and psychological. We were supposed to liberate them and help them make a brighter future for their kids. Instead, it's going from bad to worse. My boy was killed because he was given a mission. They're turning their backs on him by leaving it undone."

The father of Corporal Mark Wright, 27, of the 3rd Battalion, Parachute Regiment, said "As for whether people's lives were lost through a war that wasn't winnable, I think they were. The problem was we were fighting people that were native to the country. We weren't fighting terrorists, we were fighting people who actually lived there and didn't like us being there."

Ian Sadler, 71, whose son Jack, 21, died when his Land Rover struck a mine in 2007, said he was surprised that the Americans and allies had so much confidence in the Afghan army. "To pull them out so quickly

like that . . . I would have thought it would have been more of a strategic advantage to reduce the British and American influence," he said. "When the Nato forces were pulled out so suddenly, the Afghan National Army were left without any direction."

Carolyn Hughes, mother of Corporal Danny Winter, 28, a Royal Marine who was killed in Gereshk, Helmand, in 2009, said that his sacrifice had helped make Afghanistan a better place. She wrote on his Facebook memorial page: "Danny and all the armed forces of the countries involved made a huge difference to a wild, war torn country. Because of them, terrorist attacks on our country were avoided and countless lives were saved. The women of Afghanistan were safe to walk the street and get an education, something that had always previously been denied. People were happy and felt safe. Hughes, from Marple, near Stockport, Greater Manchester, added: "My son did not die in vain and my pride for him is etched on my heart forever."

However Ben McBean, 33, a Royal Marine who lost an arm and a leg in an explosion in Helmand in 2009 and was once described by Prince Harry as a "real hero", said he felt as if troops' hard work had been "for nothing".

CONCLUSION

Boris Johnson's political hero, Winston Churchill, in a speech in the North Wales seaside resort of Llandudno in October 1948 advanced the idea that post-war Britain sat at the intersection of three 'great circles' - the British Commonwealth; the English speaking world and a united Europe (Churchill, unlike much of the modern Conservative Party, was a passionate advocate for European integration and cooperation).

Of Churchill's three circles, in 2022 the British Commonwealth appears the most fragile. A well-documented passion of the current monarch, 95 year old Queen Elizabeth II, for whom there is much affection within the organisation (King, 2022), it is expected to contract significantly after her death. In November 2021 Barbados became a republic and removed the Queen as head of state (Relph, 2021), and the current Spring 2022 tour of the Caribbean by the Duke and Duchess of Cambridge had to be hastily rescheduled following local residents in Belize mounted a protest against "British colonialism" (Mills, 2022). During the tour Jamaica announced its intention to become a republic (Weston, 2022).

Arguably the greatest British contribution to the world is the English language in all its richness, but in the 21st century with widespread artificial intelligence on the horizon, the economic and political power of anglophone nations is hardly the basis for a foreign policy, especially when global Mandarin and Spanish speakers outnumber them. Finally, after 6 years of negotiating Brexit, the UK relationship with Europe seems characterized more by hostility and mutual suspicion than shared interests and values.

The Suez Crisis is commonly seen in historical reviews as the nadir of post-war British foreign policy, marking the point at which Britain's decline as a world power with no ability to act unilaterally was laid bare for the world to see. It led to an increased pace of decolonization, and an increased reliance on its special relationship with the US. The failure of the US to support Britain's Middle eastern adventure led to speculation that UK refusal to send even a token force to fight in Vietnam may have been in retaliation. Since Suez, there has been speculation that the much vaunted US-UK special relationship is more special

to the UK side than to the US side. As former German Chancellor Helmut Schmidt pithily put it, 'Britain's special relationship is so special only one side knows it exists' (Evans, 2010).

The UK government continues to emphasise the closeness of its historical, political and cultural ties to the US. In the 21st century there is undoubtedly close military integration with sharing of bases on UK soil and around the world, joint weapons development and procurement and intelligence sharing. However the most cursory examination of the relative sizes of the two armies lays bare the power imbalance - the UK soon to become 72,000 strong versus a US army in excess of 1m including reserves and guards.

Dean Acheson's (Secretary of State under the Truman presidency) 1962 observation that 'Great Britain has lost an empire but not yet found a role' (Deliperi, 2015), is arguably at least as true now as it was 60 years ago. Following the loss of its empire, the last quarter of the 20th century saw a foreign policy pivot towards Europe after Britain joined the European Economic Community (EEC) in 1972. The British government repeatedly cited its ability to "punch above its weight" in international affairs because its historical importance (not to mention its role in the Allied victory in WWII) ensured it again had three interlocking roles that amplified its voice - membership of the EU, the special relationship with US and permanent membership of the UN security council. The British Government stressed that these three roles acted as a 'force multiplier' allowing the UK to maintain influence at the highest levels of world affairs - whilst simultaneously spending less and less on defence. Tony Blair (Prime Minister 1997-2007) explicitly positioned the UK as a metaphorical bridge between the US and Europe.

However the Conservative and Unionist Party of Winston Churchill, which has been in power for 50 of the 77 years since the end of WWII, found itself increasingly split over the issue of integration with Europe, as leader after Conservative leader lost their jobs in internal disputes over Britain's relationship with the EU. This uneasy pivot towards the European continent was finally reversed with the Brexit vote in 2016 after a campaign that promised to 'take back control' and replace a Britain that seemed to cut an isolated and frustrated figure in Europe with a 'Global Britain' able to act on the world stage without constraints imposed by Brussels. Britain stands separated from the continent of Europe by sea, and from a geopolitical perspective considers itself an island, and has historically looked away from the continent. Reminders that GB still has a land border with the EU at the Northern Ireland-Republic of Ireland border seemed to come as a surprise to many (including some Brexiteers).

An inflated 'British exceptionalism' (Deliperi, 2015) may have in part led to the shock and outrage widely felt when the government was forced to concede that its mission in Afghanistan was entirely dependent upon the US. The UK seems repeatedly surprised at its inability to do more on the world stage. What place in the world is there for a UK that has been encouraged to take back control from Europe, but in its first test of global reach, fails so catastrophically to live up to its own meagre expectations? Withdrawal from the EU means we can no longer position ourselves as intermediary between the US and Europe. UK policy previously appeared to be to act as a wise counselor, aid or interpreter to both sides, but in future Britain may simply become - as Oliver Bullough titles his 2022 book - 'Butler to the World'. As former PM Theresa May said in the Afghanistan debate of 18 August, quoting an oft-used pro-Brexit phrase "where is 'Global Britain' on the streets of Kabul?".

The ability of the British parliament to act as a break on US foreign policy was demonstrated by the previous occasion that Parliament was recalled to debate foreign affairs, on 29 August 2013 to discuss the use of chemical weapons by the Syrian armed forces against their own citizens. In that debate, and perhaps

stung by the losses of British troops in Iraq & Afghanistan the House of Commons rejected by 285-272 PM David Cameron's call for permission for joint US-British military action against Bashir al-Assad's government to deter the future use of chemical weapons against civilians in Syria. Former Liberal Democrat leader Lord Ashdown, previously a UK Special Forces soldier, tweeted in response that in "50 years trying to serve my country I have never felt so depressed [or] ashamed". Barack Obama (who had previously stated that the use of chemical weapons was a "red line" for America) hesitated. Russia welcomed Britain's decision. Despite French support, the Americans did not bomb Assad. In a bitter summary, the U.K. was to blame for U.S. President Barack Obama's failure to follow through on his promise to bomb the Syrian regime if it used chemical weapons, outgoing Secretary of State John Kerry said in 2017. Many have subsequently blamed the West's failure to act decisively against Assad as demonstrating the weakness of the western alliance and emboldening its enemies.

