TALISTONES

A Handful of Help for Homecoming Soldiers

A thesis presented in partial fulfillment of the requirements for the degree Master in Industrial Design in the department of Industrial Design of the Rhode Island School of Design, Providence, Rhode Island

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To my Mom and Ammamma:
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And to my brother, for being so cool that I had to go make something of myself just to keep up.
"Sooner or later almost every American soldier comes home... on a stretcher, in a box, in an altered state of mind."

-Ann Jones in They Were Soldiers: How the Wounded Return From America’s Wars
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**Talisman:** an object held to act as a charm to avert evil and bring good fortune; something producing apparently magical or miraculous effects

**Digichanism:** a hybrid term cognizant of the Latin word *digit* meaning fingers and *mechanism* meaning a system of parts working together

**Exogenous:** an introduced form that is produced or originating from outside the system

**Zeitgeber:** an environmental agent or event (such as the occurrence of light and dark) that provides the stimulus setting or resetting of a biological clock in an organism

**Veteran:** anyone who has served any amount of time in any military service

**TBI:** *Traumatic Brain Injury*: Physical injury to the brain from explosives and/or blast shock waves that can result in physical and mental injury

**Circadian Rhythm:** the individual 24-hour internal body clock that dictates when we need sleep, food, and other basic needs. It regulates many psychological processes and is affected by our environments: sunlight, temperature, and habits. Disruption can lead to adverse effects on your physical and mental health.

**Cybernetics:** The science which studies the communication and the process of control in living organisms and machines (according to Norbert Wiener)
PTS(Đ): Post Traumatic Stress:

PTS: Post Traumatic Stress: a normal adaptive response when experiencing a traumatic event (a loss, an injury, an accident). The symptoms vary but there are predicated responses from your body and brain. It can be a reflex that is immediate or delayed a few days and can last for different spans of time for different people. It is considered a normal reaction and not a mental illness. Symptoms include avoiding a place that the event occurred, nightmares, heart racing, shaky hands, nervousness. Treatment is usually not necessary and symptoms wear off.

PTSD: Post Traumatic Stress Disorder: a clinically-diagnosed condition listed in the Diagnostic and Statistical Manual of Mental Disorders, the recognized authority on mental illness diagnoses. Anyone who has experienced or witnessed a situation that involves the possibility of death or serious injury, or who learns that a close family member or friend has experienced a traumatic event, can develop post-traumatic stress disorder. The symptoms can be invisible and aggregate vastly different behavioral responses, including but not limited to trouble sleeping, nightmares, flashbacks, hallucinations, etc. and may not reduce in time without external help.

IED (Improvised Explosive Device): a bomb that is used in an unconventional military action or guerrilla warfare and frequently used as a roadside explosive. They sometimes use military artillery but they are predominantly makeshift devices conceived by rebel insurgencies. They are the largest sources of injury and fatality in the war in Iraq and Afghanistan.
We are creatures of habit influenced by our environments. We function on a 24-hour clock known as our circadian rhythm that is dictated by the solar cycle, seasonal shifts, and our daily schedules to determine our understanding of time to queue our behaviors. The circadian rhythm can be disrupted by trauma to the brain, shift in lifestyle and habits, or inability to determine the passage of time and can lead to profound effects on mental health. Soldiers who are transitioning out of military service into civilian life, particularly those who have experienced combat, are an archetypal population who encounter damage to their circadian rhythm which results in critical changes to their mental health.

The United States has deployed millions of soldiers to the Middle East. Of the troops returning home, nearly one third of them are struggling with invisible injuries. The trauma they experienced can manifest in a variety of psychological symptoms, many unique to the soldier. Complicated by the shift from military structure to the independence of civilian lifestyles, homecoming soldiers face a crippling blow to their internal clocks. The circadian rhythm is a delicate system and damage can lead to disassociation, flashbacks, panic attacks, imbalanced sleep cycles, and intrusive thoughts. Without a sense of belonging, in congruence with these symptoms, veterans face an anxiety that culminates into a critical trigger of Post-Traumatic Stress Disorder.

