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Arabic beyond Arabic

Abir Zakzok

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ARABIC BEYOND ARABIC

ما وراء العربية

Abir Zakzok
To my mother tongue...
First and foremost, all thanks are due to Allah for His countless blessings and guidance, without which none of this would have been possible.

I wish to express my sincere appreciation to my primary advisor, Marco Bruno, whose door was always open whenever I needed guidance, and who consistently allowed this thesis to be my own work but steered me in the right direction whenever he thought I needed it. I would also like to recognize the invaluable assistance of my secondary advisor, Basma Hamdy and my reader, Michael Wirtz. It is whole-heartedly appreciated that your great advice proved monumental towards the success of my thesis.

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I also wish to acknowledge the support and great love of my friend and colleague, Johana. I am also thankful for my family who raised me to never stop seeking knowledge and provided me with unfailing support and continuous encouragement throughout my years of study.

Finally, I am forever indebted to my two closest friends and soulmates, Maram and Istabraq, for simply everything.
فلاناً - نَطَّبَة : ضربه على أُذُنَهُ
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“Arabic is the best and the most complicated language of all time!” Even though this statement seems like an exaggeration, it is what I grew up hearing; from my Arab parents as a child, my Arab teachers as a student, and my Arab customers as a salesperson. The Arabic language has a significant role in Arabs’ identity, yet most Arabs only scratch the surface and do not fully grasp the embedded meaning of the language.

I have long been fascinated by the relationship between language and community as well as how it translates to design - specifically, the relationship between Arabs and Arabic. When it comes to designing with Arabic, most of the spotlight is directed towards Calligraphy; in a lot of cases the Arabic language is not considered a priority but is applied to a design as a secondary element.

The inherited pride that Arabs have towards their language is immense, yet the design language does not match it in complexity. The strong connection that most Arabs have towards Arabic results in disagreements amongst each other regarding the linguistics of the language.

This thesis aims to uncover these behaviors and connections with the language by taking a critical design approach using interaction design to reveal hidden and apparent features of Arabic. This research encourages questioning current design methods and proposes alternative approaches by taking Arabic beyond its stereotypical aesthetical value and over onto its linguistic and behavioral significance.

"العربية هي اللغة الأفضل والأكثر صعوبة على مر العصور." رغم أن هذه الجملة تبدو مبالغ فيها، إلا أنني نشأت أسمعها باستمرار من والديَّ العرب كطفلة، ومن معلمتي العربية كطالبة، ومن زبائني العرب كعميلة مبيعات. اللّغة العربيّة لها دور هام في الهويّة العربيّة، ومع ذلك فإن معظم العرب لديهم فهم سطحي للّغة فقط ولا يفهمون تمامًا معناها العميق.

لقد كان لدي دائماً اهتمام بالعلاقة بين اللّغة والمجتمع، وكيف يتم توظيفها في التّصميم؟ على وجه الحدّيد، العلاقة بين العرب واللغة العربيّة. عندما يتعلق الأمر بالاستخدام اللّغوي العربي في التّصميم، فإن معظم الضوء يُركز على الخط العربي، وفي كثير من الحالات لا تُأخذ النحو أو اللّغة بعين الاعتبار. يُتم تضمينها في التّصميم كعنصر ثانوي. في النهاية، إذا لم يتم تعميق فهمها في التّصميم كعنصر قوّي، فإن استخدام اللّغة في التّصميم لا يعنينا معنى هذا الخط. يُود الإطراف الفقريّين بين بعض العرب أنهم إلى حلقات بين بعضهم البعض. يُمكن تفاصيلها من حيث النحو اللّغوي تعمّقهم به.
INTRODUCTION

المقدمة

(ورك) - (يُورَكَ) وَرَكَ: عَظْمَتٌ
وركاه. فهو أورك، وهي وركاء. ويقال:
(الميركة) وُرَكَتُ الورك. و - الرجل - (يَرَكَ) وُرَكَ:
اضطعه، كأنه وضع وركه على الأرض.
(وترك) المكان: جازوه.

(ورك) على الباب: ثنى رجله وضع
إحدى ورككه في السرج. و - على الأمر:
قدر عليه. و - في الوادي: عدل فيه وذهب.
و - في اليمن: نوى غير ما نواه مستحلله.
و - الشيء: جعله حيال وركه. و - المكان:
جاوزه وخلفه.

(نورك) : اعتمد عليه وركه.
(نورك) : اعتمد عليه وركه. و - (في
الصلاة): وضع وركه اليمنى على رجله اليمنى.

المصنوعة من ورك
و - مجبر الوتر
(ورك) 
لوُرَكَتُ خَيْرَ: أه
(ورك) كاه.
الأُلَابِّ من النَّسِاء
Light filters through the curtain walls that make up the small round shop. Sharp rays land on various objects and illuminate the Arabic script that decorates the products' surfaces. The clinking of chimes announces the arrival of new customers; three ladies walk across the shop, viewing, picking up products, and murmuring amongst themselves. One of them looks back and forth between a product in her hand and towards a younger lady sitting behind the counter. The lady behind the counter can feel the looks but does not contribute to the situation; she is used to it by now. The unsure lady seems to have made a decision and walks straight towards the counter.

"A'salam alaykoum," she greets.

The lady behind the counter smiles and greets back, "Walaykum a'salam"

The older woman clears her throat, "I am not sure if the store should be selling this," she almost whispers holding up the product in her hand.

"Oh, I see!" The saleswoman feigns interest.

The other lady's voice gets quieter and her features become somber as she states, "The Arabic that is used on it is wrong. The vowel mark on the first letter shouldn't be a fat'ha, it should be a kasra instead."

"Also, this needs to be done with a Kufi script! It would look so much better!" Chimes one of the other two ladies, a different product in hand.

"Yes, I agree, and maybe remove all the diacritics, it just makes it look crowded" adds the third lady.

The Arabic language has a significant role in Arabs' identity, yet most Arabs only scratch the surface and do not fully grasp the complex loaded language. The strong connection that most Arabs have towards Arabic results in certain behaviors or responses to the language. There seems to be a certain need, that Arabs possess, to deliver a message; this need might partially stem from the fact that the message of Islam, and the word of God, the Holy Quran, was delivered in Arabic. That need combined with pride, inherited love, and cursory understanding of Arabic create unique and interesting discussions around the language and its identity.