Rory Stewart, former Secretary of State for International Development in evidence to the Foreign Affairs Committee said in oral evidence on Tuesday 23 November 2021 that the inability of "other NATO countries to take up that slack [in Afghanistan] suggests something very worrying about the capacity of...non-US NATO countries to operate [with] any degree of independence" (Hansard, 2021). Tom Tugendhat in his Times article referenced US generals that have repeatedly highlighted the shrinking British Army. Going forward he asked, "what does it mean to be partnered with Britain" (Tugendhat, 2021)?

To return to the title of this paper, how was the fall of Kabul explained to the British public by its elected representatives?

The debate in parliament and in the wider nation paid as one would expect, a fulsome tribute to the fallen men and women of the armed services. Their sacrifice was credited with ensuring the safety of the home nations from terrorism, and improving immeasurably the lives of vulnerable Afghans, in particular women and girls, albeit for one generation only.

The Ministry of Defence and the broader Government sought to explain the disaster as a combination of unforeseen but ultimately unavoidable events, precipitated by the realization that US forces provided the critical infrastructure to the mission in Afghanistan, without which no Western forces could safely remain. The official line, right up until events overtook them, and repeated on the record in the chamber of the House of Commons, was that a detailed assessment of the fighting capabilities of the Afghan security forces to resist the Taliban predicted (at worst) a stalemate. Whether this assessment was fatally flawed or was simply wishful thinking will be discovered by the ongoing official Government Policy on Afghanistan Inquiry insisted upon by Tom Tugendhat.

The actions of President Donald Trump, described in the chamber of the House of Commons in terms never before used for any US president as "a truly dreadful US President...probably in hock to the Russians" in negotiating a withdrawal with the Taliban in Doha were widely condemned.

Fierce criticism was similarly leveled at President Biden for adhering to the Trump plan, despite the widespread acknowledgment that he had signaled his wish to extricate America from 'forever wars' long before running for office.

The impotence of UK foreign policy was summed up by Tobias Elwood asking "Where is our foreign policy determined--here or in Washington?". An inability to act without US support saw the UK described as the "51st state [of the USA]" by Johnny Mercer MP (Hansard, 2021). Those who died, the House was reminded by Mercer, were serving the British - and not American - flag; and many parliamentarians were left bemoaning the government's inability to leverage its undoubted assets including a permanent seat on the UN security council, leading role in NATO, chairmanship of the G7 and special relationship with the US - not to mention paying £40 billion per year for Tier 1 armed forces - into something more than an ignominious retreat from an insurgent force. This episode seemed utterly at odds with the opinion of British capabilities contained in the U.S. National Intelligence Council April 2021 report which stated that "the United Kingdom is likely to continue to punch above its weight internationally given its strong military and financial sector and its global focus".

Finally, many inside and outside Parliament warned that the western alliance's demonstration of lack of resolve against the Taliban would embolden the watching enemies of democracy in the future. They have not had to wait long to be proved correct. On the 24th February 2022 war returned to Europe as an emboldened Russia invaded Ukraine.

BIBLIOGRAPHY

Afghanistan Debate. (2021). Hansard. <https://hansard.parliament.uk/commons/2021-08-18/debates/A86142BD-A204-4BC8-BBC0-ACA7BAD7E9F0/Afghanistan>

Allison, G. (2021, April 12). US report 'UK likely to continue to punch above its weight'. UK Defence Journal. <https://ukdefencejournal.org.uk/us-report-uk-likely-to-continue-to-punch-above-its-weight/>

Ashdown, P. (2013, August 30). In 50 years trying to serve my country I have never felt so depressed/ashamed. Britain's answer to the Syrian horrors? None of our business! Twitter. <https://twitter.com/paddyashdown/status/373339499868467201>

Biden, J. (2021). Remarks by President Biden on Afghanistan. The White House. <https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/08/16/remarks-by-president-biden-on-afghanistan/>

Borger, J. (2021). British troops were twice as likely to be killed in Afghanistan as US forces. The Guardian. <https://www.theguardian.com/world/2021/may/12/british-troops-were-twice-as-likely-to-be-killed-in-afghanistan-as-us-forces>

Brown, D. (2021). Their sacrifice has been for nothing, say families of British soldiers killed in Afghanistan. The Times.

Bullough, O. (2022). Butler to the world: How Britain became the servant of tycoons, tax dodgers, kleptocrats and criminals. Profile Books.

Bunkall, A. (2021, March 22). Army to shrink to its smallest size since the 1700s while £23bn is invested in technology, under new defence plans. Sky News.

Cardy, P. (2021). UK pulling out of Afghanistan 'betrays local allies who fought Taliban with us'. Daily Mirror. <https://www.mirror.co.uk/news/world-news/uk-pulling-out-afghanistan-betrays-24712084>

Deliperi, R. (2015). Dean Acheson's Observation of Great Britain in 1962. <https://www.e-ir.info/2015/08/09/dean-achesons-observation-of-great-britain-in-1962/>

Demspey, N. (2021). Afghanistan statistics: UK deaths, casualties, mission costs and refugees. UK Parliament.

Dickson, A. (2021). London's fury over Afghanistan won't change much. <https://www.politico.eu/article/johnson-biden-us-uk-relations-afghanistan/>

Ellwood, T. (2021). PARLIAMENT RECALL: I called for this recall so we can debate our biggest foreign policy failure in a generation. Now I learn it will be a ONE LINE WHIP... Without a vote we will simply confirm that: UK foreign policy is missing in action. https://twitter.com/Tobias_Ellwood/status/1426991171449114624

Evans, L. (2010, November 27). 'Forget the special relationship. America is just not that into us': A Spectator debate. The Spectator.

Garton Ash, T. (2010, July 14). Britain has spent 50 years hunting in vain for its role. Change the question. The Guardian. <https://www.theguardian.com/commentisfree/2010/jul/14/britain-world-role-foreign-policy>

Heritage, T. (2021, August 15). Afghan Pres Ghani leaves for Tajikistan—Interior ministry official. Reuters.Com.

Hyde, M. (2009, September 25). The special relationship is special to only one side. The Guardian. <https://www.theguardian.com/commentisfree/cifamerica/2009/sep/25/us-uk-special-relationship>

Interview with Tom Tugendhat. (2021, August 15). <https://twitter.com/GBNEWS/status/1426858682156032002>

King, J. (2022). The Queen and her 'beloved' Commonwealth: How has it changed over the decades? Metro. <https://metro.co.uk/2022/02/06/the-queen-and-her-commonwealth-how-has-it-changed-over-the-decades-16046128/>

Lee, J. (2021). Afghanistan: UK has abandoned Afghan people, says senior MP. BBC News. <https://www.bbc.co.uk/news/uk-58220730>

Mills, R. (2022). William and Kate cancel trip on Caribbean tour after protest from Belize villagers over 'colonial legacy'. <https://news.sky.com/story/william-and-kate-cancel-trip-on-caribbean-tour-after-protest-from-belize-villagers-over-colonial-legacy-12569904>

National Army Museum. (2022). Afghanistan. <https://www.nam.ac.uk/subjects/afghanistan>

Perrigo, B. (2021). 'Ultimately We Have Chosen Defeat.' British Lawmakers Condemn Decision to Follow U.S. Out of Afghanistan After Fall of Kabul. Time. <https://time.com/6090694/afghanistan-taliban-uk/?jwsourc=cl>

Relph, D. (2021). Barbados becomes a republic and parts ways with the Queen.

