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Undermining process "S"

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UNDERMINING PROCESS “S”

by

Eduard Forehand

A thesis submitted in partial fulfillment
of the requirements for the Master of Fine Arts
degree in Dance in the
Graduate College of
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Thesis Supervisor: Professor George de la Peña

PUBLIC ABSTRACT

Undermining Process “S” is a dance project that theoretically investigates the complex emotional and physical stresses of sleep deprivation. This work highlights the causes of how technology, dependency, and work addiction, disrupt normal sleep patterns. The consequences that are focused on include anger, guilt, forgetfulness, and anxiety in general. Considering the societal pressures of needing to be productive, I seek to create an awareness of what may happen if we choose to ignore sleep (viewed as non-productive) and have our minds and bodies deteriorate. Using this dance platform along with projections, I display these possible outcomes through choreographed movement to help engage the audience in reflecting on this subject matter.

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I. INTRODUCTION & MOTIVATION

The Director of the Center for Human Sleep Science at UC Berkley, Mathew Walker, was quoted in 2017, “Human beings are the only species that deliberately deprive themselves of sleep for no apparent gain”(2017). This quote became my motivation for this thesis exploration, however I realized within the process how my own relationship with sleep deprivation became greater and catapulted this work to a more personal level. How can the complex emotional and physical stresses of sleep deprivation be explored in a theoretical movement study? According to American Sleep Association, “Sleep debt or sleep deficit is the cumulative effect of not getting enough sleep... There are two kinds of sleep debt: the results of partial sleep deprivation and total sleep deprivation”(n.d) The negative effects of sleep deprivation increase by the rate at which it happens, and in this space lied my interest. “A lack of sleep amplifies anxiety and subjective negative emotional responses in otherwise healthy individuals and does so in a dose–response manner with increasing time awake” (Goldstein-Piekarski, A.N.,Greer, S.M., Saletin, J.M., Harvey, A.G., Williams, L.M., and Walker, M.P.).

Though we have advanced so much as a civilization, sleep seems to be less thought about and even ignored. The importance of a regular sleep routine has been pushed aside in favor of activities that give the impression of being more important. Research shows that “Unfortunately, sleep is generally perceived by our society as a nonproductive state. This creates a double-bind situation in which the individual often opts to increase wake time over sleep, which paradoxically leads to reduced performance” (During, E.H., Kawai, M., 2017). In addition, the development of complex, mobile, yet user friendly technology has become a powerful new addiction. This interferes heavily with the amount of sleep required for a healthy mind and body. The National Sleep Foundation suggests,“39 percent of Americans tote their

phone to bed and use it to text before tucking in”(n.d). Blue light and the noises caused by phones and other electronics are rooted strongly into our culture. It is advised to discontinue use at least thirty minutes before bedtime, but how many of us follow this or ignore it?

I am interested in the space that is found when regular sleep hours are consistently not met. As I excavated deeper, I began to question my motivation. I did find what Mathew Walker said to be astonishing, however, feelings began to shift as I continued my investigation. This topic challenged me to reflect upon my personal experiences with sleep deprivation. This led me to my childhood at a time when I shared a bedroom with my brother, Danny. He was going through intense physical and emotional transformations he had to endure because of Duchenne’s Muscular Dystrophy. The Duchenne website states, “Duchenne is caused by a genetic mutation that prevents the body from producing dystrophin, a protein that muscles need to work properly. Over time, children with Duchenne will develop problems walking and breathing, and eventually the muscles that help them breathe and the heart will stop working. Duchenne is an irreversible, progressive disease. There is currently no cure for Duchenne”(n.d). This became the root of my research. Though we both experienced emotional trials during this time, mine were far more cosmetic than his. I felt selfishness, jealousy, and later, guilt and used these and others, to ignite this movement research project into existence.

I believed that most people could relate to this in some capacity which was useful and problematic. Useful in how my work may evoke feelings of uneasiness or justify how one feels at the present but problematic in the amount of people potentially experiencing this state regularly. The CDC reports that, ”More than a third of American adults are not getting enough sleep on a regular basis, according to a new study in the Centers for Disease Control and

Prevention's (CDC) Morbidity and Mortality Weekly Report" (2016). Another contributing issue was the amount of time spent at the work place. This is a dangerous challenge in today's driven society. "Americans who work more than 40 hours a week are also less likely to get enough sleep per night, compared to those who work 40 or fewer hours"(Hsu, C, 2012).

II. PRODUCTION

My work intentionally illuminated the anxiety and altered states that one may experience as a sleep deprived modality takes hold. I needed this project to convey everlasting uneasiness, and I wanted the spectators to empathize with it. I believed this to be relevant in our present time and having opened these reflections through a dance project, gave the audience a chance to contemplate the issues and dangers of how we treat ourselves, and others in turn.

The curtains opened onto a pale, low lit stage with a black cube on stage right. Upstage center, you could see a single dancer sitting up, restless. He was surrounded by six other dancers on three mattresses, all afflicted with the same uneasiness. An excerpt from "Good Morning" by The Butterflies began to play, and the dancers slowly rose to engage in their first choreography. They fanned out while doing the same steps, though the dancers fashioned their own quality and tempo. The initial movement looked like a plea to God for relief from their discomfort. Projected in the back was a bright sunshine, evoking a new day, with fast moving clouds that showed time continuing to pass. The light was bright and warm. This first transition lasted about thirty seconds before you heard a deep drone sound cueing the dancers to sleepily walk back to the mattresses upstage. The drone faded and "Nude" by Radiohead filled the theatre. Simultaneously, two dancers started to move. One dancer picked up another from the

mattresses and laboriously carried her before he began to drag her with her feet gliding on the floor. Once on center stage, a lift took shape that was in the form of a slow front flip, ending on the back of the lifter. From there they lazily spun, ending by placing the lifted one on the floor and the lifter easing her head to the ground. During this pas-de-deux, we are reminded of the complexities that feed into one who needs constant care and how shaken the foundation of the caregiver becomes with continued sleeplessness. The light was low and the music was haunting especially with whispered “help me’s” mixed in. On the back screen was a bold, vivid projection, that displayed various buildings blowing up from the bottom. This was shown in varying tempos as well as in rewind. This was played on a loop and repeated the same action in different ways. It was a powerful image that evoked undermined foundational supports and the result, reflecting the meaning of the dance happening on stage. Nearing the end of this scene, we were introduced to a third body, barely mimicking the movement of the male dancer who complicated and questioned what we viewed. At the end of this section was an abrupt alarm clock sound in which the performers would jolt, followed by another excerpt of “Good Morning,” however it was slower and began to warp in quality. The dancers rose again and they could be seen performing a task based mirroring movement poorly, with no apparent goal. The image in the back was the same shining sun, however the colors were edited to be darker and show more shadow. The clouds also moved slower than before yet the light on stage remained warm and bright. The drone initiated the next scene in which we heard James Horner’s “The Princess Pleads for Wallace’s Life” from the Braveheart soundtrack. The projection in the back switched to a video of heavy machinery rotating, in slow motion, very hot coils. Layered on top of this was another video of a hammer relentlessly pounding something that was red hot. These images then shifted

