Less Water, More Holy: Tools for Sustainable Ablution

Faheem Khan

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Less Water, More Holy: Tools for Sustainable Ablution

Faheem Ahmed Khan
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Abstract

Prayer is an important part of life for many people, whether it takes the form of meditation or talking to God. Muslims pray five times a day, and before each prayer, they first clean themselves by performing ritual ablution (wudu). The eight-step purification process of wudu cleanses the body from head to toe. The Hadiths of Sahih al-Bukhari and Sahih Muslim tell us the Prophet Muhammad needed just one mudd of water (650ml) to complete wudu, but most people consume many times that amount—four-to-seven liters is more common today.

To visualize and better understand the nature of performing wudu with just one mudd of water, this thesis includes a two-part research investigation. A first part proposes eight individual artifacts—each one designed to analyze and illustrate the process of wudu, showing how little water is needed for each step of the process. Next, lessons extracted from this analytical phase inform a series of contemporary artifacts, designed to guide users toward a more reflective and sustainable wudu, modeled on and inspired by the teachings of the Prophet Muhammad (pbuh).

Note: ﷺ is Arabic calligraphy meaning, “May the Blessings and Peace of Allah be upon him.” It is customary to say this after mentioning the name of the Prophet Muhammad (pbuh). This mark of respect will be used throughout.
Introduction

Water plays an integral part in Islam, and Muslims regard it as a gift that, "... gives and sustains life, and purifies mankind and the Earth." The Arabic term for water, *mā*, is mentioned 63 times in the Qur’an and is a recurring theme in several of the Prophet Muhammad’s *hadith* sayings. Water is not only appreciated for its life-giving and sustaining capabilities, but it is also crucial in a Muslim’s everyday existence. A believer must complete ablution five times a day before performing prayer. According to a *hadith* given by Hazrat Abu Huraira, this pre-prayer ritualistic cleansing represents the attainment of cleanliness and purity of the body and spirit (Sahih al Bukhari, Vol. 1, Book 4). Through ritualistic ablution, the Prophet Muhammad demonstrates the logical approach to sustainable water management. The notion of water conservation is eloquently exemplified by the guideline stating that during *wudu* we should be frugal with water, even if we have a river at our disposal.

Religion is a spiritual force that connects humans with divinity through ceremonial and spiritual experience as a stimulant for creativity and culture. Religion is a sensitive topic because it is at the heart of our beliefs and informs how we perceive the cosmos. As designers, despite its sensitivity, we should be encouraged to embrace religion, not only to understand the religious significance of designed objects, but to take a first step toward a broader understanding of our faith, the faith of others and faith itself.

Some of the essential components of learning and conveying religious truths are systems of symbols and pictures composed in a certain ordered and determined connection to the form, content, and intention of presentation. Such systems also help maintain and enhance the bonds between humans and the sacred or holy realm (the transcendent, spiritual dimension). The symbol is the mediator, presence, and genuine depiction of the holy in conventional and established forms.
A comprehension of rituals and their underlying symbolism fosters consciousness in worldly and holy realms. The significance of gestures is relevant since rituals contain a variety of performative characteristics, whether they be transforming, socially reinforcing, or something more ambiguous that relates primarily to a user’s own internal intentionality. Ritualistic gestures are multifaceted; they are a process of symbolic expression that necessitates a deep understanding of the believer’s intention. Hence designing artifacts that can sustain all these beliefs and values can be highly beneficial to a believer.

When it comes to tangible objects that dwell within the religious realm, who designs them? Why do more significantly designed creations, such as religious architecture, get more emphasis? Are religious objects meant to be mundane with practical and commercial value, or should there be a deeper meaning behind such artifacts?

The purpose of this investigation is to qualitatively explore how symbolic actions can be transformed into objects that accentuate religious ritualism. This investigative design research conceptualizes religious rituals, where religion is defined as adherence to a formal belief system in which practices are associated with tradition. This research explores an alternative approach and builds on religious artifacts by making a series of designed objects to deconstruct the process of ablution and then recombining those deconstructive insights to provide a more practical approach in today’s world.
Prayers have personal meanings that stem from a person’s religious history or spiritual practice. Some regard prayers as sacred words, while others regard them as a method of speaking with or listening to God or a higher authority. Prayer is based on the principle that a power higher than oneself could impact one’s life.