Riley, C. L. (n.d.). Was Afghanistan Britain's worst failure since Suez? It's a comforting fiction. The Guardian. <https://www.theguardian.com/commentisfree/2021/sep/04/afghanistan-britain-worst-failure-since-suez-uk-foreign-policy>

Smith, D. (2017, January 5). John Kerry links Britain to derailing of Obama's plan for intervention in Syria. The Guardian.

Syria Debate. (2013). Hansard. <https://hansard.parliament.uk/commons/2013-08-29/debates/130829800001/SyriaAndTheUseOfChemicalWeapons>

Townsend, M. (2010, June 20). Death rate of UK soldiers in Afghanistan 'four times higher' than US. The Guardian.

Tugendhat, T. (2021). Tom Tugendhat on Afghanistan: Six decades after Suez, we remain impotent in the face of US policy. The Times.

UK military deaths in Afghanistan: Full list. (2022). <http://nhttps://www.bbc.co.uk/news/uk-10629358>
<https://www.bbc.co.uk/1/hi/uk/7616301.stm>

UK Parliament. (n.d.). Oral evidence transcripts Government policy on Afghanistan. <https://committees.parliament.uk/work/1465/government-policy-on-afghanistan/publications/oral-evidence/>

Watson Institute of International & Public Affairs. (n.d.). US costs to date for the war in Afghanistan in \$ Billions FY2001-FY2022. Brown University, 1 August 2021. <https://watson.brown.edu/costsofwar/figures/2021/human-and-budgetary-costs-date-us-war-afghanistan-2001-2022>

Weston, K. (2022). Jamaica 'ready to move towards removing the Queen as head of state and becoming a republic as soon as Kate and William get on the plane'—Despite the Cambridges wowing islanders on their first day amid protests and demands for an apology over slavery. Daily Mail. <https://www.dailymail.co.uk/news/article-10642103/Jamaica-removing-Queen-head-state-republic.html>

LIKELY NON-STATE ACTOR COUNTERMEASURES TO SIGINT MONITORING EFFORTS ON AND OFF THE BATTLEFIELD

LAWRENCE FOX

Ph.D(C), MA, MBA

Capitol Technology University

ABSTRACT

This research outlines the commercially available solutions available to technologically skilled, armed non-state actor organizations that seek to impede aggressive US and local government SIGINT efforts to monitor their communications. Clandestine fiber-optic network infrastructure, high-security hardware configurations, traffic analysis resistant networking protocols, and practical side-channel attack countermeasures are discussed extensively. Communications over cellular telephones are frequently used by U.S. forces to obtain positive identification of terrorist targets via their voiceprints. Additionally, U.S. forces can eavesdrop on non-state actor communications, geolocate, track, and develop additional targets of interest through the use of drones and manned aircraft to surveil and ultimately kill or capture high-value targets via drone strikes or special forces operations. Signals Intelligence (SIGINT) is responsible for 66% of high-value target strikes during the US military interventions in Yemen and Somalia in 2013. Sophisticated non-state actors can direct-bury fiber optic cables from safehouse to safehouse to create a clandestine communications system that cannot be detected by drones employing synthetic aperture radar sensors or metal detectors. Additionally, the criteria for selecting a communications room inside a safehouse to harden against hostile intelligence services and law enforcement is discussed. The use of an interior room allows non-state actors to passively mitigate against popular low-risk bugging attacks commonly employed by state actors. Additionally, the utility of RF absorbing paints, fabrics, and commercially available faraday tents enable non-state actors to prevent TEMPEST attacks by intelligence services. The use of Tor and VPN hardware routers and using laptops without hard disks to boot the TAILS OS via DVD will make locating or hacking internet-connected systems extremely difficult. Thermite-based automated destruction systems can be readily assembled to prevent U.S. special forces or host nation law enforcement attempts at media exploitation in the event of a raid. Likely tactics, techniques, and procedures can be strongly inferred from research into traditional operations security measures and open-source cyber-criminal tradecraft, due to the intrinsic limitations defined in internet standards and non-state actors' general dependency on commercially available hardware and software. By increasing law enforcement, military, and intelligence professionals' awareness of these commercially available technologies, analysts can concentrate their valuable resources on identifying targets appearing to use the tradecraft, techniques, and procedures discussed in this research.

KEYWORDS: Non-State Actor, clandestine communications, SIGINT, fiber optic cable, drone strike

United States General Michael V. Hayden, former Director of the NSA and CIA, has famously commented that “[In the Iraq war] We had demonstrated to our enemies that if you radiated on an American battlefield, you were likely to die” (Hayden, 2016, p. 63). Clearly, it would be advantageous for non-state actors to avoid radiating radiofrequency energy anywhere near sensitive sites or important personnel, and to minimize fiber-optic infrastructure signatures to synthetic aperture radar (SAR) and coherent change detection (CCD) imaging systems. By transitioning to a wired infrastructure, U.S. attempts to “Find, Fix, Finish, Exploit, and Analyze” (F3EA) high-value targets (HVT) will be greatly reduced. Controlling TEMPEST emissions, strictly communicating via encrypted text rather than voice, using hardware implementations of The Onion Router (TOR), using stripped-down laptops running the Tails operating system, and similar measures are likely to thwart many US and allied intelligence successes in targeting HVTs on the battlefield. In peacetime settings, these measures in addition to easily implemented technical surveillance countermeasures (TSCM) efforts, can greatly frustrate intelligence agency efforts to surveil likely or known leaders of violent non-state actor organizations.

USING CLANDESTINE INFRASTRUCTURE TO FRUSTRATE U.S. SIGINT EFFORTS

Clandestine Fiber Optic Infrastructure Buys HVTs Time and Space

On the battlefield, sophisticated HVTs are likely to attempt to distance themselves from radio frequency emitting devices such as cell phones, or at endpoints of Internet connections that can be readily located by the US military or local governments, simply by asking the local internet service provider as to the service address of a particular account. In the event that a traditional wired high-speed Internet service is unavailable or undesirable, a cellular router can easily be used to connect a wired Local Access Network to the Internet, an option that may be increasingly relevant in rural areas. During the US-Afgan and US-Iraq wars, a common method of attack for the Americans was to use an armed drone to shoot a missile at a targeted building. French researcher Grégoire Chamayou comments that Hellfire missiles have a kill radius of 50 feet (15 meters) and a wounding radius of 65 feet (20 meters). Additionally, the GBU-12 Paveway II has a kill radius of between 200 and 300 feet, wherein 50% of the persons in that radius will be killed (Chamayou, 2015). Clearly, it would be optimal for HVTs targeted by these weapons systems to be outside the blast effects of such weapon systems. Single-mode fiber optic systems are easily capable of 40 km cable runs without a repeater, allowing HVT's to physically distance themselves from the battlefield, and longer distances are available with specific equipment.

USAF Lt. Gen Thomas McMullen observed that fiber optic cables are excellent for use on the battlefield as they are highly mobile due to their greatly reduced weight, as compared to conventional copper networking cables. In McMullen's discussions on Command, Control, Communications, and Intelligence (C3I) at Harvard University, McMullen noted that switching to fiber optics vastly reduced their logistics and transportation footprint and allowed the US to deploy cable that was completely TEMPEST proof, EMI proof, and moderately more difficult to tap than copper cable (C3I, 1991). The TEMPEST proof qualities of fiber optic cables are the most important quality, as fiber optic cables have no electromagnetic signature to detect. The creation of point-to-point clandestine fiberoptic intranets and the use of clandestine fiber optic cable runs to extend internet connectivity to HVT safehouses is likely to completely eliminate or greatly complicate NSA and U.S. military signals collections efforts, depending on the level of connectivity desired.

