

# SWEET DREAMS

## WHY REM?

Rapid eye movement (REM) is a stage of the sleep cycle where our most vivid dreams occur. During this stage our bodies paralyse so that we don't make the movements of our dreams however, our eyes do the opposite. They rapidly move in line with what we are dreaming about. It is believed that during this stage we are potentially our most intelligent, insightful, and creative.

What first sparked my interest in this subject was a Joe Rogan podcast with scientist and professor of neuroscience and psychology Matthew Walker. In this 2 hour long podcast Walker discusses the power of REM sleep. REM benefits our health and learning a great deal. When you learn a task, after a night of sleep you're skill has improved 20-30% more than the day before. Walker states that sleep is intelligent enough to "find that problem point and smooth it out". Sleep can find what problems and tasks we are stuck on and work on it.

A second source of research I found extremely fascinating was an article from National Geographic on the Science of Sleep. This article mentioned that there is an imbalance between our lifestyle and the sun, that our lack of sleep has become a global epidemic. The article also mentions that REM is when we are our most creative and insightful. This really stuck with me and is what led me to frame my question around idea generating within REM sleep.

## TEST 1

This test will run over 3 days where each night I challenge myself to draw further, and use techniques before bed to encourage creative thinking while dreaming. In the mornings I will write down my dreams and try to illustrate drawings I saw in my dreams or that I developed from the night before. I aim to test how dreams can be used for learning, idea generating and development.

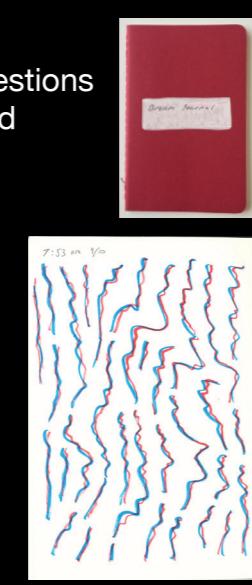
### DAY 1 09/10/19

#### Process/ Night:

- Experiment with new prototype
- Do a drawing
- Think about questions
- Read before bed

#### Outcome/Morning:

Recorded my dream in dream journal, saw a drawing line fall down a page and lines around it. It looked similar to a prototype I was working on the night before. I felt this illustration was different to previous drawings however nothing special. It looks quite scribbly, I think it is due to the fact that I was tired in the morning and was struggling to put full energy into the drawing.



### DAY 2 10/10/19

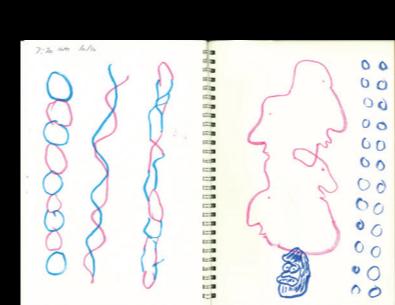
#### Process/ Night:

- Create mood boards, gather line drawing inspiration and potential 2D character design.
- Allow one hour for mood boarding.
- One hour for doodling.
- Read before bed.



#### Outcome/Morning:

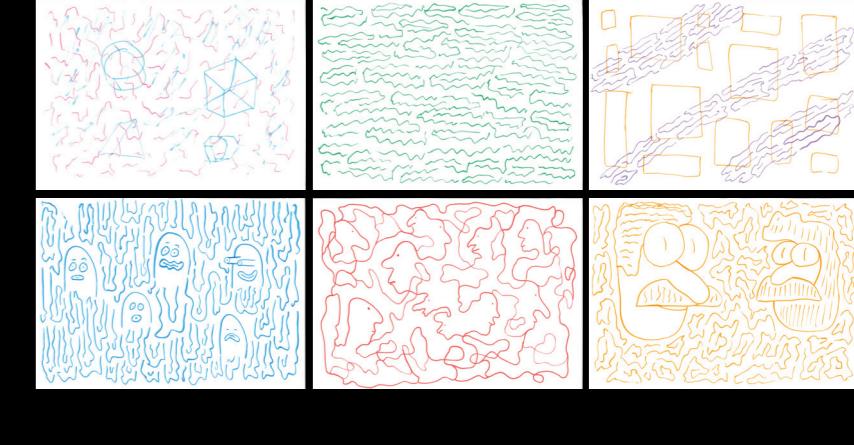
When I woke up on the 10/10 I was struggling to say awake. I suddenly recalled seeing 2 parallel lines moving down a page crossing over each other creating abstract circles. The vision was aesthetically pleasing and had flow to it. However, when I tried to recreate this on paper I was not happy with the result. I feel my tiredness played a factor here, as I went straight back to sleep after completing some disappointing drawings.