The emphasis on daily ritual prayer, known as salat, which is performed five times each day, is one of the fundamental pillars of Islam. After reaching adolescence, Muslims are obligated to complete the five daily prayers. Salat punctuates the whole day. The first prayer (Fajr) occurs before sunrise, followed by a prayer at midday (Zuhr); the third prayer (Asr) occurs in the mid-afternoon, followed by another after sunset (Maghrib), and the fifth prayer occurs as the sky darkens (Isha). Millions of Muslims perform salat regularly five times a day. Salat is a physical activity and involves recitations of various Qur’anic verses and the performance of certain postural positions.

The total cleanliness and purity an individual achieves are some of the most significant benefits of salat. It always maintains one’s physical purity. Before each salat, ablution (wudu), or washing the hands, mouth, nose, face, arms, scalp, ears, and feet, is required. Not only is this a requirement for salat, but it is also supported with scientific benefits for the body. Ablution maintains a continual level of cleanliness, resulting in better skin and overall good hygiene. It cleanses the body of bacteria, allergies, and different illnesses and disorders caused by improper hygiene. This ritual is documented in the Holy Book of Qur’an, the prophetic traditions known as sunnah or hadith, and the consensus of Islamic scholars. Since 14 centuries ago, general standards of ablution have been defined and inherited based on the Qur’an, sunnah, and scholars’ agreement.
Outside of the Muslim world it is not immediately obvious to most people what Islam might have to do with sustainability and sustainable development. Tawhid and fitra are two critical concepts in Islamic water management theory. While tawhid urges people to use natural resources (such as water) reasonably and sustainably, fitra encourages individuals to collaborate at the basin and inter-basin levels. Allah has warned humanity of the repercussions of over-exploitation of water resources in the Holy Qur’an. “Mischief has appeared on land and sea because of what the hands of men have done, that Allah may give them a taste of some of their deeds, so that they may turn back,” Allah states (Qur’an, 30:41). This verse gives insight into the harmful effects of the over-consumption of water resources on human survival on Earth.\(^\text{10}\)

Muslims believe that nature belongs to God and that humans must demonstrate their gratitude by learning how to use and manage it properly so that it might benefit humanity. Exploiting nature, as taught by Islam, is based on the use of responsibility; this gives an advantage not only for its content but also for its intact and sustainable prospects. Muslims are expected to have particular perspectives toward nature, including coping with nature while ensuring sustainability. As a result, God provides clues to help individuals regulate themselves in exploiting natural resources, which causes depletion that can damage, if not destroy, human existence.\(^\text{11}\)

Water accessibility has reduced considerably as the human population has grown. Climate change, increased water use, infrastructure, and general waste contribute to the present worldwide water crisis. How many of us consider the Prophet’s example of not wasting water? Nonetheless, it is part of our Islamic tradition. “And waste not by excess, for Allah loves not the wasters” (Qur’an 7:31)\(^\text{12}\)
Religious artifacts can assist in achieving such ritualistic pursuits. Sacred elements take different forms in different religions, such as crosses, statues, jewelry, candlesticks, garments, shrines, and graves. These religious artifacts reflect people’s religious convictions and have been influenced by the diversity of faiths. The most significant ways of understanding and communicating religious truths are symbols and representations composed in a particular organized and specified connection to the presentation’s form, substance, and aim. Such systems also help maintain and deepen the bonds between humans and the world of the sacred or holy.

The formation of religious symbols, which arise when unconscious ideas are awakened or when a process of consciousness takes place, is primarily a matter of religious experience. Such symbols are often intellectual acquisitions, and when religious conceptions are further developed, the symbols may eventually become issues of serious theological discussions. Religious symbols have an inextricable link to their meaning. They must show respect for a notion that is difficult to grasp in its entirety. Thus, it is vital to consider the design of religious objects that embody such beliefs and notions.