Jeffrey T. Richelson, a prominent Intelligence scholar stated the obvious, "When you take something off microwave relay and put it on fiber-optic, basically it's lost [to NSA]" (Shane & Bowman, 1995). Since the NSA can't find and physically tap the cable, the communications transiting the cable are secure from NSA eavesdropping efforts, thereby protecting the HVT using the communication link. According to the

Intelligence, Surveillance, and Reconnaissance Task Force Requirements and Analysis Division's *ISR Support to Small Footprint CT Operations – Somalia / Yemen* report, two-thirds of HVTs are found by US forces through SIGINT (Intercept, 2015). Technologically sophisticated non-state actors are likely to make communications security their first priority, as this single countermeasure would have prevented 66% of HVT deaths in Somalia & Yemen in 2013 (Intercept, 2015). Highlighting the U.S. military's commitment to locating cellphones and radio transmitters on the battlefield is readily evidenced by the US Army's development of its fifth variant of the EMARSS-E (Enhanced Medium Altitude Reconnaissance Surveillance System, a specialty ISR aircraft), which is solely designed to intercept, direction-find, and geolocate enemy electronic emitters (i.e. radios and cellphones). Switching to fiber optic communications lines would result in a total communications blackout to NSA, overnight.

Finding Hidden Fiber Optic Cables Is Truly Difficult

Clearly, fiber optic cables are not subject to detection by metal detectors, as ordinary communication cables would be. Research into the detection of fiber optic cables using ground-penetrating radar (GPR) by Vincent Utsi reveals that the detection of fiber optic cables is quite difficult, as the cables themselves are essentially sand (2014). The detectable portion is actually the strengthening materials, jacketing, or ducting that surrounds them. The ideal radar frequency for the detection of these cables in Utsi's testing was 1 GHz (2014). Since the wavelength of the radar is longer than the diameter of the fiber optic cable, the effective dielectric constant is the average of the different materials in the fiber optic cable (Utsi, 2014). Utsi observes that the glass inside the cable has a dielectric constant of 5, while the jacketing materials have a dielectric constant of 3-4, leading to a dielectric constant average of 4 for the fiber optic cable as a whole. Many dielectric constants of soils match the electric properties of fiber optic cables. Dry sand has a dielectric constant range of 3-6, sandy soil 3, silts 5-30, and clays 5-40 (Hubbard Et al., 1997). Clearly, there are some soil and cable combinations that will be harder to detect than others.

In the field, there will be background clutter, moisture variations, and stones, that interfere with the operator's interpretation of the radar image (Utsi, 2014). During Utsi's attempts to locate fiber optic cable buried underneath ground consisting of coarse gravel was simply impossible, even when Utsi had prior knowledge of where to look within a tight range (2014). Utsi noted limited success when looking at GPR readings taken at right angles to the fiber optic cables, radar readings not taken at a right angle did not reveal the fiber optic cable. Utsi was only able to locate buried fiber optic cable when using frequencies between 1-2GHz in uncluttered, low-loss ground, and when looking at long stretches of ground containing buried cable, so that a pattern would become evident (2014). The most obvious countermeasure would be for non-state actors to run cable in wavy patterns, ensuring that a single pass of GPR would not show a long stretch of cable, since much of the cable would not be presenting a right angle to the observing radar. Non-state actors will also likely run the cable through the rockiest, or otherwise "noisiest" ground possible. Cable would also be difficult to find in small waterways and streams due to the dielectric similarity of silt with fiber optic cable. While penetrating radars can still penetrate freshwater, penetrating radars cannot see through saltwater due to its high conductivity (Hubbard Et al., 1997). Lastly, sophisticated non-state actors and governments attempting to locate buried fiber optic cable would also be aware of the greatly increased dielectric values of all soils when wet, possibly leading to increased success in GPR location efforts.

Preventing SAR Detection of Fiber Optic Line Installation

Once non-state actors begin to adopt fiber-optic communication lines in a meaningful way, US forces will attempt to react to the loss of valuable SIGINT. If non-state actors use a fiber optic system in parallel with their existing cellular communications, they may successfully deceive the NSA and the larger U.S.

intelligence community into believing that no such clandestine communication capability exists, for a time. A relevant example is the Sinaloa drug-trafficking cartel's success in keeping the DEA and NSA unaware of its use of a parallel network of encrypted cellphones for a period of time. However, once a careless operator stated that the conversation on their overt communications system was getting sensitive and that they should switch over to "the spark". This revelation led a surprised DEA to begin looking for other communications, which they indeed found (Hurowitz, 2021).

The U.S. intelligence community regularly uses Synthetic Aperture Radar (SAR) on both satellites and drones to see in all-weather conditions. SAR uses radio waves instead of light to image an area of interest. By using drone platforms rather than satellites, the US government can obtain extremely high-resolution imaging of non-state actor-influenced territories. When combined with coherent change detection (CCD), subsequent aerial reconnaissance photography over the same territory can be automatically analyzed by computer software to highlight areas that have been subsequently changed (Wolff, n.d.). The changes in imaging detected can be extremely small. Sandia National Laboratories Copperhead SAR imaging system, which has been transferred to the US Department of Defense for field use, was able to identify the path of a lawnmower after a 20-minute delay, by observing the bending of the grass from 10,000 feet up and three miles away. Clearly, any effort to disturb the ground can be easily detected by SAR, if anyone is watching. Additionally, forward-looking infrared imaging (FLIR) is able to notice changes in temperature resulting from digging, as the increased moisture content on top of a covered hole is renders the site thermally dissimilar to the nearby area for several hours. Since the window of FLIR detection is temporary, it indicates recent activity, as opposed to SAR CCD imaging. A large rainstorm could provide non-state actors an opportunity to lay cable during the rainstorm as the ground becomes uniformly wet through the burial, optical sensors are impeded by clouds, bad weather impedes flying, and the mass movement of water drainage creates channels of moved soil due to erosion that will appear on highly sensitive CCD scans. A sophisticated non-state actor is likely to bury fiber optic cable at this time if they are attempting to hide the installation from persistent drone SAR surveillance. It is important to note that the US Air Force frequently uses SAR to search for voids in the ground where improvised explosive devices and landmines are buried. Since at least 2001, the US military has had SAR systems capable of detecting probable landmines by identifying the empty space inside the mine (Airforce-technology.com, 2001). Because of this, direct-burial of fiber optic cable is critical, as using conduits to protect underground cable would introduce the same type of air pocket found inside landmines that make them easily detectable to SAR systems (Airforce-technology.com, 2001).