This thesis aims to uncover and explore these aspects by taking a critical design approach, using methods such as interaction design. The research does not delve into the religious aspect of the language; instead, it focuses on the linguistic features of the language and the intuitive responses towards it.
LITERATURE REVIEW

المراجعات الأدبيّة

كَبْسٍ. (انظر: كَبْسٍ) : (انظر: كَبْسٍ)
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equations, light, and perspective theory to link abstract, Muslims used complex mathematical Arabic script, like any other, arrived at its form tend to miss is the embedded spiritual and literal senses. The product of imagination could not be in turn was located in the realm of the inner view, images did not originate in the eye, but rather in the imagination, and the imagination Alhazen's and physicist of the Islamic Golden Age, to Alhazen, the Arab mathematician, astronomer, Belting, in his book Florence and Baghdad, uses breaking principles they believed in. Historian Hans or Aniconism. These sects, like Sunnis, needed with concepts such as pictorial representation sects of the religion do not tolerate or agree understood through events in Islam that certain representation of figures other than God, it is Although there is no actual text that forbids of God is forbidden, this extends to other figures of such realistic images with direct narratives gave birth to a new type of art, and at its heart, the challenge to relay an abstracted spiritual message through abstracted forms only.

The Cosmic Script: Sources and Principles of the Geometry of Letters

In the first volume of their book, The Cosmic Script, Moustafa and Sperl talk about the Arabic script's embedded meaning - the hidden holy messages behind the formation of the script. The book takes scripts from master scribes such as Ibn Muqla and Ibn Albawab and analyzes its development and effects on later scripts. The theories of embedded meaning discussed in this book include both spiritual non-literal meaning, and linguistic literal meaning. It also examines the history of these theories and their development through the script. According to the classic philosopher, Alfarabi, as cited by Moustafa and Sperl, one theory is that all script emanates from the diacritical dot, or Nu’qttah; the dot’s shape and size is decided, and the script is then proportionally based on it. Therefore, the dot is a metaphor for God: the beginning and creator of all living things.4

When describing Arabic calligraphy, the words that come to mind are usually related to beauty, aesthetics, and harmony. It is true that the Arabic script is pleasing to the eye, but what most viewers tend to miss is the embedded spiritual and literal meaning that the script holds. The science of the Arabic script, like any other, arrived at its form today due to the works of many scholars. Each letterform and diacritic developed over time - under the hands of the best scribes, calligraphers, philosophers and mathematicians.

Florence and Baghdad

In Islam, the physical or pictorial representation of God is forbidden, this extends to other figures in Islam such as the Prophet Mohammad (pbuh). Although there is no actual text that forbids representation of figures other than God, it is understood through events in Islam that certain sects of the religion do not tolerate or agree with concepts such as pictorial representation or Aniconism. These sects, like Sunnis, needed to find another way to visualize Islam without breaking principles they believed in. Historian Hans Belting, in his book Florence and Baghdad, uses Alhazen, the Arab mathematician, astronomer, and physicist of the Islamic Golden Age, to further illustrate this notion. In Alhazen’s view, images did not originate in the eye, but rather in the imagination, and the imagination in turn was located in the realm of the inner sense. The product of imagination could not be represented in pictures that address the external senses. Instead of linking the figurative with the abstract, Muslims used complex mathematical equations, light, and perspective theory to link another abstraction to another. Early and even late

1. Arabic calligraphy: the art of writing in Arabic script.
2. Mamluk dynasty: a period of Islamic history that lasted from the 13th to the 15th century in Egypt and Syria.
3. The decoration Arabic calligraphy in a 14th-century Qur'an from the Mamluk dynasty.
4. When describing Arabic calligraphy, the words that come to mind are usually related to beauty, aesthetics, and harmony. It is true that the Arabic script is pleasing to the eye, but what most viewers tend to miss is the embedded spiritual and literal meaning that the script holds. The science of the Arabic script, like any other, arrived at its form today due to the works of many scholars. Each letterform and diacritic developed over time - under the hands of the best scribes, calligraphers, philosophers and mathematicians.

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The Cosmic Script: Sources and Principles of the Geometry of Letters

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Another theory is that the sound, letterform, and meaning of the words all interrelate and inform each other. For example, the word for pressure, D’haghi’t, written "ضغط," informs the meaning through shape and sound. The three letters in the word are considered letters that use an ‘emphatic’ or ‘heavy’ point of articulation, in other words they are points that put “pressure” on the throat. Another discussed aspect is related to the form, as all three letters fall under the category of ‘looped’ and ‘tight’ shaped letters. These two aspects emphasize the meaning of the word so that it is not only known by memorization but can also be recognized through sound and form.

The Cosmic Script: From Geometric Pattern to Living Form

“The system of signs that make up the Arabic script is perceived to stand at the boundary between the physical and the metaphysical realms. The means to bridge it, is geometry.” In the second volume of The Cosmic Script, Moustafa and Sperl dig deeper into the laws of the Arabic alphabets to arrive at the concept of spiritual geometry. The golden ratio for example, is discovered in the geometry of each letter. It is an ongoing debate whether the golden ratio occurred spontaneously and unintentionally or deliberately. The argument that the golden ratio was used as a design tool is a bit feeble due to the absence of any significant evidence that the golden ratio was used for aesthetic purposes dating from the establishment of the proportional script by Ibn Muqla. Moustafa and Sperl mention in their book that “Judging by the data available so far, [the golden ratio] was known only as a feature of geometry and mathematics. There appears to be no reference to it in any theoretical text dealing with arts and crafts." So how does the golden ratio consistently exist in each letter? If the golden ratio was at the time not considered an aesthetic feature but a geometric one, it is possible that the scholars who developed the script were only considering geometry and spirituality, and that these two aspects gave birth to the prominent aesthetic feature of calligraphy.

Hurufism

Letters, words, and reading have enormous significance in Islam. The first word of the prophet Mohammad’s (pbuh) revelation was an order to “read.” Ever since, Muslim scholars and philosophers have related that command to the word of God: reading the word of God in Qura’an and contemplating or interpreting its meaning. Another example of the letterforms’ embedded spirituality can be found in Hurufism in the Sufi sect of Islam. Sufis believe that each letter holds within it secrets about life and God, and they have a purpose for each letter and holy rules of repetition and recitation. This has bled into the modern arts, as Hurufism also became the title of an abstract art movement led by artists such as Madiha Omar, Jamil Hamoudy, Naja Al Mahdawi, and others. According to the author and critic Yaseen Al Naseer in his book Hurufism And Modern Constrictions, The Hurufism art movement still retains aspects of
and Calligrams based on spirituality and its visual manifestation, by the artist Meliha Teparic, whose artwork is figural representations, mostly of animals, to the modern arts are Calligrams—Calligrams are theories as to where the art movement sourced from the roots of the Islamic arts and Arabic language, is ancient, has a rich history that is impossible to talk about and analyze the Arabic language, Arabic calligraphy developed into a language, and its rules. It is believed that it has developed either from the roots of the Islamic arts and Arabic calligraphy, through the mixing of western and eastern art, or through the Sufism laws of the letter and worship.9