to pouring lava and a giant cauldron leaking very hot liquid barely able to contain the pressure. This video was mesmerizing and stayed on a repetitive loop relaying to the viewer the emotional, pressurized anger of the dancer that could possibly release at any time. Lighting was low and seemed to have elements of red. The dancing was in the street genre. Very smooth and fluid movements were displayed with sharp angry punctuations, as well as ground work and explosive moments where the cube was hit hard and kicked. With these emotional explosions, one could understand the agitated states that were rooted in sleeplessness. Closer to the finish, another dancer joined and again seemed to be unconsciously going through the same movements till all were jolted by the alarm clock that signaled the following transition. The sun shining video in the background continued to deteriorate in color and pace. The dancers were lower lit and rose from the mattresses to form a line and wonder downstage right while attempting, and failing, an arm exercise in coordination. These transitions continued to highlight the degenerated state that sleep deprivation causes. The drone predictably chimed in and faded into Yann Tiersen's "Kereon." This solo piano music seemed lighter yet had themes of heavy repetition. The dancer covered the space quickly and entirely. She was wearing a dress with many pockets sewn onto it that she used to show a constant searching for something, we later found out was a key. This vignette was the brightest lit so far. The dancers' movement varied greatly in style and elevation. She had moments where she did not know where she was or what she was doing which brought into focus how one has trouble with memory when not getting enough sleep. The projection fed into this theme by playing a video of being lost in the woods. One could interpret the stark trees as neurons in the brain not connecting where they need to in order to process and encode memory. The movement in the video was jerky, while the colors began to melt into pinks and purples

causing a feeling of panic to creep in. By the end, another dancer rose and juxtaposed the first, in quality and speed of movement. We were interrupted this time by a loud ringing, seemingly from an older phone, causing a surprised twitch from the dancers. During these individual dances, it is of note that the bodies on the mattresses and the cube, were in a constant state of unrest as well as the one dancer never lying down. The suffering conveyed was palpable and a reminder of what lack of sleep can cause. The dancers arose to the continued warping of the “Good Morning” song, now much slower and with a melting quality. The dancers repeated the choreography from the earlier transition that started with the reaching action. This time, they all headed straight for the audience, interpreting the movement at will. Once they had done this, they turned and started tightrope walking back to the mattresses at varying degrees of accomplishment. The light was low with warm tones and the video of the sun was now infused with purples and reds and moving very slow. As the predictable drone eased in, a mobile phone took center stage on the projection. This had a cartoon quality which was a departure from the realism of the others. As the dance progressed, added to the single image were smaller phones falling. The main phone started to show cracks (due to usage) which you could take as a metaphor for the dancers’ state of mind. “You need more sleep,” was slowly and poorly typed out on the screen of the center phone. The dance presented was smooth with surprising high flexibility from the dancer while holding a mobile phone. Other moments included a compulsive relationship with the phone as well as being overcome with exhaustion while staring at the screen of the phone and collapsing. This vignette highlighted a cause rather than a symptom of this sleepless modality. The music was “Les Yeux Ouverts” by Emilie-Claire Barlow. It was jazzy and matched the smoothness of the dancing. Mixed in, you could barely hear sounds of one texting relentlessly. Lighting was too

low and was easily overpowered by the vivid projection. Another performer rose near the end, and indicated at the movement the original dancer was doing. These dancers I felt gave depth to the broader scope, reminding us that this could be interpreted as one person with many afflictions or many persons with similar symptoms and causes. The dancers again were startled at the sound of an electronic alarm prompting the “Good Morning” song to play, now barely recognizable. It has slowed and been remixed for the consistent melting quality needed for the deterioration happening on stage. The dancers rolled out of bed and began to retry the mirroring exercise with no better results. The image of the sun and clouds was flipped sideways, however it was returned to its original coloring. Watching this with the warped music, you almost wanted to yell for them to go back to bed, they looked spent. Upon the fading of the music, the dancers made their way to the mattresses as the audience began to hear “Fade to Black” by Apocalyptica, a cello quartet with an added ticking clock in varying speeds. The dancer for this piece started on the black cube on stage right. She was tossing and turning until she slid off and left the cube however retaining her focus to it. Her movement was constant and seemed to imply urgency as well as fear towards the cube. She had moments that looked like writing on the floor then attempted to inscribe this motion onto the cube, but never satisfied. Her movement juxtaposed the music until the end where she adapted a very mechanical quality, repeating three poses incessantly while traveling towards the cube, steadily becoming more wild. The music was constantly building and layering speed till it was broken by the sound of a European siren. During this, it was clear the cube was the source of her sleeplessness. The images that accompanied it were falling flowers that kept on piling up so you could see the different layers and colors till overwhelmed. Bright lighting was shown, almost like fluorescents in an office. A second body started mimicking gently her last

movements. Upon hearing the siren, the dancers twitched and ever so slowly rolled out of bed, some never standing. Choreography did not exist and they just melted back onto the mattresses after about twenty seconds. The music was extremely slow and the image in the back displayed a red and black sky with a yellow sun twinkling in the middle. This left you with an uncomfortable feeling, wondering what could possibly be next. After the familiar drone and fade of the dancers, we were left with one dancer in a white dress and point shoes bourree-ing in a large circle till she reached up, grabbed the top of her head and violently pulled herself to the ground. This dance culled a feeling of uneasiness as she went from dragging herself on the floor to executing aerobic sequences that ended in a fall. The performer utilized her pointe shoes well by stomping them into the ground hard and rapidly. This was unnerving and lent itself to the uncomfortable atmosphere. The music used was Gnossienne no. 1 by Patrick Cohen. A stark piano score that had added effects of stressed breathing. The back drop projected a water balloon bound with rope, getting ever tighter. If the balloon had been red, you could have mistook it for a heart. By the end, the balloon was popped by a squeezing hand, not the rope, which transported the viewer out of the ambience created. This was the last of the individual vignettes so no second performer was present in the conclusion. The lighting was pale but not bright. When the music ended and the dancer walked nervously back to the mattresses, the viewers could suddenly hear an acoustic guitar. To our surprise, a live musician stepped into the spotlight and began singing, as she walked slowly to the middle of the stage. While this unfolded, the dancers began to roll from bed and attempt to surround her. On their cue, the dancers created a canon effect as they sprung from the floor and started the choreographic phrase recognized from the transitions. The viewers finally got the satisfaction of watching this section performed, without interruption, till the end.