Non-state actors have a history of using countermeasures to drone surveillance, as evidenced by the Taliban's tradecraft during the US-Afghan war; Taliban forces used the cover of trees wherever possible to shield their activities from drone surveillance and planted large numbers of new trees to aid to counter aerial surveillance (Reuters, 2017). Sophisticated non-state actors are likely to trench cable underneath tree cover, run fiber optic cable through existing drainage pipes, and use other creative means to hide the installation of long cable runs wherever possible. The use of streams and other waterways would allow for the expeditious laying of cable, wherever available. If farmers are tilling their fields, or otherwise making substantial changes to the ground, this may present an interesting opportunity for the non-state actor. By installing cable under the guise of an irrigation system, or just as part of a farmer's field, a HVT may be able to successfully complete a connection from one safe house to another, ideally breaking line of sight. Such an arrangement would likely give the HVT enough advance warning to escape a drone strike or capture attempt on the wrong building. An event that is likely to occur, if the HVTs online COMSEC countermeasures fail and U.S forces discover the HVTs communications endpoint. By using underwater rated fiber optics cable, non-state actors can direct-bury waterproof fiber optic cable through creeks and streams. Considering that coherent change detection is ultra-sensitive and water is likely to frequently

carry debris, silt, and other foreign matter, extremely small changes in a body of water are unlikely to be observed by the intelligence operator.

Considering that many streams are murky, local waterways may provide ready cover for the cable, reducing the need to cover the cable with silt. Considering the need for third-world persons to fish or obtain drinking water from such water sources, the presence of a few military-aged males walking in or around small streams of water is unlikely to appear suspicious or noteworthy. Such an approach would be advantageous in areas where there is a heavy SAR CCD presence, or in strictly peacetime intelligence operations, where non-state actors must separate themselves from their internet-based communications to increase their survivability in the event of a raid from the host nation's security services. The most straightforward implementation of this concept would consist of two safe houses that share close proximity to a long stream. One safehouse is unoccupied by HVTs and has commercial Internet service, while the other does not. The HVT uses the Internet from the safehouse without a commercial Internet subscription. For operations security reasons, low-value non-state actors would be unaware of where the fiber optic cable goes, who uses it, or anything else that would violate the standard operational security (OPSEC) practices of giving sensitive information only to those with a need to know.

Attempting to Trace the Location of the Other Safehouse

Once the local government forces or U.S. military raids a suspected non-state actor's first safe house, they will inevitably notice the addition of a fiber optic transceiver. Once such actions become commonplace, US intelligence may attempt to estimate the length of the cable by using an optical time-domain reflectometer (FOA, 2013), make a quick determination of which direction the cable is traveling in, and then attempt to search in a wedge as long as the cable is reported to be, and in width consistent with the manpower and aerial assets available to them. Sophisticated non-state actors will leave extra fiber optic cable coiled up on the HVT side of the link, thereby creating the illusion that the actor is farther away than they actually are. Additionally, the cable should not be pointed in a straight line back to the HVT, so that somewhere along the cable, there will be a radical change in the direction of the cable toward the HVT safehouse, so a quick uprooting of the fiber optic cable will not yield useful information, thereby providing the HVT valuable time to escape. The use of boobytraps or non-metallic mines along the burial path of the cable would further increase the time required to trace the destination of the buried cable. Again, referencing the Sinaloa narcotics cartel, kingpin Joaquín "El Chapo" Guzmán Loera, had so little time to flee during one of his escapes, that he had to escape and evade U.S. forces naked (Hurowitz, 2021). The unanticipated presence of anti-personnel mines separating government forces and non-state actors could easily mean the difference between success and failure.

Costs

The costs of moving to fiber optics are trivial for a non-state actor. A Wiitek brand single-mode fiber optic to Ethernet converter enabling 20km long communications cost a mere \$24 USD on Amazon at the time of writing. Additionally, fiber optic cables sourced through various Chinese online vendors were priced in the low hundreds of US dollars per kilometer range. Clearly, the costs involved in purchasing fiber optic equipment are trivial for the drastic increase in survivability they provide. Custom cables are available and non-state actors can order cables to their specifications, to include completely non-metallic cables.

IMPLEMENTING COMSEC AND OPSEC BEST PRACTICES

Leveraging The Onion Router for Geolocation Privacy

Any sophisticated international terrorist organization will be using The Onion Router (Tor), simply because they are sophisticated to know that no better options exist. In fact, the NSA confirms that a “critical mass of targets use Tor” (NSA, 2014). Tor user’s traffic through three different servers and two of these servers change frequently. The “Tor Stinks” NSA documents written in 2012 famously revealed by Edward Snowden that Tor presents a substantial burden to NSA eavesdroppers. NSA is able to conduct some attacks against Tor users successfully. There are known JavaScript attacks against the Tor Browser Bundle (TBB) that trick the pc into revealing its actual IP address (NSA, 2014). These attacks are defeated through the use of hardware Tor routers, as the PC does not actually know its public IP address. Operating the Tor browser in the standard window size helps users stay anonymous by keeping their screen the same size as other users, preventing them from standing out.

A skilled operator may be interested in “profile softening” and may choose to use a virtual private network (VPN) that offers users the option of a hardware router that permits Tor traffic. This would prevent the local ISP from seeing that they are using Tor, an option associated with hardcore hackers and criminals due to the abundance of criminal organizations running anonymous platforms for selling illegal narcotics, stolen credit card numbers, firearms, counterfeit passports, and other contraband. Considering that VPNs are frequently used for business purposes, they are less suspicious to ISP system administrators looking for unusual activity. Assuming good tradecraft was used in procuring the VPN router and paying for the service, connecting to a VPN before Tor can still be secure. If there is an error in tradecraft when sourcing the VPN however, the operator can be deanonymized. The non-state actor must weigh these risks against the local government’s attitude towards the Tor service.

Using TAILS OS and Laptops Without Hard Disks

The operating system used is of critical importance when attempting to defeat NSA surveillance. Gen. Michael Hayden has previously stated that even after the PRISM leaks, U.S. companies are still working with NSA to put backdoors into systems. The problem of major technology companies deliberately creating backdoors is a well-known and serious problem. In 2016, VICE News reported that Research In Motion, the manufacturer of the popular Blackberry cellphone had created a backdoor for all consumer devices and that the Royal Canadian Mounted Police was given decryption keys that could unlock any consumer’s encrypted traffic (Ling and Pearson, 2016). Considering that Canada is a member of the UK-USA agreement, the ability to decrypt was likely shared among the United States, United Kingdom, Australia, and New Zealand, as well. Linus Torvalds, the creator of the popular open-source Linux operating system was publicly asked at a developer’s conference in 2013 if he was ever asked to install a backdoor into Linux, where he immediately confirmed that he was asked to create a backdoor (Finley, 2014).

The Temporary Committee on the ECHELON Interception System, a commission established to publicly document NSA espionage against the European Union, publicly declared that “... packages whose source code has not been made public in the ‘least reliable’ category” and that only open source cryptographic solutions should be relied upon. As a result of NSA espionage, open-source developers created The Amnesic Incognito Live System (TAILS), a security-focused operating system that directs all Internet traffic to Tor, boots from a DVD or USB stick, does not require a hard disk in to be installed in the computer, and once the PC shuts down, any information on the PC is permanently erased. The DVD installation of TAILS allows for a sophisticated operator to perform a hash verification of the DVD, verifying that it has not been tampered with, an option unavailable to USB-based installs. Additionally, if a DVD installation of TAILS is hacked, access would be lost upon system shutdown. An attacker would be required to attack

the system and gain access every time to system starts, as It is impossible to change the DVD hosting the operating system.

No sensitive information is ever stored on the DVD, only on an optionally encrypted USB stick. When the operator removes the small USB thumb drive from the laptop, all confidential information is removed. The use of the TAILS OS is commonplace among security-focused computer users and the project is quite active. Without question, the developers of Tor and TAILS are powerful allies of non-state actors worldwide, as they continually develop and expand their security platforms and adapt to new threats. Technically sophisticated non-state actors will only use open-source software, in keeping with the European Union's ESCHELON recommendations and common sense.