Calligrams

Another practice that made its way through to the modern arts are Calligrams. Calligrams are figural representations, mostly of animals, through a freeform usage of calligraphy. As stated by the artist Meliha Teparic, whose artwork is based on spirituality and its visual manifestation, “Calligrams primarily focus on the textual content but also with its visual expression they influence the observer’s own belief.”10 Similar to Hurufism, Calligrams viewed “Islamic calligraphy as the most dignity way for the transmission and worship of God’s word.”11 These inspired artists to look beyond the letters, to try and find signs behind the words. “Calligrams make the relationship between the living beings, their metaphysical dimension, and their Creator—Calligrams stimulate viewers to consider both metaphysical and physical dimensions of the reality.”12

Through the entwinning of religion and language, Arabic calligraphy developed into a topic that is beyond the physical script. It is nearly impossible to talk about and analyze the Arabic calligraphy without venturing into sub-topics such as spirituality, religion, philosophy, geometry, mathematics, arts, architecture, and design. The language is ancient, has a rich history that is ever changing, and is influenced by its users and receivers.

With the development of modern art, the art movement had to either calligrams viewed “Islamic calligraphy as the most dignity way for the transmission and worship of God’s word.” It is believed that it has developed either from the roots of the Islamic arts and Arabic language, is ancient, has a rich history that is impossible to talk about and analyze the Arabic language, Arabic calligraphy developed into a language, and its rules. It is believed that it has developed either from the roots of the Islamic arts and Arabic calligraphy, through the mixing of western and eastern art, or through the Sufism laws of the letter and worship.9

Calligrams

Another practice that made its way through to the modern arts are Calligrams. Calligrams are figural representations, mostly of animals, through a freeform usage of calligraphy. As stated by the artist Meliha Teparic, whose artwork is based on spirituality and its visual manifestation, “Calligrams primarily focus on the textual content but also with its visual expression they influence the observer’s own belief.”10 Similar to Hurufism, Calligrams viewed “Islamic calligraphy as the most dignity way for the transmission and worship of God’s word.”11 These inspired artists to look beyond the letters, to try and find signs behind the words. “Calligrams make the relationship between the living beings, their metaphysical dimension, and their Creator—Calligrams stimulate viewers to consider both metaphysical and physical dimensions of the reality.”12

Through the entwinning of religion and language, Arabic calligraphy developed into a topic that is beyond the physical script. It is nearly impossible to talk about and analyze the Arabic calligraphy without venturing into sub-topics such as spirituality, religion, philosophy, geometry, mathematics, arts, architecture, and design. The language is ancient, has a rich history that is ever changing, and is influenced by its users and receivers.

With the development of modern art, the art movement had to either
PRECEDENT STUDIES
Silenc

Silenc is a project by students at the Copenhagen Institute of Interaction Design. It is a project that addresses the silent letters in English, French, and Danish using a database of rules. “The silent database is constructed from hundreds of rules and exceptions composed from known guidelines for unpronunciation.”

Pages are produced using a program that prints the silent letters in red, and the pronounced letters in black. A person who is interacting with the text uses a special red filter paper that will only show the black letters and eliminate the red silent ones. The project showcased a comparison of silent letter count between English, French, and Danish.

Silenc also focused on how a language can be translated beyond its basic rules and principles; people that did not speak or read French for example, were able to articulate the pronunciation better due to the elimination of the extra, silent letters. This project succeeded in creating a discussion about the silent letters that do not have a function, a comparison between three languages, and an interactive experience that is accessible to a variety of people.

As a result, the project showcased a comparison of silent letter count between English, French, and Danish. The project was successful in creating a discussion about the silent letters that do not have a function, a comparison between three languages, and an interactive experience that is accessible to a variety of people.

Fig.5 Momo Miyazaki, Manas Karambelkar, Kenneth Robertsen, Silenc, n.d., poster, Copenhagen institute of interaction design.
Farid Omarah is an architectural engineer and artist who "aims to deliver ideas in the simplest ways possible." His artwork mainly uses digital manipulation methods to combine the Arabic script and various images. In some of his work, Omarah uses the script as it is, while in other works he deconstructs the script's form and integrates it in the image.

In some pieces, the script is not immediately obvious and is only revealed after careful examination of the image. For example, his work "You" in its feminine form, demonstrates a planet with rings going around it; the planet is the word "you" and the rings are stretched words that spell out "the world revolves around" aligning the meaning of the text and the image in a harmonious way. Omarah's artwork plays with visual graphic design concepts such as closure and familiarity to allow the viewer to make certain connections between text and image to eventually arrive at the intended meaning. Omarah's work is a good example of an exploration of people's behavior around Arabic language and forming an expressive relationship between script and image.

Humble
Visual artist Raghad Alaawaji explores the script slightly differently compared to Farid Omarah. Instead of combining an image to create closure, she manipulates existing features of the script such as vowel marks, letterforms, and diacritical dots. For example, using the word tawadho' or humble she slightly moves one diacritical dot lower than the other in the letter ta to insinuate a literal, linguistic meaning through the script only, without any further additions. The result creates a momentary confusion for the reader before the connection between the linguistic meaning and the altered script is understood. Alaawaji's work addresses the behavior around the language, manipulating both form and meaning of words to construct discussion.
The students at the College of Architecture in Kuwait were asked to transform the spatial qualities of specific Arabic script into physical forms that occupy a space. Students worked to transform the two-dimensional forms on paper into three-dimensional functional objects such as public benches. One of the scripts the students used was Ruqa’a, a complicated script that looks deceptively simple. In this project, the students focused on three features of the Ruqa’a script: tilt, dependency, and minimalism. They also explored the corners of the letterforms, which are treated in a way that gives the impression that it is folded. The result was a public bench that successfully adhered to the principles of the Ruqa’a script, the overall form was tilted and occupied the space diagonally, and the folded corners were a detail that echoed Ruqa’a script effectively. This project successfully looks at multiple principles of the Arabic script to create tangible, maybe functional objects, from intangible or semi-tangible concepts.

Maturing of Consciousness

Maturing of Consciousness by artist and author Ahmad Moustafa aims to combine the script with geometry and embedded meaning. The geometry used represents both a cube and a hexagon, two significant shapes in the Islamic geometry. The script is a Quranic verse describing the miracle of birth, “The central nucleus enfolded within its shell of cubes appears like the embryo located within, and protected by, the womb.” Moustafa uses the organic script with the rigid geometry to create a contrast and an illusion of the geometry; the shape looks like a cube that has been cut, and in other instances it looks like flat or two-dimensional hexagons. Embedded or “cosmic” meaning are recurrent topics in Moustafa’s work, he claims that the Arabic script contains hidden meanings. This project combines geometry and script to deliver that embedded meaning of the Arabic language and script.
PRELIMINARY EXPLORATIONS

Preliminary explorations...