Talistones are physical objects that create haptic and visual feedback in response to their body’s physical response to their invisible wounds. Talistones embody the essence of talismans to honor veterans and provide a subtle introduction to recalibrating their internal systems through patterns and repetition to help them on their path to healing.
The wars in the Middle East\(^1\) are the longest wars the United States has fought in. Tactics and technology have revolutionized modern warfare by expanding the battlefield far beyond the traditional etiquette of a designated war zone. War has become precise and dehumanized. It is no longer simply about land or religion; it has become about the exchange of information. It is so complicated and convoluted, that there is not a clear explanation of why we are fighting or who the adversary is anymore. Guns are stronger and more accurate. Artillery is synonymous with cutting-edge technology, but that does not mean that the unmanned drones and defense teams dictating battle from thousands of miles away are the only ones engaged in war. There are still boots on the ground and humans in those boots. There are more IED’s, more guerrilla tactics, and strategic and spontaneous breakouts of firefights overfilled with injury and death. Beyond the battlefield, beyond the war, the home front must face the consequences of this evolving landscape. More soldiers from Iraq and Afghanistan survive their deployments than compared to troops in any previous wars but more return with brain injuries that lead to invisible wounds.

Post-Traumatic Stress Disorder is the most frequent invisible injury among returning soldiers. As civilians, the experience in its most basic form is similar to jet lag. The missing feeling of belonging, the ambiguous uncertainty of who you are, where you are, what you are supposed to be doing, paired with the intangible sensation of disassociation mimic the shallow end of PTSD. The more intense characteristics are not limited to but can include extremely vivid flashbacks where every detail of a moment is relived, nightmares, hallucinations, panic attacks, intrusive thoughts, and imbalanced sleep cycles. They can be triggered by sounds as simple as an alarm or song, common smells, even specific habits. Most of the time it is unexpected and whether the reaction is minor or extreme is not always predictable.
There are screenings, tests, and different checkpoints but many times it is easy to dodge or hide the behaviors and symptoms, knowingly or unknowingly. Part of the problem is that testing is insufficient but more immediate is the stigma associated with PTSD. When serving, going to a psychologist or psychiatrist can drastically affect your success in your military career and ranking. When you are out, it might affect your ability to attain a job or license. (This is not true but it is an accepted belief). There is also a social bias that makes veterans believe that seeking help is weak because they are trained to be able to handle anything. Furthermore, brain injuries may not have prevalent symptoms immediately and when they do surface, they can be unique to the individual, making it harder to diagnose.

Currently, the precedent for dealing with PTSD is predominantly medication or therapy but veterans must first admit to their condition, seek out help, and find the right resources; a series of hurdles requiring veterans to surpass internal and external barriers.

Talistones are an object-based intervention living in the space between memento and care. Functioning as medallions, they honor veterans for their service, and as amulets to provide grounded regulation to address a veteran’s body’s physical reaction to a psychological symptom. PTSD is a result of a physical injury to the brain’s hypothalamus, the home of the body’s master clock. When injured, the rhythms the body relies on to establish heart rate, regulate hormones, blood pressure, eating and sleep cycles, and understanding of time can all be derailed. Talistones provide private haptic feedback in the form of patterns and repetition to allow the brain to return to its homeostatic sense of calm during a triggered episode. Neither a replacement nor substitute for medical help, but an opportunity to bridge the gap in identity from soldier to veteran and help with the anxiety that can trigger PTSD by providing immediate help and long-term proof of invisible symptoms.

1. The US was engaged in two separate conflicts in the Middle East simultaneously. The Afghan War from 2001 to 2016 and the war in Iraq from 2003 to 2012. The 1.64 million troops deployed is a combined number from both. The death toll for both is significantly less than previous wars but the number returning with TBI, PTSD, and depression is disproportionately high. For further information please refer to Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery.
CHAPTER 1

“Citizen | Soldiers, We’ll always be ready, We’ll always be there”