TEMPEST Concerns When Using Ordinary Laptops

While fiber optic cables are free of electromagnetic interference or TEMPEST-type radiofrequency signatures, the monitors and monitor cables will radiate UHF signals in the low 400MHz band. These emissions can be intercepted and will reveal the contents of a PC's screen. Perhaps more important in this application, is the mere presence of these signals and their harmonics, as they are evidence that a computer is in use at a particular location and these signals can be captured at distances of at least 50 meters (Elibol, Sarac, & Erer, 2012). Non-state actors will have three options to deal with the TEMPEST vulnerability problem. The first is to rely on a zoning approach, if they are far enough away from potential eavesdroppers, they can simply operate unshielded. The second option is to acquire TEMPEST shielded laptops, a difficult and costly proposition but certainly not impossible in the limited use case of these systems being reserved for HVTs. Unfortunately for non-state actors, there is a serious risk of supply chain attacks to contend with when using such specialized hardware, especially in a third-world country where such hardware would be rare. The third option is to use external shielding, such as RF absorbing tents, curtains, paints, and so on.

If an HVT was looking for a mobile TEMPEST solution, they would likely use an RF blocking tent or an RF curtain and a grounded metal floor, to achieve as much shielding as possible. While TEMPEST standards are classified, they are strongly believed to be -100 dB. This is due to the declassification Specification NSA No. 94-106, which reveals that shielding must provide "... a minimum of 100 dB insertion loss from 1 KHz to 10 GHz" (NSA, 1994). A combination of RF blocking paints and RF curtains can be used to meet TEMPEST standards, or at least significantly reduce the RF signature emanating from a particular safe house. In the context of a battlefield, if it would be unusual for a certain dwelling to have a computer, it would certainly be possible for communications surveillance drones to notice radio frequency and harmonic signatures consistent with a computer in use, despite its inability to actually monitor the computer screen. It would certainly be possible for an RF monitoring drone to count the number of computers in use if such a computer was operating without shielding. This information regarding the presence of a powered-up computer may or may not be of use to the battlefield commander.

Mitigating TSCM and Side-Channel Threats

Non-State actor safehouses in peacetime situations are vulnerable to monitoring by local intelligence services. Passive defenses to most attacks exist and sophisticated actors are likely to use them. To protect against infrared-laser eavesdropping attacks, operators will not have sensitive discussions in rooms with a window (Kaiser, 2012). Additionally, skilled operators will not conduct sensitive business in any room that has a shared wall with a neighboring building, or the outside. This is because a hostile intelligence service could silently drill a pinhole and install a microphone into the separating wall and capture room

audio (Kaiser, 2012). This leaves operators to work within interior rooms only. This would also protect them from ultrasound leakage from capacitors and coils in power supplies, as this ultrasound is only detectable for approximately three feet, unobstructed (Guri, 2021).

Research by Guri, Zadov, & Elovici reveals the ability of PCs to leak data via electromagnetic fields for around three feet, these low-level electromagnetic fields cannot be stopped by typical Faraday cages but, require spacing or mu-metal type shielding (2020). Considering that laptops will likely be operated by battery power, there can be no sensitive leakage via the powerline (Guri et al., 2020). Additionally, sophisticated operators will use fiber optic networking exclusively to defeat “Lantenna” type attacks as discussed by Guri (2021). HVTs should not have microphones or speakers connected to prevent some attacks discussed by Guri, and to prevent forensic analysis of their voice, which could confirm their identity and lead to a drone strike or arrest, in the event they can be geolocated (Intercept, 2015). A complete accounting of the possible side-channel attacks that could be mounted against a non-state actor is beyond the scope of this research however, the reader is encouraged to read all of Mordechai Guri’s works on the subject.

A single operations room would be selected, and the entire facility would not have any RF transmitting devices such as cellphones inside to prevent HIJACK and NONSTOP attacks, where secret data modulates an RF transmission from a device like a cellphone (Atkinson, 2002). The secure room would not have any landline telephone, intercom, or speaker system. A white noise system could be used to introduce white noise into air ventilation systems, eliminating the need to install acoustic baffles (Kaiser, 2012). A rubber gasket at the bottom of the door would minimize the audio leaving the room (Kaiser, 2012). The laptop should have its speaker and microphone removed. A skilled HVT will not communicate by voice, even if encrypted, as this is confirmation of his identity and one of the two confirmations required for the US military to conduct a drone strike on a particular location. A leaked copy of the 2013 ISR Task Force report reveals that 17% of all HVTs killed by US drone strikes in Somalia and Yemen were due to a combination of SIGINT and voice analysis (Intercept, 2015). The removal of speakers, microphones, and video cameras also reduces the vulnerability to side-channel attacks, particularly the exfiltration of data over PC speakers via ultrasound, and in the event that the laptop is hacked by NSA’s Computer Network Operations group and the microphone and video camera is activated. All HVT communication with the organization would be through email or text chat.

All unnecessary items, especially electronics, would be removed to avoid becoming hiding places for an audio or video bug in the event of a hostile intelligence service bugging operation, and to prevent a device like a cellphone from being compromised and used to exfiltrate data gathered from a side-channel attack against the HVTs laptop (Fox, 2021). The operations room would strictly contain only what was necessary to do confidential work, a table, chair, light, the laptop running Tails, and the TOR router would be ideal. The workspace would be regularly physically inspected and swept for transmitters using inexpensive and commonly available “spy shop” grade equipment from China. These RF detectors are capable of detecting simple threats from 1MHz-8GHz. Most non-state actors will not have the financial resources or specialized expertise to use non-linear junction detectors and spectrum analyzers in their counter-surveillance effort. While this approach to security is highly simplified, it would likely be a substantial improvement over most current non-state actor counterintelligence efforts. These simple security measures could greatly lower HVTs risk profiles from local intelligence-gathering efforts, as it would force the security services to enter the dwelling to bug the safehouse or forgo intelligence collection. If the safehouse is continuously occupied, it would be a strong deterrent to any attempt at bugging the facility. The addition of a hidden

silent alarm that notifies the occupants of an intrusion, or the activation of an emergency data destruction system, as explained later in the research, would be another major countermeasure.

It is important to note that any attempt to forensically analyze a found TAILS USB stick will result in failure. The goal of the hostile intelligence service is to install keylogging hardware or otherwise tamper with the laptop used for communication, or to successfully bug the room. The hostile intelligence service hopes the non-state actor does not notice the tampering and continues to use it now that it is insecure. Obvious non-state actor countermeasures involve the use of FIPS-140-2 crypto seals (tamper-resistant adhesive seals) on the screw holes and seams of the laptop to detect tampering, and the storage of the laptop in a safe using a group 1R mechanical lock. Such a lock is necessary as KGB spies famously used fluoroscopes to radiologically attack and quickly crack CIA safes during the Cold War (Wallace, Melton, & Schlesinger, 2009). Such locks are highly resistant to x-ray attacks and physical manipulation. Furthermore, since the lock is mechanical, it cannot be backdoored as an electrical one could. A successful attack on this arrangement would be quite difficult and any mistake lifting the seals in use would result in mission failure.

