



TU-A1150 - FILOSOFIA JA SYSTEEMIAJATTELU, 18.01.2017-31.03.2017

## Landscape of my Life

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2017-05-22

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**Note:** Annan luvan käyttää kirjoittamiani pohdintoja anonymisti tutkimuksessa, jossa tutkitaan optimista ja henkistä kasvua tällä kurssilla

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Infomation

**name** Jaan Tollander de Balsch

**study program** TFM

**number-of-participated-lectures** 5

Source of the cover picture is from the *Limitless* movie [[LimitlessCover](#)], which fits well on the theme of the essay.

# CHAPTER 1

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## Foreword

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As a third year student of applied mathematics and computer sciences, my brains has been exposed to data structures, algorithms and equations, and of course caffeine. The views of this essay are results of that, and hopefully deviates from the views of an average person. This essay is written as thoughts about my life philosophies reflecting some of the topic discussed on the lectures. The focus is not so much on any individual topic, but the experience and teachings as whole.

# CHAPTER 2

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## Routines, Habits and Rituals

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Fig. 2.1: *Snowy Morning*

My mornings usually start waking up at around 07:00, drinking some water and eating two avocados seasoned with salt, followed by my brief 15 minute walk in the outside. Morning walk is followed by brewing some coffee. Brewing coffee for some people means putting pre-ground coffee into the coffee machine and waiting four minutes for coffee to brew. Personally, I prefer using coffee beans and preparing

it from ground up, using manual coffee grinder and Aeropress. This make way superior coffee, both in taste and effects, and makes a good way to start the day. Sometimes I boost my coffee with some butter and coconut / MCT oil, making what is called *Bulletproof* coffee [[BulletproofCoffee](#)]. An alternative to coffee is another south American drink called *Yerba Mate* which also has great cognitive boosting effects. The purpose of these morning rituals or habits is to prepare the mind for the creative work of the day, such as writing this essay.