Almost every religious symbol and image is directly or indirectly associated with sensations and artifacts in the human environment. Many are taken from objects found in nature, while others are created intentionally through intuitive perception, emotional experience, or intellectual contemplation. Most of the time, the constructs are linked to items by sensory perception. There is a trend toward simplicity, abbreviation into signs, abstraction from sensory objects, and a tendency to consolidate numerous processes into a single symbol. An example of this can be seen in early Christian depictions of the triumphant cross against a background of a star-filled sky, which can be found in the apses of many Basilican churches. The Crucifixion, Resurrection, Ascension, Exaltation, and Transfiguration of Christ are related in these depictions to apocalyptic conceptions (centered on abrupt interventions by God into history) inherent in the belief of the Last Judgment.
The conscious and unconscious, experience and cognition, sensory perception, intuition and imagination all serve as the basis of the symbolization process. The structure of religious symbolism emerges from these. The creation of the symbol structure is influenced by sensation as well as physiological and psychological processes. On the other hand, the symbol is meant to be an objective concentration of transcendent world experiences rather than a subjective product of a personal creative process.

The act of touching an object symbolically translates into a perceived mental connection with the purpose of the object. Physically connecting to an object, in particular, leads to a more significant psychological connection to the relevant service the object offers, which promotes behavioral intentions. A study also found that such tangible objects had a profound influence only when the object had a high visual appeal.

Likewise, symbolic artifacts can be found in Islam. Some of the most commonly known artifacts are the Qur’an, skull-cap and tasbih (rosary). Other objects do not directly relate to Islam, but their regular use within the context of Islam has made them recognizable as a religious accessory, such as book rests, flip-flops for ablution, prayer mats, and ablution jugs.
Precedent Studies

Mudd

According to a highly reputable Islamic scholar and collector of hadith, Al Tirmidhi, Prophet Muhammad stated, “Do not waste [water] even if performing ablution on the bank of a fast-flowing large river.” This hadith emphasizes Islam’s teachings on taking a rational approach to sustainable water usage. The Prophet would do full-body cleansing with one saa or five mudd of water, and ablution with one mudd of water, according to the Hadith of Sahih al-Bukhari.

Ablutions are defined in the Oxford Dictionary of World Religions as, “…ritual cleansings to remove impurity and to mark transitions from profane to sacred states.” Five times a day, a follower is expected to complete ablution before prayer. This ritualistic cleaning symbolizes the fulfillment of cleanliness and purification of the body and soul before prayer. No prayer is acceptable without ablution, according to a Hadith narrated by Hazrat Abu Huraira (Sahih al Bukhari, Vol. 1, Book 4).

In Islam, the act of washing oneself is referred to as wudu, ghusl, or tayammum.

Research had been conducted by the Saudi Organization of Standards (SASO) to define a mudd. Using a sample of 40 men, they estimated the average volume of water one could hold in their palms. According to the findings of this investigation, one mudd contains 628 milliliters of water. The Council of Senior Scholars of the Kingdom of Saudi Arabia define a saa to be equivalent to be four mudds.
As Muslims regard the Prophet as a role model and try to follow his teachings, a mudd for performing an ablution should be plentiful. In the arid climate of the Middle East, it is a moral responsibility to conserve water. A traditional vessel containing a mudd of water (Figure 9) is simple but can be improved for a better user experience. The value of this measurement has a psychological appeal for Muslims, because the Prophet used it to set a sustainable example. With 1.9 billion Muslim adherents worldwide, an ablution vessel designed to contain just one mudd of water would save tens of billions of liters of water every day.

A standard swimming pool holds 13,500 gallons (~61,000 liters) of water. 97,134 individuals can perform ablution with that amount of water if they follow the prophetic teachings and use only one mudd each. Instead, on average, people today use anywhere from 4-7 liters of water for ablution. Statistically speaking, at today’s levels, a swimming pool full of water would provide ablutions for only nine to fifteen thousand people.
Masahiro Mori, a well-known Japanese porcelain designer, created Fancy Cups. His ground-breaking designs merge traditional elements with a modern look, resulting in exquisite but simple, creative yet utilitarian items. When Fancy Cup was first released in 1969, it was touted as a high-end design item. The collection’s thin, light porcelain bodies, smoothness, shine and distinctive profiles have made it a famous example of quirky design.