IMPLEMENTING AN EMERGENCY SELF-DESTRUCTION SYSTEM

Ensuring Reliable Destruction With Thermite Based Destruction Systems

Since thumb drives are flash memory modules encased in plastic, small amounts of thermite can completely incinerate these devices and the data they contain very quickly and securely (Todd-Simpson, 2016). Flash drives and solid-state disks are greatly preferred to traditional metallic hard disks, as metallic hard disks require extreme amounts of thermite to destroy and fragments containing recoverable data frequently survive expedient type destruction (Brooks, 2015). Lab experiments with tens of grams of thermite successfully destroyed an SSD board, which was approximately four times larger than a USB thumb drive in 10-15 seconds (Todd-Simpson, 2016). By way of comparison, the AN-M14 TH3 incendiary hand grenade is used by the US military and contains 26.5 ounces or, 751.26 grams of thermite, a slightly hotter and more volatile variant of thermite (Pike, 1998).

Thermite, which consists of powdered aluminum oxide and ferric oxide, which is merely powdered aluminum and rust, burns at a temperature around 4500F or 2500C, which is more than satisfactory to destroy sensitive circuit boards and memory modules (Pike, 1998). More modern thermite mixtures add barium nitrate and sulfur to increase their thermal effect. The necessity to source barium nitrate makes the manufacturing of the incendiary less convenient and more expensive while being completely unnecessary to create a high-quality emergency destruction device. The igniter in such a system is likely to be an electric match or model rocket igniter, as this will allow the user to flip a switch to manually start the destruction or to connect it to an alarm system. Thermite reactions can be safely contained within a crucible or combination safe placed on concrete, ceramic or similar surfaces.

Automatic Self-Destruction Systems Are Hard to Defeat and Impossible to Regulate

The components required to create a thermite-based self-destruction system are readily available, generally unregulated, and cost around a US dollar. Since electric matches are unable to generate the temperatures required to ignite thermite directly, they will be connected to an igniter of finely powdered magnesium, which will in turn quickly ignite the thermite. These simple materials are easily acquired in the third world and ready-to-use thermite can even be purchased from welding shops, due to its popular use in welding. Sophisticated non-state actors can trivially integrate an electric match ignition system into

a standard burglar alarm with an X10 power controller, or another relay system. Once ignited, thermite essentially guarantees the immediate and permanent destruction of the already encrypted data present on any SSD or USD drive stored alongside the thermite incendiary device. Considering the time delay intrinsic to opening a combination safe, attempting to extinguish the thermite post ignition is impossible. Considering that thermite can even burn underwater once ignited, even introducing water into the safe is unlikely to be successful. By operating the USB thumb drive on a USB extension cable, the non-state actor can safely use the TAILS USB thumb drive while it is armed and located inside the combination safe by routing the USB extension cable through a small hole in the back of the safe.

CONCLUSIONS

Considering that armed non-state actors are frequently the aggressors in conflict, they are free to prepare the battlefield in advance. This would mean installing direct-burial fiber through the ground, rather than through conduits that can be discovered by SAR analysis, due to the hollow void they leave in the earth. A single point-to-point connection, rather than an interconnected system that would allow non-state actors to communicate between facilities, will prevent the U.S. from mapping the network when one of the facilities is compromised by special forces operators. By heavily segmenting the network and relying on human operators to physically relay messages from one network segment to another, strong compartmentalization can be achieved.

Non-state actors will inevitably shift their attention to creating clandestine infrastructure, as information security awareness and technology literacy becomes increasingly ubiquitous in third-world conflict areas. As the millennials and other generations grow up, they will be increasingly comfortable with advanced technology. Inevitably some of these digital nativists will one day join extremist groups and bring valuable IT security skills with them. Non-state actors and criminals have long known that talking on and walking around with powered-up cell phones will get you caught one day. Non-state actors seeking the assistance of computer hackers or otherwise developing an offensive or defensive hacker corps can expect the aforementioned COMSEC and OPSEC reforms to become a major tactic in fourth-generation warfare. If these tactics, techniques, and procedures mentioned in this research become commonplace, the capture of valuable intelligence by special forces raids on safehouses will greatly decrease and a 66% decrease in the number of drone strike opportunities against HVTs is likely.

REFERENCES

- Airforce-Technoogy.com, 2001. Mineseeker mine detecting airship. *Airforce Technology*. Available at: <https://www.airforce-technology.com/projects/mineseeker/> [Accessed April 19, 2022].
- Anderson, R., 2008. *Security engineering: A guide to building dependable distributed systems*, Wiley.
- Atkinson, J., 2002. STU-III secure telephone units, crypto key generators, encryption equipment and Scramblers. *TSCM.com*. Available at: <http://www.tscm.com/stu.html> [Accessed April 17, 2022].
- Chamayou Grégoire, 2015. *A theory of the drone*, New Press.
- Clark, H., 2014. IED detector developed by Sandia Labs being transferred to Army. *Phys.org*. Available at: <https://phys.org/news/2014-06-ied-detector-sandia-labs-army.html> [Accessed April 9, 2022].
- Coakley, T.P., 1991. *C3I: Issues of Command and control*, National Defense University Press ; Sold by the U.S. G.P.O.

Cusmariu, A., 2006. SID Today Technology that identifies people by the sound of their voice. *DocumentCloud*. Available at: <https://www.documentcloud.org/documents/4351987-2006-01-04-Technology-That-Identifies-People-by.html> [Accessed April 19, 2022].

Dilegge, D. & Nagle, B., 2012. F3EAD: OPS/Intel Fusion "Feeds" the SOF targeting process. *F3EAD: Ops/Intel Fusion "Feeds" The SOF Targeting Process | Small Wars Journal*. Available at: <https://smallwarsjournal.com/jrnl/art/f3ead-opsintel-fusion-%E2%80%9Cfeeds%E2%80%9D-the-sof-targeting-process> [Accessed April 6, 2022].

Finley, K., 2014. Tails: The operating system that blew open the NSA. *WIRED UK*. Available at: <https://www.wired.co.uk/article/tails-operating-software> [Accessed April 16, 2022].

FOA, 2013. Optical Time Domain Reflectometer (OTDR). *The FOA Reference For Fiber Optics - OTDRs*. Available at: <https://www.thefoa.org/tech/ref/testing/OTDR/OTDR.html> [Accessed April 9, 2022].

Fox, L., 2021. Communication Security Failures of the Sinaloa Cartel and the Silk Road: An Analysis of the Encryption Threat Facing the US Drug Enforcement Administration. *Research Gate*. Available at: https://www.researchgate.net/publication/355361680_Communication_Security_Failures_of_the_Sinaloa_Cartel_and_the_Silk_Road_An_Analysis_of_the_Encryption_Threat_Facing_the_US_Drug_Enforcement_Administration [Accessed April 19, 2022].

Guri, M. et al., 2020. PowerHammer: Exfiltrating data from air-gapped computers through power lines. *IEEE Transactions on Information Forensics and Security*, 15, pp.1879–1890.

Guri, M., 2021. Lantenna: Exfiltrating data from air-gapped networks via ethernet cables emission. *2021 IEEE 45th Annual Computers, Software, and Applications Conference (COMPSAC)*.

Guri, M., 2021. Power-supply: Leaking sensitive data from air-gapped, audio-gapped systems by turning the power supplies into speakers. *IEEE Transactions on Dependable and Secure Computing*, pp.1–1.

Guri, M., Zadov, B. & Elovici, Y., 2020. Odini: Escaping Sensitive Data from Faraday-caged, air-gapped computers via MAGNETIC FIELDS. *IEEE Transactions on Information Forensics and Security*, 15, pp.1190–1203.

Hayden, M.V., 2017. *Playing to the edge: American intelligence in the age of terror*, Penguin Books.