The Soldiers and Veterans
As a culture, the United States is obsessed with the military and war. Since 2000, nearly 350 movies (not including independent films) have had a war related plot or subplot. We honor these stories, hero worship the sacrifice, and memorialize the ideology that being a soldier and donating your life to the country is the noblest thing one can do. We have countless museums, galleries, traveling exhibits, and memorials dedicated to the history of the military, soldiers, and their actions. It has become ingrained into our identity through our language, fashion, and even behaviors. However, we have forgotten that the military is comprised of a variety of individuals with unique and original identities, beliefs, and backgrounds. There is not one right or wrong way to decide to enter the military but it is an important factor to consider when we are thinking of helping those who have served. Much like the decision to enlist, designing for a soldier or veteran, the motivation must be derived from the individual.
The Military is comprised of five branches: Army, Navy, Air Force, Marine Corps, and the Coast Guard. There are subdivisions of these branches to include different specialized teams, units, and task forces, such as the National Guard, Green Beret, and Special Forces. Since the inception of our nation, we have had a military and engaged in hundreds of wars. Over time, weaponry and strategy have evolved but so has the soldier as well. Since the dawn of our front lines, the armed forces have adapted to include more representation of diversity among our soldiers. There are more women (a steady 16%) and more people of color (approximately 30%) who currently serve.

I had the opportunity hear the stories from members of all five branches, some retired, some currently serving, all with different backgrounds and stories to tell. Not all of them witnessed combat but many provided invaluable insights on how to design for the those transitioning out of active duty.
We can go in the woods and survive for 3 months without a period and we'll be fine. I'm 27; I have had my period for more than half my life, I've got it down pat. The women were last to quit. They wanted to be there. We were equal in weight barring.

I am not bragging I am just getting off my chest. But there's not a military vote—everyone has a variety of opinions. Veterans struggle to get a good solid education. Trained to be a fighter not to quit. “The bad times outnumber the good times but the good times outweighed the bad times.”

We are not all the same person.

We are not all the same person.
“I joined because of a free pair of socks. Really!” Back in college, LTC (R) Marianne Sicilia did not aspire to be in the military but she had seen an ad in a magazine for a free pair of socks from the army. She applied for a pair and they directed her to the recruitment center to pick them up. “I gotta be the only person that worked on” but she walked away with her socks and a ROTC scholarship to get through college.

LTC Sicilia attended Airborne School, which she loved, and continued her career in the army through a variety of different postings. Her favorite was her last position. She was a J2 Intel Officer for the Army Chief of Staff at the Pentagon. Although the position was supposed to be only for a year, her contract was renewed multiple times. This position placed Lieutenant Colonel (R) Sicilia in the Pentagon on September 11, 2001. “The smell was just awful. I couldn’t forget it for a long time.” With her office not far from the blast zone, Sicilia went to grab her children from the care center and got out, but people she worked with died that day. “One general lost everyone.” She knows she has lingering symptoms of PTSD from that day but like most soldiers, she had a mission to complete, and would deal with her mental health later. She returned to work with her colleagues in the days to come and continued to work adjacent to her old office. Having a new motivation at work, she explained how each day became a little easier but “I still can’t go to the memorial.” LTC (R) Sicilia worked for three more years in the Pentagon before retiring.

LTC Sicilia speaks about her service fondly. During her time, she had four daughters while maintaining her active duty status and never missed a physical test even when pregnant. She built her credibility as a soldier and maintained high standards with her physique, her focus, and her work ethic.

Having retired now, “I do hair, I am in grad school, I work as an investigator, and as a trainer. I also work at my church;” she has not slowed down. The transition has been difficult because she is used to productivity and efficiency. To maintain her purpose and diligence, LTC (R) Sicilia is currently working on her masters in counseling to help women who have been sex trafficked in the Dominican Republic and Honduras. She is also learning Spanish in her spare time to be more effective in this position.
She does not wear her experience on her sleeve but she does not hide it either. Having spent many years as a soldier, getting used to civilian life when she first retired took a while; just to even change her hairstyle, but she says somethings will never go away, like her military walk. LTC (R) Sicilia is used to being highly productive and although misses her community of soldiers she still stays in touch with many; they ride bikes together and “solve the world’s problems” on their bikes.

LTC (R) Sicilia truly enjoyed her experience in the military; although she did have to face an incident of sexual harassment, she says, “I am glad I served, I am very thankful for the opportunity.”