This finale was very calm and brought the potential of sleep to the cast. The musician re-imagined Billy Joel's "Goodnight My Angel", while the projector displayed different videos of the moon and clouds. Though the musician had a spot on her the whole time, you did not lose sight of the dancers. They had elements of group partnering/supporting, as well as ending together after the canon started it. The last movements they performed were heavy and culled from their own solos. The musician walked a diagonal line to downstage left than finished on a center mark. As the last strum from the guitar rang out, the dancers slowly melted to the ground where they rested till the musician walked upstage. They were promptly woken again by three seconds of the "Good Morning" song and blazing light, their tense reaction resulted in a frozen position till a black out occurred, and the piece ended.

III. PROCESS

Taking into consideration all the factors of creating this piece, I needed to understand the why's and how's of sleep deprivation, and the best ways to illuminate them in a dance work. Patterns, habits and cycles, dominate the topic of sleep and with this in mind, I made it a priority to obstruct and undermine these normal patterns, physically and mentally. I focused on theorizing what would happen to us with severe sleep deprivation. This new rhythm of shortened sleep I discovered, may feel normal, tempting us to give up more sleep, yet our sleep debt further increases and we begin to deteriorate. Once these new patterns and habits are created, the body starts to adapt any way it can, even giving us false feelings of security.

"Although total acute sleep deprivation has shown to have a transient but robust antidepressive

effect, likely via elevation of brain-derived neurotrophic factor BDNF29 and serotonin, taurine and tryptophan levels,³⁰ prolonged sleep deprivation in turn has deleterious effects on depression and mood stability”(During, E.H., Kawai, M., 2017).

I took it upon myself to try numerous challenges put forth to me from others, however, within critical feedback loops there was a danger of trying to please everyone and attempting to apply all corrections given. I recognized this behavior in myself and instead of this formulaic correcting, I challenged myself to reflect on what the piece needed in order to convey its core meaning. This was important to remember while I worked to evolve my piece. I appreciated that a project like this could always present new challenges and this prompted me to prioritize towards making an awareness piece, rather than “fixing” all the details that I perceived to be wrong.

IIIa. Transitions

Capitalizing on a pattern based system, I attempted to implement certain movements in the transitions to capture a feeling of familiarity and normalcy, however my intent was darker. While some transitions had the same movements, the patterns changed drastically. This also enlightened failure at certain task based objectives. I hoped this would give the impression of interference towards normalcy. This was supported in the fact that when one is sleep deprived, our cognitive understanding of what we do and how we act in the world is impaired, though there is room for individual resilience. This resilience was key to understand for everyone. While sleep deprivation may take more time to illuminate on certain individuals, it would be dangerous to think you would be unaffected. Based on research, I found individual reaction to sleep deprivation varies and is complex in how the brain chooses to shut down or

compensate for the lack of sleep.”It has been suggested that some individuals may have a higher homeostatic sleep drive associated with greater vulnerability to the effects of sleep loss, ”(Tkachenko, O., Dinges, D., Galli, O., Minkel, J, 2017). Paying attention to this research, I choreographed some dancers more deprived than others. I considered this thread valuable and built in similar movements and gestures throughout the entire work for different dancers and witnessed them in varying degrees of quality and energy. This was an important reflection for self awareness and a deeper way to understand sleep deprivation.

During these transitions, I choreographed the dancers alternating between pattern derived movement and task based movement. The pattern based movement intentionally was born from the finale. The dancers would execute the first twenty seconds or so before giving up and returning to the mattresses. I felt this would be good structurally to tie into the finale when the time came. For the tasks, we thought about what we could and couldn't succeed in as a movement based objective, and what would be clear to a spectator as far as accomplishment or failure. I decided on using imagery of walking a tight rope due to its easy recognition of failing and how when sleep deprived, focus and balance become much harder. Mirroring was a good way to project failing cognition, however it became hard for the dancers to purposely mess up, indicating more rehearsal time needed. The last task was an arm coordination exercise that consisted of three movements with one arm and only two on the opposing arm. I introduced this later in the process on purpose. This frustrated the dancers but worked within the sleepless realm created, and only a couple performers managed to accomplish it. The music, an excerpt of “Good Morning” by the Butterflies, invited the audience in waking to a new day, as well as to mark time. This was an important indicator as the music and the dancers gradually warp in sound and

movement. I initially was concerned more with the warping of the music rather than the clarity of the deterioration (of music and dancers). I wanted the audience to experience a chaos that seemed out of control and directionless. Here, I originally prompted the dancers to improvise sections of their own vignette at their own pace. Observing this time and again, I wondered if I was being clear enough for viewers to follow my already abstract story. I received feedback that correlated with my own doubt, so I challenged myself to be more direct with my approach, resulting in the more successful iteration that was performed.

IIIb. Vignettes

Each vignette consisted of four key, yet different foci: the music, video, lighting and the choreography. The varied musical score that was chosen provided a soundscape and direction to the piece, as well as an aid that helped immerse the audience into this realm. I tried to choose the music in a way that would continue to inform the audience in an emotional way, not just the visual, as they engaged with the work. This music also motivated the overall movement I wished to create. To assist in this endeavor, the collaboration with a sound expert was more important than I first thought. After numerous conversations, we decided that adding effects to some of the songs could help emotionally unhinge the watchers and keep them in the disturbed ambience I believed to be necessary.

Continuing to generate this atmosphere, I collaborated with a videographer. Together we came up with a direction for some images and videos to be played in the background. After our meetings, we decided to organize these videos and images as a way to stress and emotionally discomfort the audience. This idea contributed to my core mission of uneasiness as well as an engagement method for the audience. Each vignette was complicated by

these scenes/images in a way that somewhat related to them as well as enforced the underlying message the vignettes offered.

To further develop this discomfort, I needed the light to continue to challenge the audience emotionally by dislocating any type of real place. Conversing with the designer, I talked about keeping within a very low light, almost like a night light. He countered and offered color, shadow play, and one-sided lighting, in order to help create the feeling of undermining sleep. I was excited about this collaboration and where it was leading. We both agreed that light needed to disrupt and highlight at the same time. Once the dancers were on stage, he showed me each cue and we discussed how it needed to be changed or not. This initially happened without the video projection playing.