Mori’s line of cups was developed and manufactured in Japan by Hakusan Porcelain. Because of its thin porcelain, it is ideal for cold drinks, but it may also be used as a vase or a decorative object. Mori initially meant these cups to be appreciated by the blind; hence there are six distinct designs in the range. Each cup has a distinct tactile feel in hand, allowing the sight-impaired to appreciate the beauty of their cup by feeling its distinctive surfaces in their hands. The cups were made in six distinct patterns: A, B, C, D, E, and F.

Although intended for the blind, these ergonomic cups provide a range of possibilities for different cup users. Even though traditional cups have a handle, users have their approach to holding their cups. People can choose a cup that they feel more comfortable holding. The amount of surface area that contacts one’s fingers ranges from one cup to another. Mori’s cups lend a varied experience for different drinks, depending on temperature or mood.
Aldo Bakker, an Amsterdam-based designer, created a line of porcelain dinnerware: the Vinegar Flask. Organic shapes and movements that transcend time, zeitgeist, usefulness, and purpose are of particular appeal to Bakker. This captivating and exciting time is significant to the designer, who grew up in the intellectual family of two Dutch design superstars, Gijs Bakker and Emmy van Leersum.

Every item of Bakker’s dinnerware collection began with a movement and a serving ritual that formed a shape and invited a gesture associated with fluid or powder. The Vinegar Flask is a one-of-a-kind take on how to pour vinegar. Pouring may be done precisely due to an unusual spout made of a cup that acts as a holding place for the vinegar.

Frans Ottink, a Dutch ceramicist, created this tableware. The collaboration between Bakker and Ottink began with the manufacture of the Porcelain Tableware series for Thomas Eyck, a Dutch publisher, and distributor of design objects. Since then, Ottink has been in charge of the porcelain products that have emerged from the studio.
Cloth

Cloth is a minimalist jug designed for OTHR by Stockholm-based designer Luca Nichetto. Cloth is a streamlined, multi-purpose design that may be used as an oil jug, creamer dispenser, or soy sauce dispenser. It is a numbered edition made of 3D printed porcelain that comes with or without a lid.

Cloth was inspired by the idea of combining an oil jug’s spout with its body. Its form, which is only achievable with 3D printing, enables a seamless connection between the spout and the container. The shape is draped around the liquid it discharges, acting as a porcelain cloth.

Oil jugs, also known as “Oliera” in Italian, are a standard table item in Italy, as many meals are dressed with extra virgin olive oil after they are served. Cloth is energized by its angles and lines, giving the impression of perpetual motion.
Before focusing my topic on the use of water for ablution, I initially analyzed a collection of objects found within the mosque space. The illustrations in Figure 13 depict objects commonly placed or used, while praying, in a mosque, or used while preparing for worship. Although the majority of these objects are common items that would not otherwise be considered holy or sacred, their existence within a spiritual space conveys religious, symbolic meaning.

Investigations

Islamic Artifact Research

Before focusing my topic on the use of water for ablution, I initially analyzed a collection of objects found within the mosque space. The illustrations in Figure 13 depict objects commonly placed or used, while praying, in a mosque, or used while preparing for worship. Although the majority of these objects are common items that would not otherwise be considered holy or sacred, their existence within a spiritual space conveys religious, symbolic meaning.
Following the examination of found objects, I focused on the process of ablution. Even though ablution is a universal practice of cleansing oneself before prayer, methods vary from region to region. People in developed nations, with abundant water, enjoy well-maintained ablution rooms, while people living in developing nations, or praying at home, more commonly use a vessel (lota) to perform ablution. Because a *lota* was among the found objects in this initial exercise, it sparked my curiosity to explore ablution and the history behind it.
Following the previous artifact examination, I decided to explore the act of ablution. Upon reaching this decision, I came across a *hadith* from Sahih al-Bukhari and Sahih Muslim; “The Prophet ﷺ, would perform ablution with one *mudd*, or half of a litre, and would perform a ritual bath with one *saa’,* or two litres, up to five *mudd*.”