Captain Christel Sacco is currently serving as a member of the United States Army in the Special Forces in Civil Affairs. Captain Sacco made a promise to herself that she would serve after witnessing the horrors of 9/11 as a teenager, so she participated in several programs in high school, ROTC in college, and followed up with a pilot program for women in combat right after graduation. She was then immediately deployed to Afghanistan. Captain Sacco works as a liaison for the US Department of Defense and the Department of State in the distribution of humanitarian aid (in the interest of the US Military) by maintaining cultural sensitivity. Currently stationed at Fort Bragg in Fayetteville, North Carolina where she is studying Indonesian, she had previously applied to Ranger School as part of the first class of women. She did not pass but was asked to come back.

Captain Sacco spoke about her identity as a woman in the military and how it can be a complicated perspective, especially with the number of systematic barriers; an opinion shared by many women, and even men I spoke with. She also discussed the security of the military, “you get all the benefits, healthcare, a consistent paycheck, all things I would be really worried about if I wasn’t in the army.” She is not wrong in this sense. While Captain Sacco is committed to serving her country, many enlist because it is a good career move, a way to provide for a family, and have a future, especially for those who may live in
poverty or not have many other options as a young adult. “I do not want to be in the army forever though” she says, “I think eight or nine years, and then I want to teach; start a family, do something related to my master’s degree in Environmental Resource Management.”

Captain Sacco and Lieutenant Colonel Sicilia decided to join the military for specific reasons, Pete and Joe landed in their services for a different reason.

Peter O’Donnell was young when he joined the Coast Guard Reserves. When he volunteered for deployment to help in the largest retrograde of homecoming soldiers, his family thought it was a joke. He was not going to fight but he did not think he would make it back from his deployment. Broken hearted, he let go of all his worldly possessions, said his goodbyes, and walked away from his life. He was not a combat soldier but it did not mean he did not have close encounters with the worst parts of war. O’Donnell was even trapped outside the bunker during an air raid during his first deployment.

Joe Masely, chasing what he felt was his destiny to be a Marine, faced his own near death experience during training but luckily survived even though his condition was unprecedented. Hospitalized for multiple days, as a result of heat stroke, was later discharged from care and the military due to medical reasons; dashing his hopes of ever being a marine. Both Joe and Pete spoke about how the military shaped who they were but also who they wanted to be.

Joe, currently working as a firefighter in Boston, talked about how he could not comprehend the amount of racism that exists and is accepted. Trying hard to be an ally but not always sure how, Masely spoke about how he hoped he would never judge others, especially when they are at their worst. Pete discussed his inherent desire to protect people but did not always know how to safeguard himself. Both had gone on their missions to explore their own identity and meanings to life.

Then there was Femi Popoola. A Nigerian immigrant that won the Visa lottery to come to the United States. Having finished medical school in Nigeria,
his father always preached the importance of learning from all over the world because it would bring a different perspective and more knowledge. When Petty Officer Popoola arrived in the United States he was informed that signing up for the military would guarantee him naturalization, the ability to bring his wife to the US, and most importantly, an opportunity for a military medical residency. Disappointed when he did not receive the residency, PO Popoola instead still served on the DDG 107 Destroyer in the US Navy. After four years, PO Popoola decided to exit and sought out a civilian residency. Currently a 1st year resident in psychology doing his rotation at the VA, PO Popoola spoke about his relationship with PTSD as a soldier and as a doctor and how it is a condition every soldier has but it depends on what degree. “Everyone who has served has flashbacks. I smell things, I see things, I remember everything that happened. But it doesn’t affect me. It doesn’t affect my work, it doesn’t affect my relationships but some people it does. It’s a diagnosis: something that has happened to you and your mind and your body just can’t deal with it. You are not in control anymore. It’s not you.” He also explained how, as a soldier, Popoola had attempted to do research to help create better solutions for soldiers but was consistently discouraged. “They have their own ways of research; they never want you to know. They’ll tell you what they want you to know. I thought I had an edge as a soldier, nope!”