...أوَّليَّة

...ستِكْشافاتٌ
Observations

This research was based on the relationship between the Arabic language and Arabs. It stemmed from a long on-going interest in Arabs’- including myself and my family’s- attitude towards the language and grew more with observations during my time working as a salesperson in Darhaa, a gift store in Qatar, which sells products that mainly utilize Arabic script. Arabs that walked into the store were of different ages and backgrounds and their suggestions varied accordingly- from aesthetic-related suggestions to function-related ones. However, most customers had one particular quality in common: their comments about the language were worded less like suggestions and more like corrections.

“This dot shouldn’t be here, it makes it harder to read the word, you should move it to its correct position.”

“This sentence is grammatically incorrect; this word is a Fi’il Mudare’ (Imperfect tense) and therefore the vowel mark should be a Dammah.”

“I don’t think you can stack that many letters in one word, it should be two letters maximum!”

I would regularly check with my mother about the truth of these comments. My mother holds a degree in Arabic and Quran phonology and has been teaching for nearly twenty five years, which makes her well acquainted with the Arabic language. What caught my interest was that most of these comments were incorrect and, in a lot of cases, the customers’ explanations were irrelevant, redundant, or incomplete.

The Arab identity is defined by the language that they speak, and Arabic is a prominent part of their identity. This is even more so for Muslim Arabs whose holy book, the Quran, is widely regarded as the finest work in classical Arabic literature and is believed to be a revelation from God. These factors play a part in traits such as pride towards the language that doesn’t necessarily always match Arabs’ knowledge of it.
As mentioned above, Arabic language is an essential part of Arabs' identity; their behavior and interaction with an object can be completely altered by the addition of one Arabic word to it. In order to further understand the significance of that relationship, I concentrated on the interaction and language then at the end followed it by the language. In this method I opted to initially determine a form or a material with an intuitive behavior, then proceeded to develop an object with an existing function and finally apply the language to it.

1. Behavior: the interaction between the language and the material

As mentioned above, Arabic language is an essential part of Arabs' identity; their behavior and interaction with an object can be completely altered by the addition of one Arabic word to it. In order to further understand the significance of that relationship, I concentrated on the interaction and language then at the end followed it by the language. In this method I opted to initially determine a form or a material with an intuitive behavior, then proceeded to develop an object with an existing function and finally apply the language to it.

Observations

Knowledge of the Arabic language and Behavior towards the Arabic language.

Behavior

Interaction

Form/Material

Intuitive behavior

Object

Language
The first material that I explored was memory foam; the intuitive behavior was squeezing, and the object was a stress ball. The language applied was two opposite words with an ongoing debate: freewill and determinism.

Between Freewill and Determinism

The words freewill and determinism in Arabic have the exact letterform configuration except for one letter: in the word takhyeer (determinism) the second letter is sin, while in takhyeer (freewill) the second letter is kha’a.

Between Freewill and Determinism Stress Ball was made using a liquid expanding foam mixed and poured in different densities. The two letters Kha’a and Sin were overlapped; while the letter Kha’a was made with a low-density foam and the rest of the letterforms including Sin were made with a high-density foam. Therefore, after the stress ball is squeezed and it starts to slowly go back to its original form, the first word to appear is determinism with the high-density foam. Slowly but surely the low-density foam starts to resurface and so does the letter Kha’a and the word freewill.
Did it work?

The answer is no; even though Between Freewill and Determinism Stress Ball carries profound meanings and speculations, the language was not legible for multiple reasons. Primarily, the overlapping of the letters caused confusion, and more time was spent struggling to read it rather than understanding the relation between behavior and language. Additionally, the material moved inconsistently every time, which caused the language to become even more ambiguous.
For the next exploration the material chosen was a reflective surface; the intuitive behavior was observing, and the object was a mirror. The initial proposed language was two words emra’ah (woman) and mira’ah (mirror) both having a similar letterform structure in Arabic.

Bitter Mirror

This exploration had an additional consideration which was the space in which the mirror was placed. The proposed space was an elevator and the purpose was to create an illusion using light reflection and shadows to make the observer see both words from different points of view. However, after some experimentation, words with similar letter forms were used to make it more impactful:

From these six words, I constructed the below sentence:

A man ordered a woman by (to look at) the mirror

Within the configuration of each word in the sentence, there are two letters that are found in all words, mim and ra’. These two letters form a word that has two meanings depending on the vowel mark used. When the vowel mark is dammah, the word is pronounced murr which means bitter, and when the vowel mark is fat’ha, the word is pronounced marr which means passed. In the final installation, no vowel mark is added and the word is left open for interpretation.

Thus, the exploration shifted from using two words to using a complete sentence that communicates multiple meanings instead of one. As the language was altered, the execution and space were also affected. In the final outcome, the word bitter/passed was to be read from afar and as the viewers move in the space, they start to perceive the rest of the script which encourages them to come closer to decipher the complete message.

By placing the exploration in the space of a university entrance, the light and reflections are more meaningful.

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By placing the exploration in the space of a university entrance, the light and reflections are more meaningful.
In order to achieve the intended interaction with the mirror, the space needed to be open and wide, preferably at a curve, and where light hits the surface of the mirror illuminating letter forms that cannot be seen from a distance. The space chosen for this installation was the entrance lobby at Virginia Commonwealth University in Qatar, which is an area encased by curtain walls of reflective yellow tinted glass. Since it's a busy area and the light enters through the curtain walls, the reflection on the glass is crowded and helps in masking the letters. The words *murr/marr* (bitter/passed) were made with a reflective aluminum foil vinyl sticker, that made the words more visible than the rest of the letters that were made from clear vinyl sticker.

**Did it work?**

Albeit needing further refining when it comes to the execution, this exploration was quite successful as it brought together the language, space, and interaction. One thing to note is that the language became the driving force of the installation; when the words changed to form a sentence, the execution and space were changed to accommodate the language.

\[\text{VCU Qatar entrance lobby}\]
As the previous explorations started to reveal the importance of the language, I moved away from the behavior and interaction and zoomed in on the Arabs’ knowledge of Arabic. I constructed a survey to understand how the language is treated by Arabs. The survey was about seven products that were strictly designed and produced by Arab vendors that were not professionally trained in design, calligraphy, or Arabic. The survey was then answered by three groups: experienced calligraphers, typeface graphic designers, and Arab customers.