Figure 15 is an example of a *mudd* held in the National Museum of Antiquities and Islamic Arts in Algeria. This *mudd* dates between Hegira 731 and 749 / AD 1331 and 1348. It is made from yellow copper, engraved, and incised. The dimensions of this vessel are 10 cm high, 11.6 cm wide base, and an opening of 8.1 cm. This artifact roughly holds up to 780ml of water. Upon further research, there is disagreement among scholars about the exact measure of a *mudd*. However, it is approximately agreed upon that it holds around 650ml of water. Islam discourages any form of wastage, and, as mentioned in Sahih al-Bukhari, scholars discouraged excess in ablution, and advised following the Prophet’s example.

**Mudd — Ergonomic Studies**

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The first phase of my research sought to develop a well-designed vessel containing one mudd of water. Looking back to my precedents, I incorporated ergonomic features to improve the look and feel of the vessels. With a bulbous form, the vessel naturally fits the hand, but I added distinct features to distinguish each iteration. From left to right in Figure 16, the first iteration had finger dents to hold the vessel from beneath, while the second had a spout, providing directed water flow. The third version had an built-in, handle-like thumb hole, to allow the user to hold the mudd, like a mug, while the final example had finger dents on its surface for improved grip.
After exploring ergonomics, a next phase of my research speculated on ways to perform ablution with much less water. By self-testing and observing my family perform ablution, I was able to allocate quantities to each step of the ablution process. As depicted in Figure 17, I performed calculations to determine how one *mudd* of water (650ml), could be assigned to each of the eight steps of ablution, based on the percentage of surface area of the body parts associated with each step. With those percentages assigned, I calculated a specific volume for each step.
Next, I designed individual vessels for each body part and step. This produced eight vessels (Figure 18), which correspond to the hands, mouth, nose, face, arms, scalp, ears, and feet. These vessels support the physical movements that make up the choreography of ablution.

Each one responds to the physical gestures needed to cleanse each body part, ergonomically responding to existing actions and methods of traditional wudu, so users experience the familiarity of a known ritual (Figures 19-26).
Having performed a didactic deconstruction of the ablution process, I next sought to combine lessons from the earlier exercises and create a more practical, user-friendly vessel.

Figure 30 shows a reductive attempt to make a single, convenient, all-in-one solution. A central hole in the lid allows users to easily fill the vessel. Two spouts at opposing ends—one wide and the other narrow—offer the user two different pour rates. Figure 31 illustrates a version inspired by contemporary oil and vinegar containers, with the body of the vessel holding water for ablution steps dedicated to larger surface areas, and a smaller, internal chamber for cleaning smaller body parts.

Figure 32 articulates the different volumes dedicated to each step of ablution. The segmented chambers offer users a visual sense of how much water remains, step-by-step.
In the next series of studies, vessels are tapered, to depict the increased quantity of water used in each sequential step of ablution. Figures 33-35 study various ways to control the pour of water. Figures 33 and 34 work similarly, each with two spouts—one wide and one narrow. Figure 35 has perforations in its lid for a controlled pour.

Each of these studies incorporates a manual pressure-lock mechanism, allowing a user to stop flow by covering one spout/hole to stop the flow of water from the other. Once the second hole is released, the water is free to flow.
Figure 36 incorporates ergonomic bumps on one side of the surface for grip, with a small spout on the opposite side, for a more controlled pour. The small spout serves double duty, acting as a thumb support when pouring from the large spout.

Figure 37 is inspired by Aldo Bakker’s water carafe\(^{40}\) where the left side of the vessel can be held with both hands or the smaller spout acts as a grip for the fingers or thumb.

Figure 38 pays homage to Aldo Bakker’s Vinegar flask (Figure 11). It is designed to pour a small amount of water at a time into the protruding container to break the process of wudu into steps, encouraging users to perform ablution patiently and reflect on its meaning.
Found Mudd