I conducted a total of 15 interviews with soldiers and veterans, 3 different doctors, and spoke about this project to many more people. Everyone seemed to know someone who served and/or suffered from PTSD related to military experience. Most of my interviews were with well-adjusted veterans who knew the resources available and more obviously had strong support systems, access to knowledge, and different outlets to help them transition, such as jobs, education, or different goals they wanted to achieve. However, my target population, the ones I wanted to design for specifically, where the toughest to get a hold of. The few I did come across did not want to talk to me or quickly became defensive, aggressive, and combatant. It became more and more evident that there was a gap. The people who needed help were not the ones willing to find it, or let it find them.
CHAPTER 2

“War; what is it good for? Absolutely nothing”

The Effects of War on the Brain
Modern warfare destroys the brain; although this seems like an obvious fact, it is still not accepted by the military. For many years, soldiers have been dishonorably discharged for disciplinary issues but now these behaviors have been proven to be caused by brain injury. The New York Times and PBS both recently reported on the work of Dr. Daniel Perl, a leading neuropathologist who has worked on nearly 20,000 different brains. He has been able to detect a physical and a visual marker of the effects of blasts on the brain. While the military always addressed PTSD and symptoms of brain injury as emotional or comparable to sports concussions; Dr. Perl has found that this type of injury is completely unique and unlike any other type of injury. Soldiers that face combat and experience blast force and shock waves from explosions obtain physical injuries that exhibit themselves in scars and burn marks that change the structure and color of the brain while also leaving tiny brown worm-like zig-zag structures in the crevices. Dr. Perl has revolutionized the understanding of PTSD, proving that PTSD is not an emotional imbalance but the long lasting psychological symptoms as a result of physical damage to the brain. However, Dr. Perl’s findings are not visible on the living brain, yet.
Veterans make up 7% of the American Population but account for 20% of its suicides.

In 2012, more US Soldiers, Seamen, Airmen, and Marines died by their own hands than in battle. Suicide was the No.1 cause of death among US Troops that year.

In 2013, the VA paid $600 million for PTSD treatment for these veterans.
In recent years, creating awareness and recalculating how to address healthcare for veterans has become more prevalent with the rising number of soldiers who commit suicide. However, the most frequent form of aid is therapy or drugs restricting care to veterans who are aware of their condition and actively seeking help, leaving a majority in the dark and in dangerous mental conditions.
The hypothalamus is centrally located in the brain and houses the master clock; the control center and connection between the nervous system and the endocrine system and the regulation of hormone release. In short, it is the central intelligence for cyclical systems in the body including, body temperature, metabolism, sleep cycles, and even how and when cells grow. (For many animals, it also plays a role in migration, reproductive cycles, and maturation.)

It is also the part of the brain most susceptible to injury for many soldiers. Physical injury causes symptoms of flashbacks, irregular sleep cycles, panic attacks from improper hormone production and delivery, and a sense of disassociation due to disruption in the circadian rhythm. All of these symptoms then result in irritability, sleep deprivation, hallucinations, and anger.

While many injuries require medical attention, the circadian rhythm can be re-calibrated with simple grounding regulatory inhibitors from patterns, rhythms, and stable, repetitive behaviors, and sounds. During high stress situations, such as a triggered episode, repetition can help the brain find homeostasis in the chaos.
CHAPTER 3

“Come home, Come home, ‘Cause I’ve been waiting for you, For so long”

The Process
The military lifestyle provides many assurances for soldiers. Not only because of pay and benefits, but also in structure and hierarchy for clarity in purpose and position. Transitioning out leaves a sense of vague in-continuity. While there is more family time, freedom, and ability to express personal identity, the shift from having permanent stability and direct goals to six months of hero worship and then complete independence can be jarring.
In creating an object that is subtle yet beautiful and above all else, effective, I had to explore a variety of spectrums. What does it actually do? Is it smart or static? How does it work? What is the size, shape, weight, mechanism, material? Many new “smart wearables” live in the same genre of a tech that relay the same information and notifications in the same manner and can be more chaotic than calming. Traditional military “objects” all revolve around static heirlooms who’s value is based on the meaning soldiers place on them. How do I combine both of these and arrive at a single solution?
Pocket watches, a quintessential inspiration for talistones, were first documented in Anglo-Saxon culture in 1492 in a letter from an Italian clockmaker to a Duke in England; however, similar and complex versions incorporating star charts and moon cycles, can be found in many East Asian histories long before the 15th century. Pocket watches became a cultural icon of the military and the general public until wrist watches became popular just before World War I. The idea that ‘smart’ is associated with ‘digital’ is not only premature but silly. These mechanisms were highly accurate and functioned in watches, music boxes, automatons, and many other gizmos for many centuries before the digital age. The winding of the clock was a ritual and a highly prestigious habit.