The dancers and I collaborated at first by talking about sleep deprivation and their experiences with it. I did this with all the dancers in each vignette. Choreographing this work was a series of experiments that started with the dancers' input and capabilities. From there we devised movement practices based on action words that together we contrived, founded on what we thought this world of sleep deprivation meant. These action words retained our focus and continued to help me as I would occasionally become stuck on certain themes, or stray from the core values as I was inventing movement. I challenged myself to create in genres that were not my expertise. I used the music and the dancers' own improvisation in order to generate movement. During this process I took risks with my movement that seemed foreign to my body in regards to the shapes I was making and the quality of the movement. Nothing was off limits and I stressed creativity through the impetus of each vignettes subject.

Within these vignettes, I asked most of the dancers to creatively come up with a way to write out “I need more sleep,” with their body. This was a way to capture their natural movement and identity. This process informed me of how they liked to move and the extent in which they grasped the overall concept. I believed this had value for the dancers and helped them engage more deeply in the topic and give them some responsibility for the outcome of their choices. I also added single dancers to the ends of each vignette. The added dancer started mimicking, in a heavy, almost nonsensical way, the current dancers’ choreography. This new presence further complicated choices the audience had when spectating. I believed this accentuated the high level of difficulty it takes to split your attention. Once realized, one can appreciate how this can be magnified to an almost intolerable degree while sleep deprived. This attention span played a key role on how we humans operate in a deteriorated state, “More specifically, attentional maintenance becomes highly variable and erratic (with attention being sustained, lost, re- established, then lost again), resulting in unstable task performance”(Krause, A.J., Simon, E.B., Mander, B.A., Greer, S.M., Saletin, J.M., Goldstein-Piekarski, A.N., and Walker, M.P.,2017).

The opening for this work was important. It had to illuminate the subject in a way that would capture the audience and immediately force recognition or empathy of what they saw. The opening focused on one performer who was the immediate embodiment of sleep deprivation, recognized by his action of sitting, being too tired to sleep yet continually showing effort towards it. This permeated into the space and introduced the tone from which the whole piece drew its energy.

The first vignette that was performed, dealt with the psychology of caregivers. This particular piece changed my motivational outlook for the whole project. There I explored, autobiographically, the effects of sleep deprivation by recalling the relationship between my mother and brother. Witnessing my mother as a caregiver at the time, I had no real understanding of her hardships. I reflected on myself as a child and recalled feelings of jealousy and frustration that now cause guilt and regret. Remarkably, these paralleled the feelings my mother had throughout her time as a caregiver. Having lived in this specific household climate, I was able to reflect and recognize the deterioration into a sleep deprived state both my mom and I went through. Due to my brothers condition, she was needed throughout the night, and at times, most of the night. Her sleep hours at this time were erratic and few. “Family caregivers truly are at risk of physical and emotional problems of their own while they are providing care to a loved one. Fatigue contributes to an increased vulnerability to illness and it is prevalent in nearly all caregivers”(Dwyer, K., 2017). As time continued and my brother systematically worsened, unconsidered ideas of caregiving began to illuminate. For instance, my mothers identity as an independent person became blurred. She would never leave my brother and would take it upon herself to carry the full burden of his care, not trusting that we (myself and sister) would be capable in an emergency situation, which was always imminent. She would accompany my brother everywhere, all the time, and this would transfer over to how family and friends saw her, and thus “she” became “them”.

My query was how to transfer this knowledge into a dance piece. As described above, our working words for this piece were: cling, lean, hold, guilt, rely, frustration, and heavy. My decision in using a traditional approach of a man and a woman in this duet was purely

instinctual. I was unsure what I wanted, but because of my history as a ballet dancer, easily leaned in this direction. I am proud of the result. I felt that the female dancer brought delicate energy and tenderness that almost diffused what I was asking her counterpart to be. As the caregiver, he was jaded in his feelings of guilt and frustration and became explosive at times. Though she knew he would always be there, a sense of apprehension crept into their relationship on her part.

The idea of complete dependency struck me in the early experiments of this vignette. We played with ideas on how to manipulate moving a body around the stage by the work of just one person. In the end, I decided it focused too much on the caregiver. Though this may seem what caregiving is about, from my personal experience, the patient has just as much influence and power, psychologically, as the caregiver. I wanted to continue with both dancers being capable of moving and creating, which resulted in the work becoming very symbiotic. This was pivotal and changed the way I thought about this work. I now thought about how we all needed someone, or something to physically help us or to emotionally feel complete in our existence. I learned that unexpected results came at the diligence of experimentation and I must be open to the idea that dance is a living and unpredictable organism yielding productive results.

The dancers quickly captured the emotional pain and developed the dualities of dependency and guilt in a way that motivated us to excavate deeper. Those experiences were ammunition towards the piece which became rich movement investigations while at the same time we held ourselves accountable to the action words. I was apprehensive, but began to trust my dancers as they captured these difficult emotions and created an uneasy atmosphere. Letting go the idea of having to teach every detail, freed me to observe rather than to do. This was

challenging because of the control I crave over my choreography. The freedom I gained, however, allowed me to motivate my dancers in different ways such as musicality, and able to focus on the articulation of the atmosphere.

Anger and frustration was the subject matter of the next vignette. “Despite typical tendencies to get somewhat used to irritating conditions – an uncomfortable shirt or a barking dog – sleep-restricted individuals actually showed a trend toward increased anger and distress, essentially reversing their ability to adapt to frustrating conditions over time. No one has shown this before,” (Krizan, Z.,2018). The motivating words used for this work were: shaking, tight/flexion, bottled, sharp, static, impatient, and throw. Using these words, I tried to embody what it might be like to be agitated all the time. Casting this dancer as part of my ensemble, I had no preconceived standards to uphold. His style was very different than mine, and I actually wondered how I was even going to choreograph for him. My mind always wondered to road rage, its something I thought we could all relate to and have experienced. Bottling that feeling and imprinting it upon him is what I was afraid this process might simplify to, however our skills in collaboration surprisingly transformed the piece drastically. I had no experience in choreographing on a dancer more accustomed to street and hip-hop dancing. We began the first rehearsal casually, treating it more like a session of “show me what you can do,” rather than consisting of actual choreography. That was intriguing and illuminated movement that we could really pull from and helped in creating an actual usable process. This work felt like filling in puzzle pieces with his capabilities and how we could use them to depict this subject matter in an unexpected way. I found myself acting more as a director or storyteller of movement, rather than generator. This was a new feeling because I relied more on my words and the images I could

iterate. He then would spawn varied movement to try to capture the essence of what I was asking of him. In this compromise, the dancer often offered an alternative thought or pathway through his movement unintentionally.