### DAY 3 11/10/19

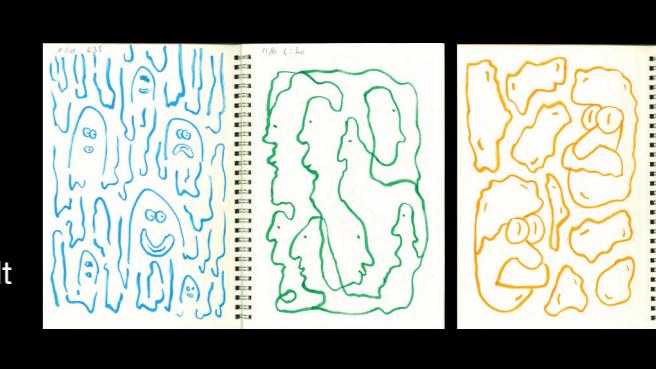
#### Process/ Night:

- Create 6 to 10 large scale illustrations and hang on bed room wall. Try to cover as much of the room as possible.
- Think about character and location design.
- Try to incorporate elements from other dreams (look at dream journal).
- Read before bed.
- Drink 3 glasses of water.



#### Outcome/Morning:

Stickgold suggests that drinking 3 glasses of water before bed helps to remember your dreams. However, I found this disruptive to my sleep. I made an attempt at a line style drawing of connecting faces 6:30 am on 11/10. Later on I drew some orange faces with beards which looked slightly better. I did like the use of putting large illustrations up in my room, as it was the last thing I saw before going to bed and I did feel inspired looking at it. In the morning however I felt that my dream had lacked the amount of drawing imagery compared to the nights before. However, I felt my drawing skill had improved.



## TEST 2

The findings from my experiments last week showed an improvement of skill, however I felt I struggled to generate new ideas from my dreams. I found some new research on external light impacting dreams. I want to incorporate this and the tetris study into my second round of REM sleep test.

The purpose of these tests are to see what imagery I can gather from my dreams and whether or not I can generate new ideas from this imagery and dreams.

### DAY 4 14/10/19

#### Process/ Night:

- Create mood board of new content I want to use.
- Set up drawing at night and complete in the morning.



#### Outcome/Morning:

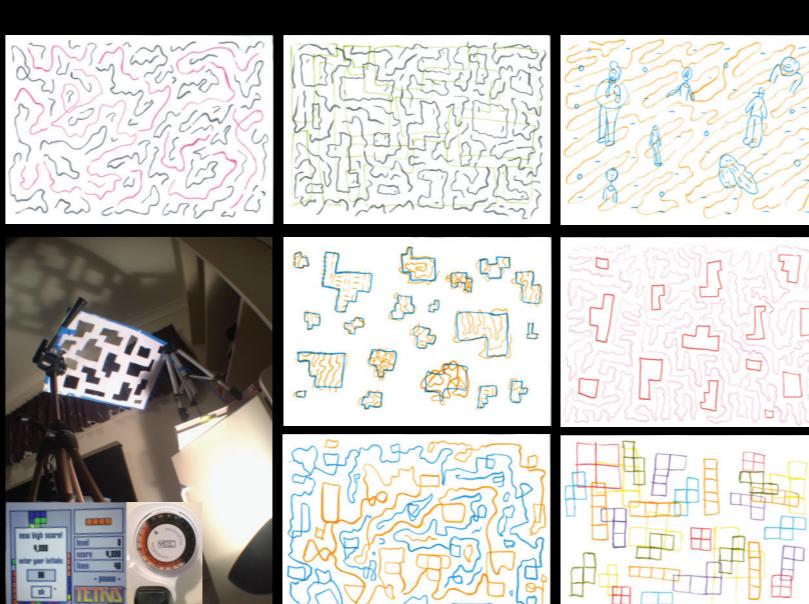
I like the results here, the buildings here are different to the illustrations and building moodboards I did the night before. Rather they look like the buildings in the city I was drawing when I was at uni the day before. This suggests that to gather inspiration for my drawings and dreams I should go out and illustrate, film, photograph these buildings and plants.