After the sequence of studies reconstructing mudd, my research narrowed to a focus two project components; a lid, designed to pour water in specific ways, and a vessel capable of holding one mudd of water. Rather than design the vessel from scratch, I decided to embrace the sustainable solution of upcycling found glass bottles. Specifically, I chose a unique type of tapered vessel that comfortably holds 650ml of water—a glass Rayyan water bottle.
I accepted the technical challenge of creating a threaded lid that would fit perfectly onto the found bottle. After careful measurements (Figure 39) and multiple prototypes, I achieved a water-tight fit to match the Rayyan bottle threads. Next, I developed eight individual caps/spouts, reviving the poetic and symbolic lessons from the *mudd* deconstruction exercise (Figure 40).
Figure 41: Prototyping
The final step leading to my thesis outcomes was to reduce the number of lids required for ablution by strategically combining and pairing sequential steps, converting pairs of pouring actions into one dual-functioning cap (Figure 42). By reducing eight vessels to four, I was able to reduce the number of tangible objects required for ablution, while retaining the symbolic and poetic link to each physical gesture of ablution. The collection of four caps allows a user to perform ablution sequentially, while intentionally slowing down and ritualizing the process, allowing believers to more thoughtfully connect with this holy practice.
Figure 43: Rendering of final designs
The objective of the eight-piece collection called *Wudu Deconstructed* was to not only quantify the amount of water needed for each step of ablution—as a fraction of one *mudd*—it was also to visually articulate how water is used in each step. Practicing Muslims are obliged to follow the teachings of the Prophet ﷺ, and to follow his example of conservation. Each of these eight pieces is designed to analyze conventional methods of performing ablution under a constant source of water, reinforcing a familiarity of use. The vessels not only serve a didactic purpose; they can also be used for daily ablution. Although it would be time consuming to use each of the eight tools in sequence, doing so would allow the believer to truly act in harmony with and appreciation for the teachings of the Prophet ﷺ.

**Outcomes**

*Wudu Deconstructed*

The objective of the eight-piece collection called *Wudu Deconstructed* was to not only quantify the amount of water needed for each step of ablution—as a fraction of one *mudd*—it was also to visually articulate how water is used in each step. Practicing Muslims are obliged to follow the teachings of the Prophet ﷺ, and to follow his example of conservation. Each of these eight pieces is designed to analyze conventional methods of performing ablution under a constant source of water, reinforcing a familiarity of use. The vessels not only serve a didactic purpose; they can also be used for daily ablution. Although it would be time consuming to use each of the eight tools in sequence, doing so would allow the believer to truly act in harmony with and appreciation for the teachings of the Prophet ﷺ.
These eight pieces were created from brass, using lost-wax casting (Figure 45). Brass was chosen as the final material of production to reflect and pay tribute to the vessels that held one mudd during the prophetic era. These eight artifacts are didactic and meant for visual articulation. Additionally, the symbolic pieces serve as a visual reminder of how much water one needs and can also be used to perform the eight-step ritual ablution.
Figure 46: Wudu deconstructed, Brass
Figure 47: Wudu deconstructed, Brass
Figure 48: Wudu deconstructed, Brass
Figure 53: Wudu deconstructed, Brass, Arms

Figure 54: Wudu deconstructed, Brass, Head
Wudu Deconstructed
Video demonstrating tools for ‘Wudu Deconstructed’
Tools for Sustainable Ablution

The resulting collection is a culmination of all of the investigations, studies and research discussed and documented above. The project’s primary objective is to propose ablution vessels that can be mass-produced and used by every Muslim believer, while expressing the symbolic and poetic characteristics embedded within each step of the ablution process—all while using just one *mudd* of water. A complete set of four lids facilitates ease of use, while reinforcing the thoughtful step-by-step performance of the ablution ritual.

Thoughtful use of water is not exclusive to just ablution. However, there are multiple references to the importance of water in the Holy Qur’an, including: “Do not the Unbelievers see that the heavens and the earth were joined together (as one Unit of Creation), before we clove them asunder? We made from water every living thing.” (Qur’an, 21-30). Moreover, cleansing is not only a mandatory step before praying; it helps the believer achieve a humble state, as water represents purity in Islam.
Tools for Sustainable Ablution

Video demonstrating ‘Tools for Sustainable Ablution’
If 650ml of water was sufficient for the Prophet to perform wudu, why is it that contemporary Muslims use many times that amount? As Muslims, are we not supposed to follow the teachings of the Prophet?

These questions drove my thesis inquiry and design research. Not only does this work connect to the teachings of Islam and the sunnah of the Prophet, it also addresses the global impact of wastage and the need for conservation of natural resources. This design research was meant to empower modern Muslims with teachings embedded in their religion and to encourage them to follow in the Prophet’s footsteps.