The performer's movement was fluid and smooth when he was dancing his own style, but unsure and lacking confidence when it came to specific movement, resulting in hard and sharper qualities. These surprises fit in with the direction I was headed for and also acknowledged this as a natural state for him. Even the frustration that came with learning specific choreography was not ignored. This inherent feeling was a breakthrough and offered a relatable guide for him in an unforced way. A good portion of his solo was improvised, however with my direction, he had certain elements and objectives to accomplish. I learned that using a dancers patterns and habits could actually refresh the way I look at movement. I used this as a way to reboot myself when stuck and this forced me to stay open to new ideas and directions that otherwise I would not have seen if I were to implement a pre-fabricated blueprint.

This was the first dancer to interact with the black cube in the vignettes. I saw this cube as a physical embodiment of the ailment bespoke of the dancer. For this performer, it became a punching bag as a way to express his anger in a more violent way. I felt it was important for this expression to take place, giving actual task based goals of hitting and kicking something solid. I believe this creates a different type of kinesthetic awareness and energy. My original thought for this section was a desire for him to throw the cube across the stage. I was looking for an explosive, violent shock for the audience to really experience how anger can get out of control. Once we received the cube, it was too heavy. We edited it out for fear of injuring

the dancer and doing unnecessary damage to the stage floor. The compromise of hitting and kicking it for this release was fair, and we were both pleased with it.

Following anger, I chose the next symptom as forgetfulness. This may seem very trivial, however, this can lead to poor performance at work as well as wasted energy spent recalling precious memory. This recalling period becomes substantially worse the longer you are sleep deprived, cutting into valuable time you may need to spend doing other things...”sleep-deprived participants showed a significant lack of memory, regardless of specificity or valence, implicating a dysfunctional AM (autobiographical memory) compared with the control group. Furthermore, they had more difficulties in retrieving specific memories and rather recalled more overgeneral memories...sleep-deprived participants retrieved more negative and less positive memories”(Khormizi Z.H., Salehinejad M.A, Nitsche M.A, Nejati V., 2018). Sleeping gives your brain a chance to process and encode memory in a way you can recollect it when you need. Undermining this process weakens your ability to remember and continues to quantify negatively on the rest of your body.

When collaborating with this dancer, our action words were: flinch, unfinished, repetition, stutter, distracted and unreliable. I was excited to start this work because it was the only one in which I put a positive spin on. Sleep deprivation, in what I have found, illicit mostly negative effects and emotions. This was going to be quirky and lighter. The music by Yann Tiersen engages repetition in a way that gently motivates forgetfulness. The costume was a dress in which many pockets were sewn. These pockets highlighted her memory lapses, as she could never quite remember where she put her key. I chose a key, in this instance, as simply an object to let the audience identify with for memory loss. Reflecting on this decision, I understand the

many meanings a simple key may represent, however the spectators may project their individual meanings upon this object. This performer really surprised me in a humbling way. Her choreography, matching the prompt I gave for writing “I need more sleep,” I considered to be the best part of her dance. I was so grateful for her contribution that I found myself in a position I had not experienced yet. I began to build the rest of her vignette off of what she had done. She became a real inspiration to how I looked upon choreographing with others. I realized profoundly that the dancers can have just as much to say as the choreographer, and there does not need to be one authoritative voice. This particular work demonstrated this attitude for me more than anything else I had done.

Following forgetfulness, I have come back to a cause that I have found especially relevant in today's technology minded society. The mobile phone. Never have we had such easy access to information and knowledge than we do now. This cause feeds into an obsessive individual already struggling with this disorder. The sustained abuse of the phone through manically checking messages of all types as well as constant surveillance of social media, adds up. This excavated deeper into the psychosis of how one needs to be perceived by the virtual public. Keeping up one's virtual identity can become a relentless quest and can be dangerous to your physical self once this begins to interfere with sleep cycles. Research indicated, “Social Media Anxiety Disorder can result in OCD, and chronic depression; according to Clinical psychologist Seema Hingorrany – SMAD is, “SMAD starts when a person is obsessively hooked to the internet and his or her moods and thoughts are dependent on the responses they get from the virtual world. The anxiety builds up to such an extent that the behavior pattern becomes totally maladaptive”(University of British Columbia, 2015). Though social media plays a part in

sleep disturbance, we cannot weigh out the blue light emitted from the device itself, as a source. That said, “ researchers from the University of Pittsburgh asked 1,700 18- to 30-year-olds about their social media and sleeping habits. They found a link with sleep disturbances – and concluded blue light had a part to play. How often they logged on, rather than time spent on social media sites, was a higher predictor of disturbed sleep, suggesting “an obsessive ‘checking’”, the researchers said.”(Brown, J., 2018).

I ended up choreographing this dance quite quickly. The dancer lended herself to the movement I was exploring at the time. My initial concept was investigating the literal love that she felt for her phone. I committed time to working with this and together we created movement to enhance and experiment with this idea. What would physical love look like with an object that only virtually can love you back? How can we personify the phone into something reactive? These were questions we tried to tackle and this clear trajectory helped our intent, and to generate good ideas.

I sought external eyes once we had a blueprint of the movement. I was given feedback of how I could utilize the phone in an intimate manner, even how the dancers’ natural, flexible abilities could be exaggerated to a point. As the piece continued to evolve, the idea of loving the phone became weaker as it was unclear how it related to actual sleep deprivation. The motivation was naturally changing to the psychosis behind the usage of the phone, and less about objectifying the phone. This performer was a dynamic dancer with an unfitting presentational style that numerous feedback loops addressed. We went back in the studio and analyzed piece by piece the intent and relation of the choreography towards sleep deprivation. It was valuable to re-direct in order to find a clearer focus, recognizing that what I was trying to say was not being

heard. The version performed was more concise, conveying how one who relies emotionally on an object has trouble inhibiting this action and cannot commit to the time it takes to prepare for, and get, the necessary amount of sleep for proper body function.

The next topic chosen, was workaholic. With society respecting and expecting high quality work at a massive volume, the pressure to meet and exceed those expectations is great. Addiction.com suggests that, “Workaholics have a compulsive need to overwork and rarely feel satisfied or relaxed unless they’re doing something related to their job. Simply put, they immerse themselves in work to reduce anxiety and a fear of failure.”(n.d) This effort of working to reduce anxiety is a reciprocal action. The more work continues, the more anxiety builds and the emotional need to work intensifies in a effort to alleviate the anxiety of working. In addition to overworking, Addiction.com also states, “Workaholics are more likely than those who don’t work compulsively to suffer from too little or poor sleep; fatigue at work;... low work performance (working harder, but less effectively) and poor physical health. They appear to be more likely to suffer from depression and from disabling back pain, too, as well as to miss work due to illness “(n.d).