### DAY 5 15/10/19

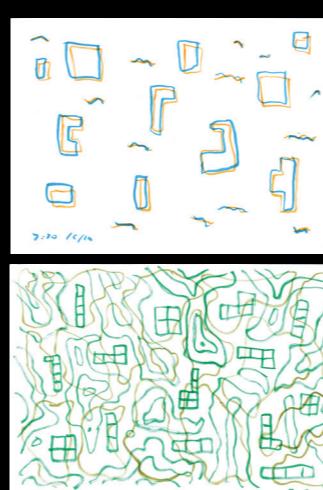
#### Process/ Test:

- Played tetris for 30 minutes.
- Created 8 A3 illustrations.
- Tried drawing an illustration related to tetris.
- Experimented with new illustrations - new characters and line.
- Set up lamp to project tetris squares in my room at 4 am (roughly when I will be in REM)



#### Outcome/Morning:

Unfortunately on this night I was unable to remember my dream. Reflecting on the projected lamp squares I feel this was unsuccessful as I didn't have the light shining on my face. I also don't think I played tetris long enough to visualize it in my dreams. However the drawings I made in the morning, I managed to do with much thought and feel it was a development.



## REFLECTION

Over all I found that sleep helped with my drawing skills, however not with creating new ideas and subjects to draw. I believe the reason for this was because I wasn't asking the right questions before bed. For my next experiment I'll test the subject of what I'm drawing rather than the style.

### DAY 6 16/10/19

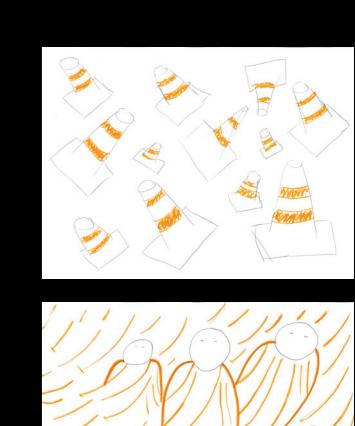
#### Outcome/Morning:

- Reinterpreted and illustrate dreams from journal.
- Tried meditation before bed.



#### Outcome/Morning:

Inspired by a dream I decided to try meditation for the first time. As I was new to it I struggled to fully immerse myself in the experience, however there were moments I could let go of other thoughts. Over all was happy I gave it a go. I also found that I dreamt of the pasta that I had reinterpreted from the previous day.



## REFLECTION

I looked over dreams I had recorded in my dream journal. I illustrated them and tried to find meaning in them. There were two dreams that stood out to me. One I was driving a car and could barely see past the dashboard, my vision was all hazy and dark. I almost felt sick. Reflecting on this I realised that I was driving while drunk. My take away from this was to be more mindful of safe driving.

A second dream I had was I was in a mad rush to get somewhere. Once again I was driving a car however the car was not fast enough. I got out of the car and started running. As I was running I got stuck behind this pedestrian and could not get past him. This pedestrian was a monk simply walking along the footpath.

I interpreted this as a message to relax and not always stress about having to go to a location and to try be more spiritual. This led me to try meditation as a part of my experiment.