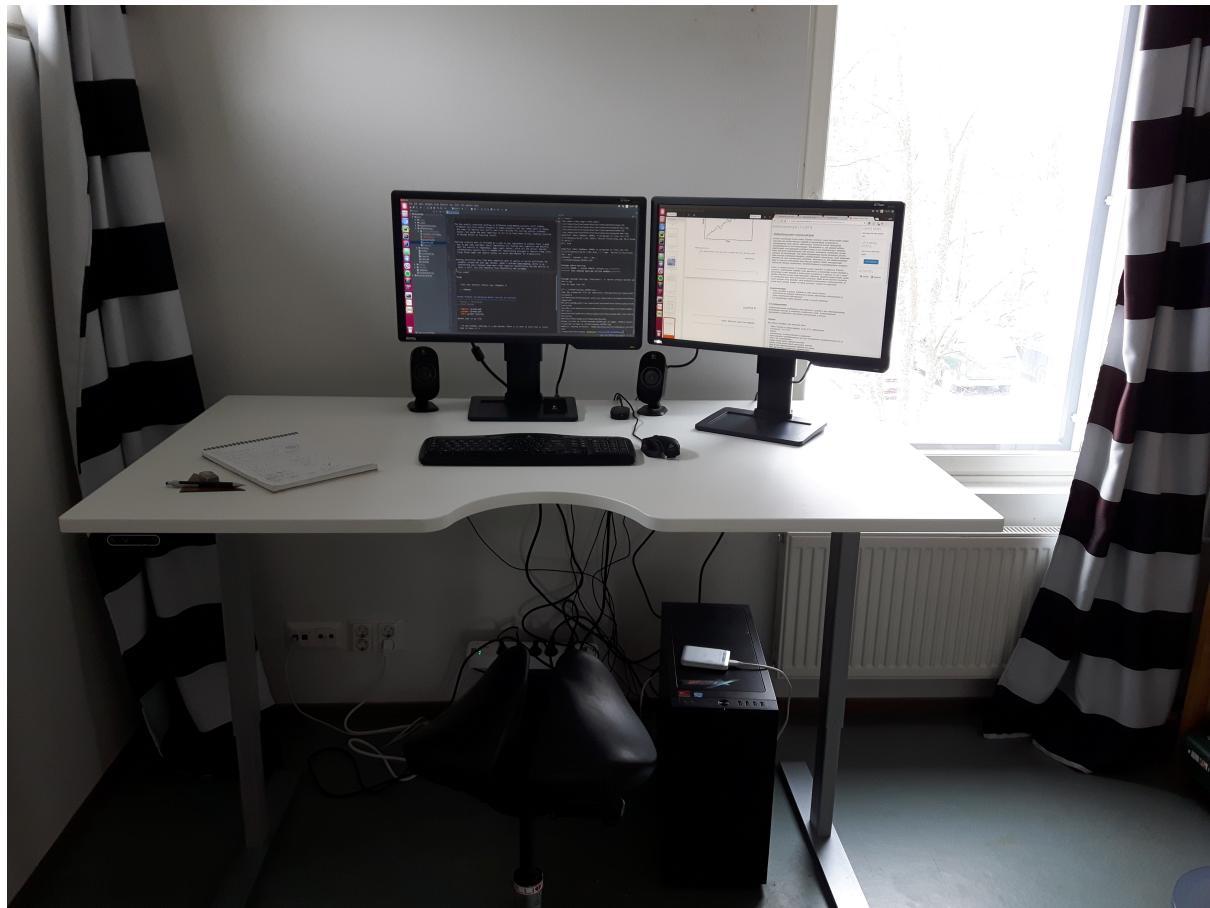


Fig. 2.2: *Altar of success*

The day usually continues working on different programming projects until midday. Projects vary from school projects to hobby projects, but the common goal is always the same, to improve core skills and craft routines for solving similar problems faster, but maybe the most important of all is to learn meta skills, meaning learning to become better at learning itself.

Morning creative work is followed by a walk to buy ingredient to prepare food. It also a good way to get some sunlight. Usual ingredients for fueling more cognitive and physical work for consist of vegetables, eggs, meat, butter, olive oil, spices and herbs. Starchy carbohydrates usually only if needed for replenishing glycogen or improve sleep since large blood sugar and insulin spikes are quite detrimental for productivity.

Evening activities vary from more cognitive work to sports or social activities. For example, around one year ago (winter, 2016) I started cheerleading, which is an interesting sport because it is a team sport that requires concentration and ability to learn new skills, because you are responsible for throwing (literally) other people in the air and catching them. It also benefits from flexibility, strength and stamina. When it comes to social activities, we can leverage the many *saunas* in Otaniemi as great place to meet other people (foreign too), enjoy hot sauna, socialize and potentially take swim in the ice cold sea. Not only

does it offer the benefits of socializing after a day of being inside of my own head, but also the health benefits of heat exposure and cold thermogenesis.

The common factor with all of these activities is that they attempt to induce the “*flow state*”<sup>1</sup> [[FlowGenomeProject](#)] one way or the other, which is almost a requirement to make great things happen. I believe that this was goal with the lectures as well.

Final important part of the day is going to sleep. Before sleep is usually great idea to have wind down period and avoid exposure to blue light. Good sleep ensures that the next day will be great learning opportunity as well.

*“Let your actions reflect your thoughts.”*

—Author

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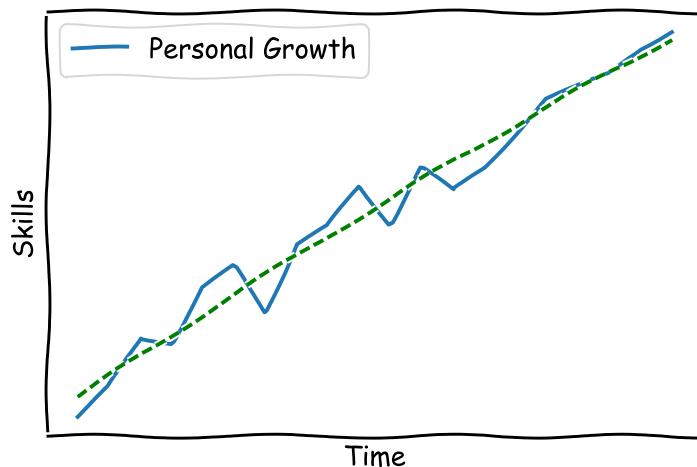
<sup>1</sup> In positive psychology, flow, also known as the zone, is the mental state of operation in which a person performing an activity is fully immersed in a feeling of energized focus, full involvement, and enjoyment in the process of the activity.

# CHAPTER 3

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## Growth Mindset – Becoming Your Best Self

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It's obvious from the previous chapter that my goals are focused on self improvement as many of the topics in the lectures were, ranging from giving more roses to our ladies to learning from Nelson Mandela or Lady Gaga.

My goals and mindset were not always favoring growth. Referring to the lecture on "Three lessons from Tarantino", my personal *Transformation* happened around three years ago, due to health reasons (which I have fixed since) and it has lead to quite significant change, both physically and mentally. The motivation to improve one's self, to reprogram bad *mental models* and harmful *inner talk* comes down to energy levels, sufficient hormone levels and neurotransmitters. These parameters can be affected by understanding your environment and changing it to benefit you. Some of these parameters are sufficient sunlight exposure, the air you breath and the edibles and liquids you consume. Unfortunately change often itself take energy, which if you are not well may be exactly what you don't have, and this is called negative feedback loop. Transformation comes down to finding a way to break this negative feedback loop and turning it into positive feedback loop. Positive feedback loops will lead to success and better life.

To ensure being in the positive feedback loop, listening, reading and learning from the master of this field. Some of my favourite podcasts in this field are [\[Bulletproof\]](#), [\[Ferriss\]](#), [\[Greenfield\]](#) and recent book by finnish authors called “Biohakkerin käsikirja” [\[BHkasikirja\]](#).