Our action generating words for this piece were: busy, persistent, impatient, rigid, perfectionist, frantic. These seemed in tune with the research I was finding. The foundation for this piece was how clearly the choreography projected her compulsive state of mind to her movement. Utilizing the actors cube, we sought to promote this as a fictional work station and an ongoing source of her obsession. This process and topic lent itself to movement that was continuous and focused in a way that could be interpreted as writing or drawing in an office atmosphere. Our initial choreography was abundant with movement, and an effort was put into

this facade of the potentially overworked office employee, however the focus to her source(cube) was lacking. In tying into sleep deprivation, I also needed more moments of suffering and utter exhaustion. With external eyes helping, we discussed ways in which to overhaul the work to address the intent and clarity we were looking for. I slowly stripped away unnecessary movement and turned her attention onto the cube. With prompts that addressed this as well as inviting the cube to accept in-scripted movements like a piece of paper, we were able to start making sense of this subject matter. As I removed layers of movement, we found that the piece was naturally starting to hold a mounting tension that came to an apex in her last manic movements.

I chose to start this vignette with the dancer uncomfortably lying on top of her work (cube), as a way to metaphorically address how this is the source that keeps her up. This was an idea that could engage the audience with this topic quickly. Continuing to investigate, we layered the emotion of fear into the piece as a way to complicate how the dancer felt about her obsession and chosen lifestyle. I feel this presented the audience with a glimpse of how easy control may be lost over oneself and habits.

The final individual vignette was anxiety. I felt this to be the root of sleep deprivation and the on going connector for the other symptoms to follow. "Sleep debt can cause increased anxiety even in those that do not experience anxiety regularly. When you don't get enough sleep, several issues affect your body that can ultimately lead to trouble with anxiety and stress. But sleep debt can particularly affect those that already have anxiety, making it harder to cope with symptoms"(Abraham, M., 2018). This same article continues on to read that anxiety caused by lack of sleep does not create anxiety in just one way, but through body and brain stress, hormonal changes, several physical symptoms, as well as leading to anticipatory anxiety.

Chronic elevated levels of adrenaline may occur as well as overall stress due to lack of sleep. What made this so compelling was that these symptoms are recycled in the way that they are perpetuating themselves.

Our motivating words were: small, shaky, staccato, fall, showing difficulty, breath (stressed), circular, uptight. With this in mind we began, fore mostly thinking about quality of movement. My vision of this piece's opening moments were pre-conceived and started with her in her pointe shoes doing an expansive bourree in a circular pattern wearing all white. Something about this image I could not shake and I began to put it on a pedestal. From there, something disruptive had to happen...so we continued with her right arm creeping to her head and yanking herself downward. I wanted this scene to be a mix of beauty with some genuine haunting moments. I thought about how I needed this work to be pivotal to the audiences' thinking, wanting to keep an uncomfortable edge while at the same time investigating some ways to disguise it. For this scene I wanted her in a white loose dress, partly for aesthetic reasons but also for the unpredictability of what it reveals while dancing. I chose pointe shoes because of how they make me feel. They are hard and unforgiving, always needing the dancer to be perfectly on balance. They can cause injury if not careful and end a career. To me that created anxiety. The sound they made I found to be useful when moving quickly. An unsettling rhythm resonated and you were never quite sure when this would end, or why. To juxtapose the frantic sounds of the shoes, we developed moments of exhaustion as well as moments of awareness. What I meant by this, was her motivations for some of her dancing (fast or slow) were prompted with imagery such as ants crawling up and down her leg. The dancer always needed to be aware of these things and respond in a way that seemed genuine.

Upon finishing the initial movement, I began to analyze it to see if it related to sleep deprivation and whether or not it stayed true to what the symptom was. I noticed parts that were heavy and struggling but I never really got enough anxiety. I resolved to re-do the pattern of the entire scene. We thought about walls closing in and how we could integrate that feeling gradually. Studying the choreography on video, I thought about using a circular pattern that shrunk with every pass the dancer made. We transformed and adapted the choreography to fit this new design. In this process, the small rehearsal studio we used became a needed component for her to adapt to the space. Also, steps and sequences began to look new due to the different directions and the immediate results of these changes were significant for me. I was opened to new aesthetics as we continued to forge ahead and commit to this evolving pattern. At this point, I was now imagining how I could help her even more and my thoughts were directed to potential prospect of utilizing light. I did not know the possibility, but I wanted to some how focus on this idea of walls closing in by using spotlights. Starting with one large spot that spanned quarter to quarter on stage, I pictured the spot diminishing in size as she danced on the edges of it. She could use this as a guide for her dancing as well as holding the thought of performance anxiety as a tool to avoid the center of the light. This specific work was a challenge for me as I wanted to reveal elements in my choreography that were balletic in nature but could continue to exude this anxious feeling. The choreography changed multiple times and was continually reworked for potential clarity. I was uneasy in how this work was developing because of the images in my head. I could not see past what I thought I was creating versus what I was really creating. I challenged myself to pay attention to video and learn from my process, or lack of.

Finale was a very different feeling than the rest of the piece. I had limited time to work on the dance, due to the fact that there was a live musician involved. Though we did have a recording of the music, it was not really an accurate representation of the artists' vision. I had one major obstacle to overcome besides the lack of time. How could I showcase the musician without losing the dancers? I decided that a mingling of both the dancers and the musician was a worthy effort. To choreograph this, I recycled movements from the vignettes as well as created new movement, and pasted them together. My one prompt was that whatever we decided on, had to be more subdued and sleepy. The choreography started with the blocking of the musicians' movement. From there, we could see how much interaction was possible and what parts of the stage needed to remain clear for the moving guest. This approach worked well and gave the musician license to go where she chose. Once she had formed a regular pathway that was comfortable, the dancers were free to engage in the rest of the stage surrounding her.

I approached the finale as a way to calm and potentially bring sleep to the cast. I saw the musician as the moon or maybe a moon faery. Its an interesting paradox how the night time is the natural time to sleep, however, a full moon may cause sleep disturbance. "Data shows participants got 20 minutes less sleep during the full moon. It also took them five more minutes to fall asleep, and more importantly, they experienced 30 percent less deep sleep than they did on nights when there wasn't a full moon"(Mercola, J., 2016). This added a complication that worked for the piece.

When I first approached the musician, my concept included an opera. After our first meeting, she had talked about more popular music, and I responded with a lullaby. She agreed. I did not push for the opera because I wanted her to feel as comfortable as possible while

on stage. She was going to be singing, moving and playing her guitar while at the same time waling a specific pathway. The added stress of singing something she was not keen on, I decided, she could do without. No pressure was put upon her and that made for a productive working relationship.