Results from this test pushed me to focus more on what I dreamt about, rather than whether or not I saw imagery of my drawings.

## TEST 3

This process of reflecting on my dreams led me to continue the experiment to focus more on the output of drawing in the morning as opposed to the input drawing at night. I aim to recall my dreams in the morning and illustrate them in my style. I hope to develop my drawing and find meaning from my dreams that I can apply to my life.

### DAY 7 17/10/19

#### Dream Outcome:

- Illustrated elements from dream.
- House on hill.
- Friends Radio.

#### Reflection:

This dream very much made me think of the relationships with the people around me. Things I need to do to get back in touch with people.

### DAY 8 18/10/19

#### Dream Outcome:

- Old house with porch.
- Had drinks with old people on porch.
- Family was going to purchase house.

#### Reflection:

I struggled to find meaning from this dream. This dream could mean to have more appreciation of belongings.



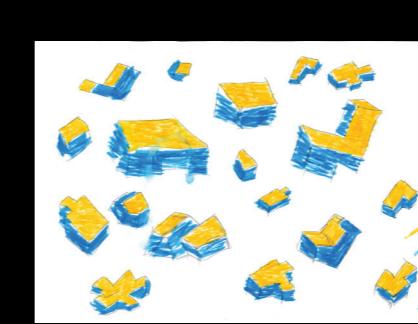
### DAY 9 19/10/19

#### Dream Outcome:

- Art gallery maze.
- Abstract illustrations on the wall.

#### Reflection:

I believe the maze imagery in this dream is related to the maze from the lab rats test I had found in my research. On the walls of the mazes were illustrations similar to my style that were different to what I have created in the past. One of these illustrations was abstract 3D squares. I think this was also reference to Stickgold's Tetris experiments. This was an outcome that I had hoped to find when I first set out these dream experiments as its was a development of my illustration style and imagery from the Tetris testing.



### DAY 10 20/10/19

#### Dream Outcome:

- Dream was about a school athletics day.
- Illustration of running track with grass around it.

#### Reflection:

In this dream I dreamt of winning a gold medal in a school athletics day. This year I've stopped playing any of the sports that I have participated in during my teen years. Nor have I been doing much exercise. Recently I've been wanting to run and potentially do a half marathon. After this dream I got up in the morning and went for a 5 km run.



## CONCLUSION

My goal for this research was to develop new ideas for my illustration style through my REM sleep. By creating a series of tests and continually recording my dreams. My results show that I was successful in doing this, on the 19th of Oct I recorded a new illustration of abstract 3D squares from my REM sleep. Also by redrawing imagery from my dreams allowed me to draw more subjects and objects I wouldn't normally come up with. The experience allowed for an entirely new approach for generating drawings.

My findings go beyond this, I discovered a way to use REM sleep as a tool for self improvement. By interpreting my dreams I found insight on myself, lessons I could use to prevent mistakes I could potentially make or a source of motivation to work on areas I've

## Q: How can I explore REM sleep to better understand its role on idea generation, communicated through a motion context?

**Alistair Kincaid**  
Media Design School, Auckland, New Zealand

## MY QUESTION

My question is "how can I explore REM sleep to better understand its role on idea generation, communicated through a motion context?" During REM sleep some part of our brains are 30% more active. The visual, emotional, and memory parts of the brain ramp up. Whereas the logical thinking parts such as the prefrontal cortex are used less. This allows for the subconscious mind to be open and free, to explore thoughts and memories without any boundaries. The result of this can mean a link between new ideas. Problems and questions that we may be stuck on are rearranged and looked at differently in ways our conscious mind would never look at. I want to explore this process and better understand how REM sleep can generate these new ideas. I will look at other research into REM sleep and see what tests I can create to explore my own REM sleep state.

Researchers at the Wilson Lab M.I.T had lab rats learn a maze. They recorded what the pattern of the maze looked like in the rats brain. When the rats fell asleep this pattern was played over 20 times faster. The rats were practicing the maze 20 times faster in their sleep. Its clear that we can practice and improve at tasks while asleep, but how easy is it to generate new ideas from REM? There are many famous works and ideas that have come from dreams such as the work of surrealist artist Salvador Dali and Albert Einstein's Theory of Relativity.