Moving into the 21st century; ‘smart’ has come to define technology. Driven by or for data, smart technology functions in a network. Although they are tethering to a charger every day, they provide invaluable data collection capabilities and distribute information quickly and seamlessly.
1: Smart or Not smart?

The main purpose of a talistone is to provide haptic invisible support in a time of panic. While data collection, input or output, is valuable the main role is to provide a unconscious response to induce grounded regulation through patterns and rhythm. So, how do you decide where an object falls in the spectrum of smart or not smart when both have advantageous attributes?

- is it pleasing to hold?
- does it have a screen?
- the ability to connect with other devices to inform family or create community with other vets?
- small enough to be subtle?
- large enough to be engaging?
2: Weight, mechanism, functions, and materials

What does this object do? If it is recalibrating the circadian rhythm, is it creating sensation to tell the passage of time? Weight and material are critical factors in creating a calming sensation for hidden objects. When relying on texture and touch, what type of haptic feedback also becomes a central consideration. Furthermore, how is attached to the body? What type of feedback is it giving, is it active or passive? Does it collect data? What is the purpose for its ‘inside’ and ‘outside’ habitats if it opens?

- Is it tactile?
- Does it have a smell?
- Do you ‘save’ things inside of it?
- Do you engage for feedback or is it passive?
- Is it made of metal? wood? plastic?
too small

the palm print is a plus

the smoothness is good and the medallion shape is great

corners are weird...
3D effect leads to a different interaction with the body.

Too badge like...meh.

? weird but maybe?

NO!
Too Big

Too small and thick

Too flat...boo
I placed these 5 stones in front of people as we had a conversation. Everyone reached for the same stone every time. They remarked it was because of the shape, weight, and texture of the stone.
3: Make it work-ish

Exploring shape, size, weight, and the sensation of introducing a new object, I also wanted to investigate the role of the feedback. Vibrations, primarily rhythmic vibrations have long been proven to have healing properties. Discussed in multiple other cultures, music theory, and even a fundamental part of psychology, I wanted to see if I could implement these positive effects into talistones. Inspired by the ideology that matching rhythm is not an unfamiliar habit to humans, we as babies need to match our mother’s heartbeats to regulate our bodily functions, I decided to play with different heartbeat like patterns.
CHAPTER 4

“The Story of a Soldier”

User Feedback
My name is Atulya Chaganti and I am a grad student at RISD where Tom is my professor. I am working on my thesis project in which I am focusing on designing for people who have served in the military.

I have three prototypes of objects (they are not perfect but they encompass a few ideas I am exploring) that I would like your opinion on. There are instructions that tell you to write as much as you can/want. Any and all your thoughts are valid and anything you do not give specific permission for me to share. I would love if I could include a first name (last only if you want), a photo (if not, can I use an avatar you? I am also very okay with saying "I tested this with a human and they found these characteristics useful" if that’s what works for you.

If you are okay with this information, please find box one to get started and DO NOT READ AHEAD.

If you would like more specific information on what I am doing, please read on.

My thesis is about creating private objects that honor people who have served in the military but also help them transition back into civilian life. The shift in lifestyle from military to civilian can disrupt one’s circadian rhythm which can be uncomfortable and jarring. I am trying to find a way to be able to recalibrate this rhythm to make the transition easier for people. These prototypes are more about...
MODELS AND TESTING

I narrowed the science I found and emotions I witnessed into three models for user testing. Thanks to Tom Weis, I was able to connect my objects to a combat vet from the United States Army suffering from PTSD. He spent a week with the objects and provided feedback and valuable insight.

DGM1 Model 1

DGM1 is a semi smart model that uses haptic reminders in the form of vibrations to indicate the passage of time. Assisting the circadian rhythm by creating cyclical structure, it is inspired by pocket watch culture but does not use the traditional markers of time. Avoiding sound for its negative effects on veterans, DGM1 has an output of a gentle heartbeat calibrated to start every 2 hours or when the button is pressed.