During tech week, I made an important pressing decision. I was grappling with the idea to have a more positive or cautionary ending. The positive one included the dancers being soothed to sleep and staying that way till the blackout. I decided on the opposing ending. I talked with the lighting designer and requested that my dancers jolt up and freeze when the transition song played one last time for three seconds before the blackout. During that time, the lights would come to full “morning” blast, before disappearing to end the show. I wanted the audience to realize how hard it is to break habits or cycles that have been created and that the suffering may continue unless better self treatment is realized

IV. REFLECTIONS

Producing a show this size had a lot of moving parts, thus considerations needed to be weighed. I applied critical assessment towards the outcome of the show as well as my goals within, as an important way to recognize change and growth. Never having been responsible for all the details of a show, this was an important opportunity for me to see how I learned and progressed from my first piece I choreographed here.

Reflecting on my directing ability with the dancers, I found myself apprehensive in areas that I could recognize from every show. A lot of my pieces required some acting to assist

in meaning making and to highlight important topics. This was an area in which I failed time and again. I believed I was not the strongest example for them, therefore, I struggled to justify the time it would take to coach this element. My patience thinned and I relied too much on the choreography to help me reach the dancers. I knew that I needed to start directing the dancers' acting earlier if I was to succeed in utilizing this skill. This illuminated how I do not employ the resources around me, knowing that some of my mentors had an expertise in acting and could have helped in these situations.

Scheduling was another weakness for me. I was unsuccessful at predicting the future and somehow chose dancers that rarely could adhere to my work needs. I felt bad about this so never really expressed the importance of attending every rehearsal. This was something I needed to transform in my self confidence and realize that what I was doing mattered, and communicate that to build momentum and a desire in the dancers to participate fully as a priority.

That said, there are other thoughts to be identified about the undertaking of "Undermining Process "S" that came to light upon completion of the run. My first thought is whether or not the topic of sleep deprivation was rich enough for a thesis. I found out how to work within its depths but needed to assess more the type of show that would have been most beneficial to illuminate this subject. I feel I took a path that lent itself to dancing and choreography, but was lacking in complex subject matter such as patterns of how the brain shuts down and what this does to individuals.

In the show that was presented, I am quite proud of the result and how hard the cast and crew worked towards our common goals to fulfill my vision. As part of my vision, I wanted to take full responsibility for the risks that I took to choreograph this piece. I learned

previously that I became influenced by others' feedback of my movement and would prioritize these new ideas over my own. By the conclusion of these processes, I realized my voice was silenced and what I had created bore little resemblance to what I was capable of. My lack of wanting immediate help or outside eyes, was a direct result of this, however I recognized this "all or nothing" approach to be flawed.

Collaboration was a big part of this process. Using a videographer was completely new to me. I had no idea how long creation took nor the impact on the piece it would have. To my surprise, getting the video was an anxious endeavor. I completely put my trust in the videographer and was delivered the initial final copy a few days before tech week. I watched it yet could not visualize how this would translate to the stage and coexist with the dancers. This was a big problem and After the first dress rehearsal, I immediately needed to change one part in particular...the phone image. The concept was good, nor did I mind how different it was than the rest, but it had a heart on the screen which related to the older idea of love. After addressing this, we thought the final version made more sense.

I was taken aback by the sheer size and vivid color of the projection. It was more dominant than expected, but I also appreciated how the images were heavily repeated. This prompted me to think that the audience could juggle watching both the video and the dancing. From audience murmur, I was mostly wrong. I overheard many comments on how cool the projections were yet little account of the dancing. I was told that the light from the videos were so strong that the dancers disappeared. Having focused on the dancing for so long, I could not see their perspective, and no one on my team told me otherwise. Having now worked with video,

I see the importance to integrate it in the very beginning of the rehearsal process to gain a clear perspective and judgement.

Lighting was a gamble that seemed to not pay out. If this piece did not have the projection, the intimate, sparse lighting scheme would have worked. I wanted so much for the dancers to stay in this darker world that I ended up hiding them. Watching the last show made me realize how vital lighting is, even if all I needed was for all of it to be a bit brighter. The direction that we went in was hard to see, the video did a good job overpowering it, however, the designer made great efforts of using cues from the projection as far as color. The color made a huge difference for setting the tone of each piece and made positive strides that kept the audience in the atmosphere we created.

Watching every vignette from creation to final performance is a rewarding and critical experience. I constantly wondered if I was conveying the subject in a way that the audience understood. I believed I had a strong opening that conveyed my message, however, I needed the dancers to be continually shifting more than what they were doing and throughout the piece in general. I felt as though if stillness was shown, sleep deprivation was lost. The first duet quickly surged to a certain level in rehearsal, but then it seemed to plateau. My direction and motivation were not enough and when it came down to it, I was more interested in the steps and what they were doing wrong. This was hard for me to let them own and enjoy the moment, as a result, some points they were too emotional and others they seemed stagnate. I held this as too precious and that got in the way of the work. The message I felt to be clear, however the lightly whispered “help me’s” aided in the literal view. The way the dancer interpreted anger was like liquid lava which fittingly, related to the projection. The slow burning tension his movement

suggested actually had little to do with our action words as it was a lot of improvisation.

Watching this piece however, the few punctuating instances motivated by the words did bring clarity to his fluidity, otherwise I believed it would have been too abstract. The lessons this dancer taught me about my capability of working outside my comfort zone was invaluable.

Forgetfulness was the next symptom. I felt this piece was better fulfilled in rehearsals. On stage, it seemed her nerves got the best of her and she left out key moments that intertwined exhaustion and absentmindedness. I felt as though she was continually rushing for no purpose. This vignette worked none the less, because the message was built into the choreography better than some of the others and she was a naturally good actress. The next dance dealt with the phone anxiety.

After numerous overhauls, the result was clearer and still gave the dancer a chance to showcase her strengths like her extensions and turns, while hiding her weaknesses. I thought this was the most relatable for the audience which ended up being mostly college students. Reflecting on workaholic, the process with this particular dancer, I am reminded of how easy it is to slip into and stay within the boundaries of habit. This performer maintained a certain movement style that had to be gently corrected throughout the choreographing process. There were multiple times I offered corrections or suggestions about her movement and how they were not inline with the direction of the piece. I realized these were not just for her, actually, I found myself at times mimicking her stylized movement and had to inhibit this in order to maintain my focus and intent of the work. I perceived then how easy it was to be influenced and the concentration needed to fulfill a project with numerous dancers of different backgrounds and styles was intense. The projection for this piece helped with the meaning. The constant and overwhelming layering was needed yet the flowers were still abstract enough to keep the audience guessing. The last work

before finale was the most difficult for me. Seeing it in the show, I felt it did not work in meaning making. I felt like there were elements that were strong but the choreography was not unsettling enough to warrant an anxious state. I needed new ideas, and by the time I realized, it was too late to start over. The erratic breathing built into the music as well as the video, sustained the mood, however the dancing did little to contribute to this symptom.