Hubbard, S.S. et al., 1997. *Estimation of permeable pathways and water content using tomographic radar data*. *The Leading Edge*, 16(11), pp.1623–1630.

Hurowitz, N., 2021. *El Chapo: The untold story of the world's most infamous drug lord*, Simon & Schuster.

The Intercept. 2015, October 15. *Small footprint operations 2/13*. *The Intercept – US Army ISR Task Force -- Small Footprint Operations 2/13*. Available at: <https://theintercept.com/document/2015/10/15/small-footprint-operations-2-13> [Accessed April 19, 2022].

Kaiser, M., 2021. A surveillance primer. *Surveillance countermeasures primer from Kaiser Electronics*. Available at: <http://martykaiser.com/report~1.htm> [Accessed April 19, 2022].

Ling, J. & Pearson, J., 2016. Exclusive: Canadian police obtained BlackBerry's global decryption key. *VICE*. Available at: <https://www.vice.com/en/article/kz9kaa/exclusive-canada-police-obtained-blackberrys-global-decryption-key-how> [Accessed April 16, 2022].

The National Archives, 2009. The Discovery Service. *British-US Communication Intelligence Agreement | The National Archives*. Available at: <https://discovery.nationalarchives.gov.uk/details/r/C11536914> [Accessed April 16, 2022].

NSA, 2000. *National Security Agency Specification no. 94-106*. Available at: <http://cryptome.info/0001/nsa-94-106.htm> [Accessed April 16, 2022].

- NSA, 2014. (U) - eff. *Electronic Frontier Foundation* Available at: https://www.eff.org/files/2014/04/09/20131004-guard-tor_stinks.pdf [Accessed April 19, 2022].
- Pike, J., 1998. M14 th3 incendiary hand grenade. *Military Analysis Network*. Available at: <https://man.fas.org/dod-101/sys/land/m14-th3.htm> [Accessed April 17, 2022].
- Reuters, 2017. In 'special message', Taliban leader urges Afghans to plant more trees. *Reuters*. Available at: <https://www.reuters.com/article/us-afghanistan-taliban/in-special-message-taliban-leader-urges-afghans-to-plant-more-trees-idUSKBN16507A> [Accessed April 19, 2022].
- Shane, S. & Bowman, T., 1995. Rigging the game spy Sting: Few at the Swiss factory knew the mysterious visitors were pulling off a stunning intelligence coup -- perhaps the most audacious in the National Security Agency's Long War on foreign codes; no such agency. *Baltimore Sun*. Available at: <https://www.baltimoresun.com/news/bs-xpm-1995-12-10-1995344001-story.html> [Accessed April 8, 2022].
- Tracy, G., & Song, E. 2003, May 25. Incendiary device (U.S. Patent No. 6766744B1) U.S. Patent and Trademark Office <https://patents.google.com/patent/US6766744B1/en>
- Utsi, V., 2014. Detection of fibre optic cables using GPR. *Proceedings of the 15th International Conference on Ground Penetrating Radar*.
- Wallace, R., Melton, H.K. & Schlesinger, H.R., 2009. *Spycraft: The secret history of the CIA's spytechs, from communism to Al-Qaeda*, Plume.
- Wolff, C., Radar Basics - Coherent Change Detection. *Radar tutorial*. Available at: <https://www.radartutorial.eu/20.airborne/ab13.en.html> [Accessed April 9, 2022].

YOUTH AS AN AGENT OF COUNTER-TERRORISM - A CASE STUDY OF PAKISTAN

SHABANA FAYYAZ

ABSTRACT

The paper is based on the 'inside-out' approach that positions the Youth as not only the 'target' or victim of terrorism - but as an agent of Change in combatting the designs of terror or violent extremist networks from the pro-active standpoint. The paper follows an empirical mold by registering the accounts of the Youth activists across Pakistan who have been on the forefront of defusing the extremist narratives particularly at the ideational plane. The study aims to bring out the successes, roadblocks for proactive Youth groups working on ground - urban and rural areas, The study will also look into the key question : Whether Islamabad has a proactive policy to tap Youth as a viable agent of countering terrorism , violent extremism and radicalization? In nutshell, this research maintains that a successful counter-terrorism, counter-extremism or counter-radicalization posture of any state or society must be proactive, preventative, holistic and futuristic in its conception and practice. Here. harnessing Youth potential remains an uphill task!

KEYWORDS: Youth, counter-terrorism, Pakistan

CULTURAL STUDIES

OCEANS AWAY FROM THE WAKEFUL DAY: A PSYCHOANALYTICAL READING OF MAURICE SENDAK'S "WHERE THE WILD THINGS ARE"

İLKAN CAN İPEKÇİ

ABSTRACT

Despite the mixed reactions on its appropriateness for young children (Brass, 2017), Maurice Sendak's *Where the Wild Things Are* (1963) remains one of the highest-selling children's books in the Global North by virtue of its poignant, pedagogic narratives on the tumultuous experiences of growing up as well as its metapsychological contributions to the ways in which we think about children's affective worlds and their turbulent psychologies (Cech, 2014, p. 105). Recognizing that Sendak makes abundant use of the key psychoanalytical themes and concepts of the classical Freudian psychoanalysis and the Lacanian psychoanalytic traditions, I contend that *Where the Wild Things Are* might be regarded as a quintessential exemplar of a "specimen story of psychoanalysis" (Chase, 1979), through which one can venture into the unconscious steppes of the traumatic childhood memories of the Oedipus complex and the pertinent psychic conflicts that had engraved their violent marks deep into the adult's psyche. Even though I appreciate Kloss' (1989) and Gottlieb's (2009) readings of the story as well-executed and insightful endeavors that were primarily focused on the destructive forces of anger and rage, I argue that analyzing the Oedipal demands on Max's detachment from the semiotic (Kristeva, 1984), the uncanny representations of the monsters, and Max's melancholic repetitions and identifications present better opportunities to recognize the unconscious complexity of Max's fantasies and the psychoanalytical dynamics in Sendak's story. As I reflect upon the antagonistic relationship between life and death instincts, I propose that, rather than focusing on Max's affective reactions, we should rather be concerned with the question of why Max is "making mischief one kind and another" in the first instance – a query directed at the psychoanalytic ramifications of one's entry (dying) into the language and sociality.

KEYWORDS: Maurice Sendak, *Where the Wild Things Are*, Children's Literature, Freudian psychoanalysis, Lacanian psychoanalysis

BODY AND STAGE AS SITES OF STRUGGLE: OSCILLATING BETWEEN PERFORMING AND RESISTING PATRIARCHAL DISCOURSES IN TWO WOMEN (2017)

MARINA FARIMA

ABSTRACT

This paper discusses the production of “docile bodies” through the means of patriarchal discourses that are narrated in the play *Two Women* (2017), written by Fatma Özcan and directed by Semah Tuğsel. Besides asking how discursive mechanisms are inflecting the narration of the play, it also analyzes how these are multiplied not only by speech acts, but also by material entities such as stage design, costume, bodily acts, and male gaze. To dive into the material consequences of such repressive regulatory schemes, Foucauldian and Butlerian epistemology is incorporated as means of a methodological start point by embedding the relationship between power and resistance. Although patriarchal discourses are performed by the characters themselves, their disidentification strategies also help to create a space where their internalized oppressive male gaze around constructions of femininity and experiences of being a woman are resisted and distorted.

KEYWORDS: body politics; discourse and power; feminist theater; performativity; resistance