The research process of systematically deconstructing and reconstructing the implications of a simple volumetric constraint opened design opportunities to educate, direct and indicate how to go about following the sunnah of the Prophet while preserving one of nature’s most vital and life-sustaining resources: water.

Conclusion
Future Directions

Water is an essential need for all life on Earth. It is utilized for various functions, including drinking, irrigation, energy generation and industrial and commercial uses. Its negligent usage has resulted in a decrease in both its quality and quantity. With almost two billion Muslims worldwide, Islam is the world’s second-largest religion.

One way to continue building on this research is to identify strategies for mass-producing and supplying these tools for sustainable ablution to densely populated Muslim regions. These tools would reduce the amount of water used for ablution to a fraction of its current use.
The exhibition has been designed to provide a linear pedagogical experience. The exhibits have been curated to flow from left to right, starting with the abstract and ending with a video demonstration. The first set of work proposes eight individual artifacts designed to analyze and illustrate the process of wudu, showing how little water is needed for each step of the process. Followed by the lessons extracted from this analytical phase, the second set of work inform a series of contemporary artifacts designed to guide users toward a more reflective and sustainable wudu, modeled on and inspired by the teachings of the Prophet ﷺ. The exhibition concludes with a video demonstration of the Tools for Sustainable Ablution in use.
Faheem Khan

Less Water, More Holy: Tools for Sustainable Ablution

Prayer is an important part of life for many people, whether it takes the form of meditation or talking to God. Muslims pray five times a day, and before each prayer, they first clean themselves by performing ritual ablution (wudu). The eight-step purification process of wudu cleanse the body from head to toe. The Hadiths of Sahih al-Bukhari and Sahih Muslim tell us the Prophet Muhammad needed just one mudd of water (650ml) to complete wudu, but most people consume many times that amount—four-to-seven liters is more common today.

To visualize and better understand the nature of performing wudu with just one mudd of water, this thesis includes a two-part research investigation. The first part proposes eight individual artifacts—each one designed to analyze and illustrate the process of wudu, showing how little water is needed for each step of the process. Next, lessons extracted from this analytical phase inform a series of contemporary artifacts, designed to guide users toward a more reflective and sustainable wudu, modeled on and inspired by the teachings of the Prophet Muhammad.

Behance.net/fa7eemkhan
fa7eemkhan

Main Advisor
Rob McClure

Associate Advisor
Stella Colaleo

Reader
Jörg Matthias Determann
Faheem Khan

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Prayer is an important part of life for many people, whether it takes the form of meditation or talking to God. Muslims pray five times a day and before each prayer, they first clean themselves by performing ritual ablution (wudu). The eight-step purification process of wudu cleanses the body from head to toe. The Hadith of Sahih al Bukhari and Sahih Muslim tell us the Prophet Muhammad (PBUH) needed just one mug of water (450 ml) to complete wudu, but most people consume many times that amount—four to seven mugs is more common today.

To visualize and better understand the nature of performing wudu with just one mug of water, this thesis includes a two-part research investigation. The first part proposes eight individual artifacts—each one designed to analyze and illustrate the process of wudu, showing how little water is needed for each step of the process. New, lessons extracted from this analysis of phase inform a series of contemporary artifacts, designed to guide users toward a more reflective and sustainable wudu, modeled on and inspired by the teachings of the Prophet (PBUH).

Biography:
www.beeline.net/fahamidkhan

MAIN ADVISOR
Kofi Addari

ASSOCIATE ADVISOR
Stefle Cofaner

READER
Prof. Matthew Dennonker
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Lastly, my family deserves endless gratitude—my father for inspiring me to take on this thesis venture, my mother for being my staunch supporter, and my brother for teaching me that an assertion of dominance is not necessarily a bad thing.
Rab McClure’s teaching and creative scholarship mine the sweet spot where design and fine arts overlap. His work, which leverages digital fabrication to amplify analog processes, investigates form, light, space, material, memory and imagination. He has been invited to present papers and exhibit his work most recently in Venice, St. Petersburg, Dubai, Miami, Vancouver, Helsinki, London, Montreal, Kyoto, and the Netherlands.