After sending the model to a combat veteran, I learnt that a disconnected object was not useful. Instead of keeping time, they provided feedback that they would prefer if it could have biometric sensors to detect spiking levels or stress and then provide an output of a calm heartbeat they could replicate. This ideology is currently being implemented for children with ADD, autism, and anxiety. Awareness of spikes in heartrate has proven to help decrease panic attacks for children and adults leaving room for it to potentially be an application here as well.
BK Model 1 was a small simple puzzle that was based on the theory that redirecting focus during a tension filled situation could distract from the anxiety and keep them grounded. Although it has its classic pitfalls of being frustrating when difficult or boring when simple, or, no longer engaging after one use, it was an experiment in what type and how long the engagement was needed to feel satisfied.

The veteran found the model was neither engaging, original, or satisfying. It also required focus and could not be used without drawing attention to it; inviting the conversation that disregards the necessity and goal of privacy.
“I would change the noise. It was annoying. It made it feel rude to use it while listening to someone in conversation.”

“I used it to reduce anxiety—to replace the wrigging of my hands. I fiddled with it in my pocket to occupy my hand. Overall good.”

“I prefered this model over the other two. I could see it fitting into my lifestyle.”

Worry beads, prayer beads, mediation stones, and calming crystals have long been a tradition in east Asian cultures. The cyclical motions of these objects allow them to be repetitive and soothing. LZM1 is comprised of magnets that trace a track on a dial. By focusing on one thought, veterans can stay present.

This model was well received but because of the craftsmanship, the magnets clinked together making it loud and unusable in company. However it was deemed as useful and with real potential.
CHAPTER 5

Talistones: A handful of help for homecoming soldiers
A Proposal
I HAVE AN IDEA

My second round of iterations were based on the feedback from user testing. The necessity of testing is evident but here are 3 potential proposals to explore this topic based on my research.
"Sometimes I don’t know what to do with my hands. When I am stressed, I tend to have more fidgeting habits because I just don’t know what to do with them and it can get really bad."
Personifying the idea of worry beads and mediation beads, LZ Model 2 focuses on mindfulness. The sensation is haptic and although it is a passive object, it gives veterans a cyclical ritual to create a sense of being. The regulatory capacity of repetitive motion intrinsically has a restorative property.
DG Model 1 is a pocket stone that captures biometric indicators and reflects a calm syncopated heartbeat vibration when a veteran’s stress levels spike. Rhythmic patterns, particularly heartbeats, help decrease chaotic brain behaviors during a triggered episode. The vibration is gentle and silent but ever present, in hopes to keep the veteran rooted by creating awareness of their high levels of stress and providing them with a potential marker of what their personal heart rate could be.
"Sometimes it is hard to ‘snap out of’ an episode..."
"I just wish there was a way to see it. I just want a test or something to tell me it is real."
MP Model 1 visualizes the invisible wounds of PTSD. When triggered, veterans tend to frequent between fidgeting and continuously checking their pockets. Data can be useful but it can also be unclear or feel impersonal. The role of this objects is to capture the times and ways veterans may feel anxious and output a daily abstract art piece comprised of lines and colors that represent different times of day and different behaviors. The daily output makes creates a physical response to the condition no one sees. These abstractions are beautiful but also extremely personal.
A vet is someone who has served for this country in any capacity. They do not have one race, one gender, one war. They are all. They are individuals.

But we see the military as one, a whole. We lump sum soldiers into compartments of stereotypes. There is the perception we place on soldiers and there is their view on the world, neither aligned with the other, leading to a multitude of issues but most directly, the lack of systematic support for soldiers from civilians. It is popular to care about veterans but political to care about soldiers; regardless, the reality is, we have hundreds of thousands of soldiers coming home. They have sacrificed everything, their bodies, their minds, even their lives, yet, we have not held up our side of the bargain, we have not protected them at home.

Too many people reallocate sympathy about issues they do not agree with onto veterans: How can we take in refugees but not take care of vets? How can we care about Africa but not our veterans? We use them as justification for decreasing foreign involvement and financial support of other issues. Veterans are not an excuse for some other problem to have the United States not participate in. They are a population that is overlooked, underserved, and suffering the brunt end of being popular cultural jargon.

This is a political topic. It is complicated and a problem frequently brushed under the rug that few want to deal with but it is very real.

Therefore, this project does not possess a conclusion, instead, it is a call to action to think of alternative ways to address complex and wicked problems. After all, every problem is a design problem.

To be continued...
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