I felt the pacing of the show was good. I presented a lot of movement variety with time to reflect upon it as it was unfolding. In finale, the live music was quite unexpected and shifted the whole piece to a somber moment. During finale, it was my hope that the audience would recognize the dancing sequence from the transitions and would breathe a small sigh of relief as the dancers were finally able to continue and conclude the movement. I perceived the dualities on stage to have worked, as the musician was highlighted yet the dancers did not fade away.

Illuminating symptoms and causes of sleep deprivation, gave us all rich material to work with. Having fully created within the core message of uneasiness, this rooted and limited us causing great efficiency. We found creativity within these confines, and with the dancing, found meaning. By the end, I was told that the piece left you with wanting more. Whenever an audience wants more art, there is a chance for survival and a lesson learned on how to continue building both the art and the sustained audience. Creating this piece, I learned how important collaboration was, and by working with non-dance artists, how to apply it to a broader practice outside of dance. I learned how to be more precisely aware of how I choreograph and my shortcomings towards preparation, management, and self-confidence, better preparing me for future projects.

REFERENCES

- Abraham, M. (2018) How Sleep Debt Causes Serious Anxiety. Retrieved From <https://www.calmclinic.com/anxiety/causes/sleep-debt>
- Addiction.com Staff (n.d) Work Addiction 101. Retrieved From <https://www.addiction.com/addiction-a-to-z/work-addiction/work-addiction-101/>
- American Sleep Association (n.d) Sleep Debt: Signs, Symptoms & Treatments. Retrieved From <https://www.sleepassociation.org/about-sleep/sleep-debt/>
- Brown, J. (2018) Is social media bad for you? The evidence and the unknowns. Retrieved From <http://www.bbc.com/future/story/20180104-is-social-media-bad-for-you-the-evidence-and-the-unknowns>
- Centers for Disease Control and Prevention. (2016) 1 in 3 adults don't get enough sleep. Retrieved From <https://www.cdc.gov/media/releases/2016/p0215-enough-sleep.html>
- Duchenne.com Staff (n.d) Duchenne muscular dystrophy: the basics. Retrieved From <https://www.duchenne.com/about-duchenne>
- During, E.H., Kawai, M (2017) The Functions of Sleep and the Effects of Sleep Deprivation. Sleep and Neurologic Disease, chapter 3 page 55.
- Dwyer, K. (2017) Fighting Caregiver Fatigue. Retrieved From https://caregiver.com/articles/fighting_caregiver_fatigue/
- Goldstein-Piekarski, A.N., Greer, S.M., Saletin, J.M., Harvey, A.G., Williams, L.M., and Walker, M.P. (2017) Sex, Sleep Deprivation, and the Anxious Brain. Journal of Cognitive Neuroscience 30(4):1-14 DOI: 10.1162/jocn_a_01225
- Hsu, C. (2012) Nearly a Third of Americans are Sleep Deprived. Retrieved From <https://www.medicaldaily.com/nearly-third-americans-are-sleep-deprived-240273>

- Hasan Zare Khormizi, H.Z., Salehinejad, M.A., Nitsche, M.A., Nejati, V. (2018) Sleep-deprivation and autobiographical memory: Evidence from sleep-deprived nurses. *Journal of Sleep Research*. DOI: 10.1111/jsr.12683
- Krause, A.J., Simon, E.B., Mander B.A., Greer, S.M., Saletin, J.M., Goldstein-Piekarski, A.N., and Walker, M.P. (2017) The sleep - deprived human brain. *Nature Reviews Neuroscience*. Volume 18. doi:10.1038/nrn.2017.55
- Krizan, Z. (2018) Lack of sleep intensifies anger, impairs adaptation to frustrating circumstances. Retrieved From <https://www.news.iastate.edu/news/2018/11/27/sleepanger>
- Mercola, J (2016) Can a Full Moon Disrupt Your Sleep? Retrieved From <https://articles.mercola.com/sites/articles/archive/2016/07/02/moon-phases-sleep-patterns.aspx>
- National Sleep Foundation (n.d) Cell phones and tablets keep people connected, but do they interfere with how satisfied you feel about your sleep? Discover the truth about tech gadgets and sleep. Retrieved From <https://www.sleep.org/articles/technology-impacts-sleep-satisfaction/>
- Tkachenkoa, O., Dinges, D.F. (2017) Title: Interindividual Variability in Neurobehavioral Response to Sleep Loss: A Comprehensive Review. DOI: 10.1016/B978-0-12-809324-5.02858-3

THESIS II FOREHAND/STAPLETON PROGRAM

DOI: <https://doi.org/10.25820/mq60-se14>

Process “S” - A set of homeostatic neurobiological processes that increase the likelihood of sleep, or ‘sleep propensity.’

Choreography: Eduard Forehand

Cast: Aaron Choi, Hailey Fay, Marcus Pei, Sonja Schulz, Catherine Short, Jensen Steinbronn, Emily Trapnell

Music: Nude by Radiohead, The Princess Pleads for Wallace’s Life by James Horner (Braveheart Soundtrack) Kereon by Yann Tiersen, Les Yeux Ouverts by Emilie-Claire Barlow, Fade to Black by Apocolyptica, Gnossienne no. 1 by Patrick Cohen, Good Night My Angel by Billy Joel, re-imagined by Emily Wheeler, Good Morning by The Butterflies

Mixing and magic, courtesy of Joseph Norman

Costume Design: Juliana Waechter & Eduard Forehand

Lighting Design: Will Borich

Special thanks to my live music performer Emily Wheeler and my videographer Colin Smyth for their wonderful collaborations in helping this world come to life. I would like to say thank you to all my cast and crew. It has been a wonderful collaboration, one that I will not forget. Thank you to my wife Christy and my children Conrad and Lucinda for their faith and patience in me at my time back in school, nothing could have happened without them. Thanks to my parents who have supported me my whole life, it has meant so much to me and I am so blessed to have you in my

life. Thank you to God for everything...literally. A big thanks to my committee for all the advice and guidance. You really motivated me towards excellence. Thank you Meredith for sharing this concert with me, your light demeanor and intelligence are always a welcome partner.

I dedicate this piece to my late brother Danny, who I pray has finally found peaceful sleep