Other research I'd found shows how the manipulation of ones surroundings can influence their dreams. Psychophysiologist Steve LaBerge did a study when subjects would fall into REM sleep, he would then shine a red light on their face. The subjects would report seeing a red glow in their dreams.

Research in this field that stood out to me was the work of sleep researcher and professor of psychiatry Robert Stickgold. He created a study where 3 groups of students played Tetris

for 3 to 4 hours for 3 days. 60% of these students reported seeing Tetris like imagery in their dreams. One group were individuals that suffered from amnesia. However, some still reported seeing Tetris like imagery and showed improvements at the game despite having to be reintroduced to the game each time they played.

These results show that REM sleep can use content from our memory and that we can manipulate our actions before bed to influence what we dream about during REM sleep. This study inspired me to create my own test by giving myself content before bed and seeing if I can generate new ideas from this content within my REM sleep.

## ILLUSTRATION TEST

To test the idea generating of my REM sleep I aim to explore my own illustration style and see how I can develop this and create new styles. My illustration style is a use of abstract overlapping line work and generally fills a whole page. I will do tasks that promote creative thinking for sleep such as making the effort to remember dreams. I will do this by filling out a dream journal. It is also proven that reading before bed helps with creative thinking so over the 10 days of testing that I did I read "How To" by Michael Bierut. This is a fascinating book about Bierut's design career. I also tried other methods like thinking about ideas right before bed and experimenting with external light manipulation.

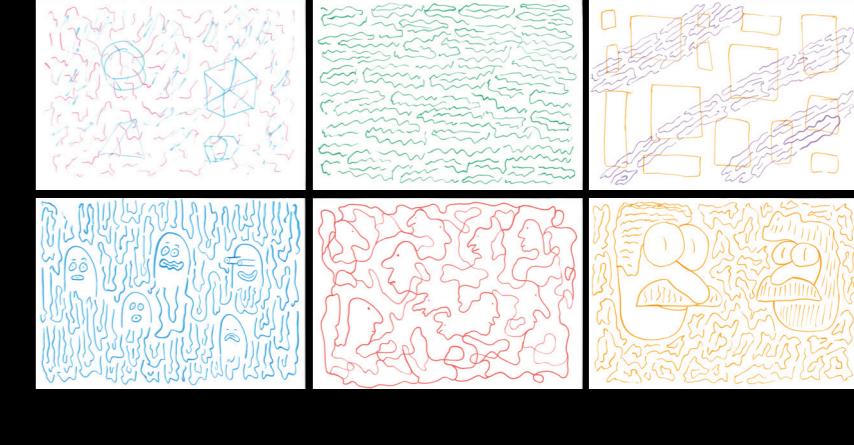
Using my findings from other research I aim to generate new ideas for my design style through my REM sleep.

Originally I was going to run 1 week of dream experiments. however I found new insight each week and continued to run 3 groups of dream tests all with different aims and results.

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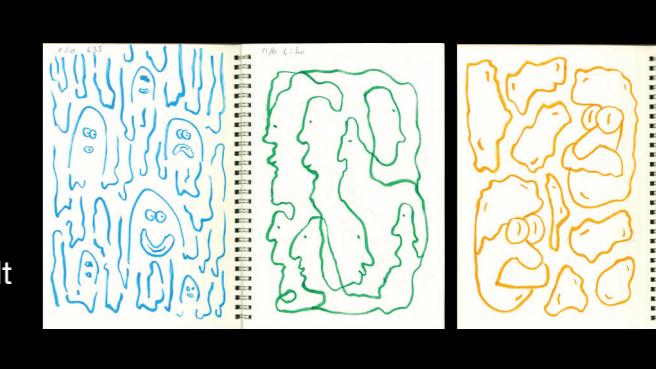
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