The questions focused mainly on the knowledge about the script and language. Below are the questions that generated interesting answers that turned into features or characteristics of the language:

1. What is the product communicating through the Arabic language?
2. Does the script form convey an embedded meaning?
3. What are your thoughts on the usage of the script? E.g. proportion, composition, logic.
4. What are your thoughts on how the letterform’s structure was used to inform meaning?
5. What are your thoughts on how the vowel marks were used to inform meaning?
6. What are your thoughts on how the diacritical dots were used to inform meaning?
7. What would you change in this product and how would you do it?

The findings from these surveys were a mixture of intriguing contradictions and newfound linguistic characteristics. For example, when it came to the questions about an embedded meaning in the language, calligraphers refused the idea and opted to believe that the language’s purpose was completely decorative on all the products. On the other hand, graphic designers believed of a richer linguistic meaning behind the design elements used on some of the products. Meanwhile, customers mostly mentioned a spiritual, poetic, and extravagant meaning behind the language. The findings from the survey helped form a collection of features that can be applied through design.

Features of designing with the Arabic language:

1. Ambiguous gendered language.
2. Linguistic meaning and form.
3. Arabic roots: meanings within meanings.
4. Spatial continuum of the script.
5. Manipulation through expectation.
6. The placement, presence, and absence of vowel marks.
7. The placement, presence, and absence of diacritical dots.
The table below showcases the noteworthy answers and the features that were extracted from them:

<table>
<thead>
<tr>
<th>Product</th>
<th>Question</th>
<th>Participant</th>
<th>Answer</th>
<th>Notes</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bab finjan</td>
<td>What is the product communicating through the Arabic language?</td>
<td>Graphic designer</td>
<td>“Flirtatious poetry. Romanticizing the female body.”</td>
<td>Misunderstood a patriotic poem for a flirtatious one.</td>
<td>Misread gendered language.</td>
</tr>
<tr>
<td>Bahja journal</td>
<td>Does the script form convey an embedded meaning?</td>
<td>Calligrapher</td>
<td>“The word Bahja means instant happiness, that will pass. The script shows that by being easy and kind on the eyes.”</td>
<td>Relating the meaning of instant happiness to the short form of the script.</td>
<td>Linguistic meaning and form: time and form.</td>
</tr>
<tr>
<td>Salam greeting card</td>
<td>Does the script form convey an embedded meaning?</td>
<td>Graphic designer</td>
<td>“The lam is written in two ways that overlap. Could it mean peace and no pain? Because the word is similar to the word Pain.”</td>
<td></td>
<td>Meanings within meanings: letters within letters, words within word, root words.</td>
</tr>
<tr>
<td>Bab finjan</td>
<td>What are your thoughts on the usage of the script? e.g. Proportion, composition, logic</td>
<td>Graphic designer</td>
<td>“Difficult to tell where sentence ends and begins on the cup.”</td>
<td>The Arabic language has the same spatial intervals between letters and words. If put on a cylinder, it’s hard to know where the sentence ends or begins.</td>
<td>Infinite loop and spatial continuum of the script.</td>
</tr>
<tr>
<td>Zakharef finjan</td>
<td>What are your thoughts on how the letterform’s structure was used to inform meaning?</td>
<td>Graphic designer</td>
<td>“Written in a decorative script which is suitable for poetry.”</td>
<td>The script is written in a Thuluth khatt, which is an extravagant script.</td>
<td>Manipulation through expectation.</td>
</tr>
<tr>
<td>Zakharef finjan</td>
<td>What are your thoughts on how the vowel marks were used to inform meaning?</td>
<td>Customer</td>
<td>“It helps to read it faster and get to the correct meaning.”</td>
<td>In Arabic, the main purpose of short vowel marks is to show the correct pronunciation.</td>
<td>The placement, presence, and absence of vowel marks.</td>
</tr>
<tr>
<td>Eid greeting card</td>
<td>What are your thoughts on how the diacritical dots were used to inform meaning?</td>
<td>Graphic designer</td>
<td>“The dots are laid out in an interesting way as it blends with the other stars on the card.”</td>
<td>One dot could change the meaning of a word or affect a sentence, e.g. the words good (يرخ) and (خر) news. By removing only one dot, we get a completely different meaning.</td>
<td>The placement, presence, and absence of diacritical dots.</td>
</tr>
<tr>
<td>Bab finjan</td>
<td>What would you change in this product and how would you do it?</td>
<td>Calligrapher</td>
<td>“I would place the two sentences according to the movement of the finjan (cup) in the hand to keep the flow of the speech: The last breaths... and you are the first.”</td>
<td>The finjan is a small cup that is used to drink Arabic coffee. Because it is small, it is easy to hold and naturally turns in a person's hand.</td>
<td>Speech flow and script placement.</td>
</tr>
<tr>
<td>الفنجر</td>
<td>التسجيلاً</td>
<td>الوضع</td>
<td>المصممة</td>
<td>ملاحظات</td>
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<td>الرمز باللغة العربية</td>
<td>&quot;الشّعر الغزلي، يتغزّل الشّاعر بجسم المرأة&quot;</td>
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<td>كلمات تباعد بعضها البعض في الجملة</td>
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Explorations utilizing the features of designing with the Arabic language

Out of the eight features that were extrapolated, four were explored:

1. Arabic roots: meanings within meanings.
2. The placement, presence, and absence of diacritical dots.
3. The placement, presence, and absence of vowel marks.
4. Spatial continuum of the script.

In these explorations, instead of starting with a material or an interaction, I started with the language first. Nevertheless, Arabic is a complex language and without having features as a starting point; the process becomes too random and chaotic. Each feature focuses on one specific feature of the language, hence narrowing down the scope of finding appropriate words or sentences. In this process, the object and interaction are determined last.

Arabic roots: meanings within meanings

The Mirror installation in the previous process explored a similar feature despite the fact that the object came first. The language used appropriates the Arabic roots feature by using words that all structurally contain one common word which was murr/marr (bitter/passed).

After working with this feature, I began to read Arabic differently. Focusing on dissecting the words and finding words within other words that also convey close meanings to each other, I found speculations on some words interesting even if not linguistically proven. For example, the word refugee or Laaji’e in Arabic consists of two syllables, laa which is also the word for no and ji’e which is the word for come.

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Fidget Seesaw

Tashkil, hand, or vowel marks are diacritics that are used to express the short vowels in Arabic. There are multiple vowel marks and they are either placed above or underneath a letter. They are not always used; full tashkil is mostly found in children's books, works for learners, or religious texts for clarity. Vowel marks play an important role in delivering meaning in Arabic. Their position could easily change the message received from a text. When vowel marks are absent, meaning is understood from context.

In this exploration, I looked at two words with opposing meanings and connotations but yet have the exact same letterform: Jinnah and jannah.