Rab is an Associate Professor and the Director of Graduate Studies at VCUarts Qatar. He is a registered architect and an NCIDQ certified interior designer. He holds a Master of Architecture degree from Yale University and a Bachelor of Science in Architecture degree from the University of Virginia.
Stella Colaleo
Associate Advisor

Stella has a Master in Architecture from the Polytechnic University of Turin with a thesis inquiring about participatory architectural design. She has worked in a studio for several years, moving to her own independent business afterward. She started a long collaboration with a company oriented to designing and producing interactive experiences, objects, and services. The company was also active in education and collaborated with schools and cultural institutions to develop pedagogical programs on new technologies and interactive design.

Twelve years ago, Stella moved with her family to Doha and joined VCUarts Qatar in the fall of 2011. Digital Illustration, Digital Fabrication, and Jewelry Design were the classes she taught for a few years, together with electives and interdisciplinary studio courses.

From 2014 to the end of 2018, she held the position of Head of Design Studio at Qatar Museums (QM). With a team of VCUarts Qatar alumni, the studio designed and developed products for the QM’s gift shops inspired by the local culture and by the content of the museums’ collections. In 2019, Stella moved back to VCUarts Qatar, where she teaches in the Masters of Fine Arts in Design program.
Jörg Matthias Determann
Reader

Jörg Matthias Determann is Associate Professor of History at Virginia Commonwealth University in Qatar. He also serves as an Associate Editor of the Review of Middle East Studies. He holds a doctorate from the School of Oriental and African Studies, University of London, and master’s degrees from the University of Vienna.

He is the author of four books including Islam, Science Fiction and Extraterrestrial Life and Space Science and the Arab World. He is currently writing a book about the history of the movement for equity, diversity and inclusion in modern astronomy.
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I want to say a special thank you to my Professor, Giovanni. His support, guidance, and insight during Studio 3 led me to take this thesis direction. If it weren’t for him pushing me to approach this topic from a designer’s point of view and embracing the symbolic characteristics of religion, I would not have been able to resolve my thesis the way I have.

Last but not least, my sincere gratitude to Amna. She played a crucial role in facilitating the production of ‘Wudu Deconstructed’ in Pakistan. Amna worked closely with multiple artisans to ensure the pieces were produced as intended and got them delivered to Qatar promptly.
Giovanni Innella
Assistant Professor, VCUarts Qatar

Giovanni Innella (Torino, 1982) is a designer, design researcher, curator and critic, and educator. He holds a bachelor degree in Industrial Design from the Politecnico Di Torino (Italy), a master in Conceptual Design from the Design Academy Eindhoven (The Netherlands) and a PhD in Design Critique from Northumbria University (UK). Through his career, Giovanni exhibited at the Triennale Design Museum of Milan, the International Design Biennale of St. Etienne, Droog Gallery in Amsterdam, among other venues.

He curated exhibitions at The New Institute in Rotterdam, the Shenzhen Bi-city Biennale and other international venues. His work is part of the public collections of the Centre National des Arts Plastiques in Paris and the Design Museum in -s’Hertogenbosch. Giovanni regularly publishes in academic and non-academic contexts. After having worked as an educator in The Netherlands, Japan and USA, he is currently a faculty member at VCUarts Qatar.
Amna Sana
Interdisciplinary Designer

Amna Sana is an interdisciplinary designer with a Master of Fine Arts from VCUarts Qatar and a Bachelor of Design in Jewelry and Accessory Design from Beaconhouse National University Pakistan. Her main focus is product design where she focuses on designs that inhibit strong personal, cultural and/or social narratives. Her work process is directed through digital ideations and prototyping which manifest into tangible creations that highlight materiality and function.

Her professional experience includes running a jewelry startup called ‘Saphigo’ in Pakistan, where she was the Co-founder and Creative Director. She has collaborated with many national and international brands which include; Rungrez, Miss Veet Pakistan, Saira Rizwan, Kayseria, Crossstitch Official and GT Magazine. Her jewelry has been adorned by many Pakistani celebrities such as Sanam Baloch on the Morning Show ARY News in Pakistan and Mahira Khan for her red-carpet appearance. She has also developed a customized collection for Cross Stitch’s debut on the runway for Pakistan Sunsilk Fashion Week 2017, where the brand was recognized for its contemporary design aesthetic. 

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