The placement, presence, and absence of vowel marks which in context translate to demons and heaven respectively. The object used to convey the two words was a small fidget seesaw toy that would be placed on an office desk. The only vowel marks used are fat'ha which is above the letter and kasra which is below it. When the fidget seesaw is not pressed, the diacritic remains below the first letter and the word reads as jinnah (demons). However, when the fidget seesaw is pressed down, it moves the word and consequently the diacritic appears above the first letter and the word reads jannah (heaven). The font used is an old Kufi khatt and the diacritical dots are absent which makes it harder for Arabic speakers to read. Fidget Seesaw is a playful, provocative exploration; if the seesaw is not pressed there is a demon on your table!
Diacritical dots in Arabic serve to distinguish between letters that have a similar letterform. The dots vary from one to three dots, it can be placed above or below a letter. Some letters do not have dots; it is either because they are not needed or because not having a dot within itself is a distinguisher of the letter.

The placement, presence, and absence of diacritical dots

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Ebrah Lamp

Ebrah Lamp was the first exploration of this feature, I started by defining the words to be used: ghirah, a'thrah, and ebrah (jealousy, mistake, and lesson). These three words all have the exact same letterform and only differ in the diacritical dots’ placement. The lamp was constructed of acrylic layers, one layer contained the common letterform structure, while the other layers comprised of the different possible placements of the dots.

This feature explores the diacritical dots and their effect on the meaning of the words. In Arabic, a lot of words can be written by altering the dots and using the same letterform; this feature aimed to uncover words that can tell a story through only changing the dots’ placement.

Ebrah Lamp expresses two features of my research; first one being the Interaction: the user is allowed to choose what the word says by simply moving the acrylic layers. The other feature is language: when they are out of sync, both the diacritical dots and the letterforms become meaningless - simple lines and dots without any significance.

Ebrah Lamp
Tanaqabat Divider

The word niqab (veil) in Al Waseet Concise Dictionary has two definitions. The first one is a knowledgeable man who digs thoroughly for information. The second definition - and what is more popularly known - is a piece of clothing a woman uses to cover her face. I believed it was an interesting contrast of meaning and looked further into derivatives of the word and it led me to the word tanaqabat. Linguistically, the literal meaning is "she pulled the niqab tighter around her face" but it is more commonly understood as "she wore the niqab." The word tanaqabat is composed of five letters, all of which have dots and that gives freedom to create other words by altering the dots' count and/or positions. What gives even more opportunities is that when the first and/or last letter - which are the same ta - are removed, it generates more words that are also close in meaning. After determining the words to be used for this exploration, I moved on to the object and settled on a divider used for privacy.

The desired outcome was to create an interactive object and the purpose was to allow the user to create different words using only one-word structure by changing the dots. The challenge was finding an intuitive, simple, and inviting way to represent the dots. I looked at the Japanese paper dividers (Shoji) and specifically at the paper used in its construction. I thought that paper could be an easy solution for an easy intuitive interaction; it's light and can fold in different directions and so I experimented with different folding techniques and different types of paper.

The table shows the variety of words written with the Tanaqabat divider:

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<thead>
<tr>
<th>Word</th>
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<th>English Meaning</th>
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<tbody>
<tr>
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<td>(he)🏈dig</td>
<td>(male) dug</td>
</tr>
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<td>(she) dug</td>
<td>(she)🏈dig</td>
<td>(female) dug</td>
</tr>
<tr>
<td>(she) wore niqab</td>
<td>(she)/Qarnab</td>
<td>(female) wore niqab</td>
</tr>
<tr>
<td>(she) was certain</td>
<td>(she) was certain</td>
<td>(female) was certain</td>
</tr>
<tr>
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<td>(he) football</td>
<td>(hole/opening)</td>
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The variety of words written with the Tanaqabat divider.

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The variety of words written with the Tanaqabat divider.
The letter form of the word tanaqabat was the constant factor, while the diamond shaped dots were the interchangeable elements. When the dots are folded in, they morph into the paper screen, and when they are folded out, they create a hole or a dot. I first started by creating a printed letterform while the dots were achieved by the negative empty space created when the dots are folded.

However, the design language did not align and it made it harder to see the connection between the printed letterforms and the carved out dots. For that reason, I opted to also empty or hollow out the letterform so that when the dots are folded the negative space they create also matched the negative space created by the letterform. Even though the design language was better unified, it was still not quite complete; the dots that are folded in created a shadow of an outline and were still legible even when not folded out.

Back view of Tanaqabat paper divider

Tanaqabat divider: Hollowed out letterforms and dots

Hollowed out letterforms and dots
In contrast to English, the spaces between the letters and words in the Arabic language are the same, and this could pose a challenge for a non-Arabic speaker or someone who is just learning the language. For Arabic speakers, it is easy to distinguish the words from the context; however, does that still apply when the sentence is in a loop?

The shape that best fit this feature is a cylinder; it rotates endlessly and creates an infinite loop. In this exploration, I first constructed the sentence alkhayr kathir alshar (The good has a lot of bad). When read from different positions, the sentence makes sense linguistically. I repeated the sentence multiple times and applied it to a column, then constructed a rotating layer around the column with an opening that only gave room for three words to show at a time. And so, when the user rotates the layer, they get to choose what the sentence says by choosing the order of words.

The sentence constructed was linguistically correct in all three positions; however, it did not always have a meaning related to the behavior, or suggested a multi-layered connotation. For this feature to work, one must construct sentences that can be read from any position and would always have either the same meaning or a different one that still counts as a complete sentence. By doing so, a native or fluent speaker is brought down to the same level of a beginner speaker; they both will be able to read the sentence and there is no right answer as to where the sentence actually ends or begins.

In Arabic, the sentence can be written as: في عُمَود "خير كثير الشر" يمكن لمن يفهم اللغة العربية تحويله إلى "خير كثير الشر" من خلال التدويل وارتداد الكلمات. بالإضافة إلى ذلك، يمكن للشخص الذي لا يفهم هذه الكلمات أن يفهمها من خلال التدويل والتغليظ والتدوير. هذا الاستكشاف يجعل المتكلم الطليق عى نفس مستوى المتكلم المبتدئ؛ فكلهما سيكونان قادران عى قراءة الجملة ولن يكون هناك إجابة صحيحة للموقع الّتي تبدأ منه الجملة.
OUTCOMES

النّتائِج

68 69
For the final outcomes, I decided to focus on three explorations to produce interactive installations that would be all exhibited together in a gallery but can also stand alone in a public or a private space. The outcomes explore different features of the Arabic language such as diacritical dots, root words, and the infinite loop.

**Tanaqbat Divider**
I decided to further develop Tanaqbat Divider and to refine the interactive system used. The divider is light and easy to fold: it is 1.8 meters tall and made of 3 millimeters thin CNC'd wooden panels layered to become 6 millimeters in thickness. Each panel has a grid that is cut out except for where the letterforms are situated, and the panels are connected with a fabric hinge that is sandwiched between every two panels. The grid represents all the possibilities for dots to be placed. The dots are made out of memory foam that can easily be plugged or wedged into the grid. When they are not used, the dots are placed at the bottom of the grid. The audience can interact with the divider in two ways, either by placing the dots in order to form whatever word they desire, or by folding both or one of the divider's first and last boards to create even more words. The entire structure is fixed to the floor, except for the two ends, which move and fold within a directed track on the floor. The tracks are comprised of half circles that indicate how far the screens can be folded. The clear tracks and the inviting memory foam dots act as a visual language to intrigue the audience and guide them through the interactive process of the installation.

<table>
<thead>
<tr>
<th>لغة</th>
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Diacritical dots that can be easily squished and fitted in the grid.

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Diacritical dots in its three variations: letters formed left to right: noon, taa, thaa.

Diacritical dots in the shape of the mouth and the word "mouth".
Diacritical dots made out of memory foam

A closer look on the mock-up

Divanahel divider mockup
**Tanaqbat Divider in use,** dots scattered for to achieve more privacy.

**Tanaqbat Divider in its original word position, tanaqbat or she wore niqab.**

The lettersforms are pocketed to unify the design language of the grid.

The screen on the far left end is also folded, dots are moved and a new word emerges: *naqabah* or he dug.

First screen from the right is folded back to reveal a new word *naqabat* or she dug.

The dots on the last two letters/screens from the right are adjusted to reveal another word *naqib* or leader/captain.

**Possibility of structuring completely different words using the memory foam for both the letters and their dots.**

The dots on the last two letters/screens from the right are adjusted to reveal another word *naqib* or leader/captain.
في التحليل السابق لهذه الخاصية، توصلت إلى استنتاج أنه لتحقيق نتيجة أفضل يجب أن يكون للجملة المركبة معنى يمتد إلى ما وراء المعنى اللغوي. بما أن هذه الخاصية تعتمد بقوة على الشكل الأسطواني، فقد قررت أن أتعمق في البحث عن كلمة "أسطوانة" لفهم دلالتها في اللغة العربية. يُعرّف المعجم الوسيط كلمة أسطوانة كالتالي:

"في الهندسة المعمارية هو العمود أو الساريّة، وفي الهندسة جسم صلب ذو طرفين متواسيين على شكل دائري، وأطرافه اللسانية والمثمنة عموماً، وهو من ضلعين عبارة عن عدة ثقوب، وعندما تكون على سطح الطيف، فإنها تُسمى الأسطوانة الموسيقية أو الأسطوانة.“

الحناء أو الموسيقى وغيرها. ساعدني العمود على تحديد العنبر الذي ستطبق عليه اللغة، وبما أن العمود هو عنبر معماري فهو مناسب لخلق منشأة عامة أو ما يسمى بالفن العام. وعندما بحثت في كلمة الأسطوانة الموسيقية وجدت أمراً مثيراً للاهتمام، فهي في كثير من الأوقات تُربط بالأمثال أو الأقوال التي تدور حول التكرار أو الإعادة مثل "عدنا لنفس الأسطوانة" أو "الأسطوانة مشروخة" أو "تكرر الأسطوانة نفسها.“ بناءً على ذلك فقد قمت بتكون جملة مفيدة تقرأ من جميع الجهات وتُبلغ أكثر من معنى: "الأسطوانة تدور الآن" و "تدور الآن الأسطوانة" و "الآن تدور الأسطوانة". 

In the previous exploration of the spatial continuum of the script, I drew the conclusion that to achieve a better outcome, the constructed sentence needs to have a meaning that stretches beyond the linguistic sense. And since this feature of the language heavily relies on the cylindrical shape, I decided to research the word oustowanah (cylinder) in Arabic to grasp its connotations and usage in the language. Oustowanah has three definitions in Al Waseet Concise Dictionary: one of course being the cylindrical shape; another is the official terminology for an architectural column, and the last one being an LP or vinyl record.19 I directed my attention towards two words, column and LP record; the column being an architectural element that can act as a public installation. What was interesting about the LP record is its strong association with common proverbs such as: al oustowanah makhdooshah/mashrookhah (the LP record is scratched); al oustowanah tokar (the LP record is repeating itself); and many more that convey the same message - repetition and looping of events. After this immersion in the language, I constructed the sentence al oustowanah tadoor alaam (the cylinder/column/LP record is now turning).

The final outcome is an interactive installation; I worked with Royal Stone Trading and Contracting company to construct a column with three sections on separate ball bearings that turn freely and individually. All sections have the same sentence repeated on it. The structure is about 2.3 meters tall and is made out of welded metal. The rotating sections were fabricated with thin polished aluminum sheets. The rest of the structure is made out of galvanized steel and the base was built with a thick heavy metal to add weight and hold the column in place. The entire structure can be easily assembled and taken apart for transportation convenience. Finally, the Arabic sentence, which is made out of flexible acrylic laser-cut sheet, is added to each rotating segment. As the person interacting with the installation spins the column, they read the action that they are preforming (the column is now turning). At the same time, the sentence can also be understood as (the LP record is now turning) which conveys that events - such as turning the column or reading the sentence - is being repeated or looped.
Each cylindrical segment spins independently and the sentences are in a constant loop.
Bitter Mira’ah

The bitter mirror exploration was successfully implemented on a curtain wall at the VCU Qatar entrance lobby; I wanted to recreate it on an actual mirror and to refine it in production. I worked with Spectra Arts Co., a company established in 1988 in Doha and that mainly specializes in glass art. Multiple tests were created on sample mirrors. The tests varied in levels of etching, sandblasting, and carving.

The final outcome is 2 meters by 25 centimeters flat mirror, the words murr/marr were carved while the rest of the letters in the sentence were etched at the lowest density. Once Bitter Mira’ah is installed in a public space, it plays on the human intuition to look at a mirror. The first thing one would notice - after themselves - is the word murr. Upon moving around, more of the text can be seen as the light etching casts a shadow that makes the text slightly more legible at specific angles.
أمر امرؤ أمراً أمرا بأمرة بالمرآة
A man/person ordered a woman by (to look at) the mirror

The audience moves around the Bitter Mira’ah to see more of the script and make conclusions about the Arabic root words.
Virtual interactive exhibition

On December 2019, the first case of Coronavirus Disease 2019 (COVID19) was identified and has since spread globally resulting in the ongoing 2019-2020 coronavirus pandemic. The pandemic resulted in lockdowns of schools and multiple institutes in Qatar, including the Industrial Area, which harbors a major portion of industrial production of the country. Therefore, the production of all three installations could not be completed. In addition to that, exhibitions and events were either postponed or cancelled due to social distancing requirements.

Consequently, my final exhibition became a virtual interactive installation rather than a physical one. I collaborated with a game developer, Malek Anabtawi to produce the public installation in a virtual space that is accessed online via a website. The website visitors can interact with the pieces using the mouse cursor or keyboard arrow keys, moving freely in the space. The time I would have spent working on the production was dedicated to developing my designs virtually. I built detailed 3D models of the pieces using a modeling software (Rhinoceros6), the models were then programmed by Anabtawi using a video game engine (Unity).

Although I realize that the virtual environment is no substitution for the physical installations, this great shift of focus created other opportunities such as reaching a wider audience and allowing my exhibition to be accessible at any time or place. The transition from a real to a virtual exhibition as well as the development of 3D modeling and program coding widened my perspective on the design. The virtual installations affected the physical installations production plan.

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The virtual gallery space of Arabic beyond Arabic interactive online exhibition.
A view from the virtual gallery showing the projects Bitter Mira'ah and the Infinite Oustowanah.

A view from the virtual gallery showing Tanaqabat Divider.

A view taken from behind Tanaqabat Divider showing the virtual gallery.
CONCLUSION
I am fascinated by the connection between language and community and how it is translated into design, particularly the relationship between Arabic and Arabs. The inherited pride that Arabs have towards their language is immense and yet the design language does not always match it in complexity. This thesis aimed to uncover design methods that will attain new alternative ways to design using Arabic. In pursuit of a method, I focused on investigating design processes while employing two factors: behavior and language.

Starting with behavior and interaction, my process entailed finding an engaging material or object for the audience to interact with. Following that, I applied the language to match the design. This method proved to be problematic since different materials have different features, and they were not always compatible with the language. In the second process, which proved more effective, I reversed my approach by allowing the language to be in the lead. The Arabic language is a rich, gilded language and it would have been quite unreasonable and redundant to not have a starting point. Therefore, through more research, I constructed the features of designing with the Arabic language as a point of departure. Each feature exploits an existing characteristic of the language. Some of these characteristics are based on a linguistic outlook, while others are based on my observations on the behavior towards the language.

The Arabic language is cooperative; the key to designing with Arabic is to not be afraid to start with the language first. For any material, object, product, or installation that follows, the Arabic language will accommodate to it accordingly. As I write this thesis, I understand that the features of designing with the Arabic language are only a starting point to altering the view on Arabic language and design. I am aspiring that my thesis will instigate designers to treat Arabic beyond its aesthetic and linguistic value - to delve into the language created beyond verbal and written communication and into the aftermath, the unsaid, the unwritten, the Arabic beyond Arabic.
Future directions

The Arabic language is an ancient language, the relationship between Arabic and its speakers is ever evolving. The features acquired in this research were limited to Classical Arabic. I would like to implement a similar research on Spoken Arabic from which I believe I can uncover equally intriguing characteristics and behaviors that newfound features can emerge from. Another aspect of the language that would be exciting to expand on is Arabic Phonology in relation to behavior and linguistics. For example, the letter dhad has a great significance on different levels: it is an emphatic consonant that is considered as one of the hardest letters to pronounce correctly hence the language is commonly named after it as the language of dhad. Even in Arabic Phonology there are traces of pride that is involved since some Arabs claim that the letter dhad does not exist in any other language.

In regard to the design factor, this thesis focused on the perceptible qualities of the materials and the physical interactions with objects or installations. While working on the virtual interactive exhibition, I practiced communicating or transforming physical concepts and ideas into virtual ones that still retain the same qualities. I would like to take public installations into a novel reality since I am keen on experimenting with a divergent, less tangible and more virtual approach. Given that most of my explorations included themes such as the seen and the unseen, illusion and reality, and behavior and interaction; Augmented Reality (AR) is an appropriate mode to take such themes into another dimension. With AR, there are more possibilities for concepts such as audio, mixing between physical and virtual installations, and connecting with the language beyond visible terms.

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لعل السين ناه، (اللَّهَمُ) : التقول يوضع على الله،
(ج) لَغَة، الشفة، (ج) لَحَم،
(الله) من حرف إلى لواء غيناء.
(ك) ركبت ريه، ويقال: لثق.
(المثل) : لأنف وما حوله. ووضع.
(المثل) : قوم من الغاربة كأنه
في إفريقية والأندلس دولة.
(هلْ) ندى، (هلْ) الشجرة - لثة، خرج
الله، فهي لثة. و - الشيرة، ندى.
فهر، بالماء والطين، ويقال: لثة خف بُعير: ندى من الوُهـ.
(هلْ) وحل، WA - دم، و - الثوب وغيره: أَبْتَلٌ من;
و - الغيم، واتسخ. و - الرجل من الطين: تلَّطَخَت。
(الله) الشجرة: خرج منها اللثة و
الأمر: تردد، و - الشجرة ماحولها: نفذته وفلانا: أطعمه.لا
(هلْ) وْغَه، ويقال: (هلْ) الشجر: سال منه اللثة.
(الله) : لما يسل من بعض الـ
Notes

2 Belting, 26.
3 Belting, 26.
5 Moustafa and Sperl, 1:61.
7 Moustafa and Sperl, 2:566.
9 Yaseen Al Naseer, 32.
11 Teparic, 149.
12 Teparic, 153.
List of figures
All figures courtesy of the author unless noted

Figure 1. unknown, Folio from a Quran, 14th Century, Opaque watercolor, ink and gold on paper, 41.1x31.6 cm, 14th Century, https://commons.wikimedia.org/wiki/File:Folio_from_a_Qur%27an)_Mamluk_dynasty_%28jpg

Figure 2. Sultan Mohammed, The Mi'raj of the Prophet, 1543 - 1539, Opaque watercolor and ink on paper, height:28.7 cm, https://en.wikipedia.org/wiki/Sultan_Mohammed

Figure 3. Madiha Omar, Temple of ‘Ayn,’ 1948, Mixed media, 11 ¾ x 9 in, 1948

Figure 4. Everitte Barbee, Mutanabbi’s Lion, 2012, Ink on paper, 55x44 cm, 2012, http://www.everitte.org/portfolio/mutanabbis-lion-arabic/


Figure 6. Raghad Alaawaji, untitled, 2018, Instagram post, Instagram collection, accessed Nov 13, 2019, https://www.instagram.com/sawajy/


Figure 8. Student designed Ruqa’a script bench, n.d., steel metal, College of Architecture in Kuwait, accessed Nov 13, 2019, https://www.instagram.com/p/Bzk1Q0Nh3TA/

Figure 9. Ahmad Moustafa, maturing of consciousness, 2013, oil on canvas, in The Cosmic Script Vol 2: From Geometric Pattern to Living Form (London: Thames and Hudson, 2014), 608.