*“A day without learning is a day wasted. There is so much to learn and so little time to learn it.”*

—Albert Einstein

# CHAPTER 4

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## Power of Feedback

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### Feedback Systems

Feedback plays central role on controlling systems. These systems can range anything from electronics to industrial processes, but also they play key role on regulating human biology. Feedback is a process where *output* is fed back to the process as an input called *feedback*. Feedback is extensively used in

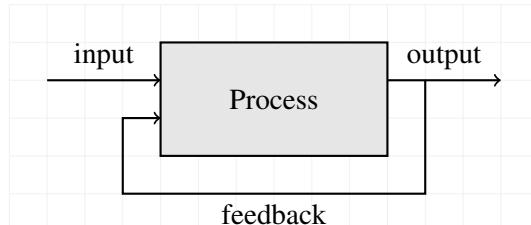


Fig. 4.1: Feedback Loop

control theory, where the feedback is used to determine the magnitude of change in the output value to guide the process into desired value. For example thermostat is such an feedback controlled system. *Input* of the thermostat would be the desired temperature and the *feedback* value would be current temperature measure by a sensor. If current temperature is lower than desired temperature thermostat would turn on, but if current temperature is higher or equal to desired temperature thermostat would turn off. After a set interval of time thermostat would measure the temperature again and loop. [\[Wikipedia\]](#) [\[Wikibooks\]](#)

### Biology

But what does this have to do with human beings? Turns out that many parts of human physiology and behaviour can be explained by feedback mechanisms. For example, to maintain homeostasis, the *homeostatic control system* [\[AP13\]](#) relies on feedback mechanism consisting of

1. **Stimulus** Produces change to a variable.
2. **Receptor** Detects the change and responds to it.

3. **Input** Information travels to control along pathway to the control center, where it determines the appropriate response and course of action.
4. **Output** Information sent from the control center travels down the pathway to the effector.
5. **Response** A response from the effector balances out the original stimulus to maintain homeostasis.

For example, consider blood sugar control by insulin. If rising blood sugar is detected by receptors, it causes pancreas to excrete insulin, lowering blood sugar levels. This cycle continues until homeostasis is reached.

## Human behaviour

We gather *input* information from the surrounding environment through our senses and *process* the information to understand the environment in order to take action if needed. *Output* of this action is then *fed back as feedback* in order to evaluate if the action produced positive results. *Feedback loops* results in repetition of behaviours *reinforcing* them. Process often happens automatically without any thought, which is fast but primal system that produces immediate reward but can lead to feedback loops that have negative long term consequences. [\[EM17\]](#)

An article *Harnessing the Power of Feedback Loops* in *Wired* magazine [\[Wired17\]](#) gives an real life example of feedback system used to control human behaviour. The article discussed about the problem of drivers speeding through school zones. The solution for reducing the speed of the drivers was to install *dynamic speed displays* with huge readouts displaying the driver's speed. This was found very effective at reducing the speed of the drivers by 10% on average. The reason why they were effective was because the readouts acted as a feedback mechanism to the driver giving them real time information about their speed and opportunity to change it.

The *Quantified Self* movement [\[QS\]](#) has taken the idea of tracking data, biometric data for example, analysing it and using it to improve their daily lives, health or productivity. Because technology is getting more advanced and cheaper every year, also tracking human data is getting easier and more available. In the future, when we can efficiently track all the most important factors effecting human health and analyse them, the feedback generated to the users might be one of the keys to fix for example the epidemic of lifestyle diseases<sup>2</sup> in the modern world.

## Creating Feedback Loops Through Behaviour

Feedback loops can not only effect our behaviour, but they can also be created and reinforced by our behaviour. For example one of the most simplest ways to create a positive feedback loop is to smile. This signals warmth and hospitality creating more positive environment. Positivity tends to make us feel better, which makes it contagious creating a cascading effect where the mood of a group of people might be uplifted by one positive person.

This translates to the example presented in the lecture [\[Wonderwall17\]](#) from 1:21:00<sup>3</sup> onwards discussing how *Nelson Mandela* was able through his behaviour to create an environment of positivity. Some of these key behaviours are

- Demonstrating appreciation for the other person
- Showing genuine interest on the other person

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<sup>2</sup> [https://en.wikipedia.org/wiki/Lifestyle\\_disease](https://en.wikipedia.org/wiki/Lifestyle_disease)

<sup>3</sup> <https://youtu.be/YdwYIKJ8Pvo?t=4877>

- Taking control of the atmosphere
- Gratitude
- Respectfulness
- Empathy
- Finding connecting factors

All of these behaviour encourage the environment of the conversation to become more positive. For Nelson Mandela this was crucial for uniting the nation into one instead of keep it slitted into two.

## Conclusions

Feedback mechanism are powerful tool for controlling systems, ranging from purely physical to biological and behavioural perspective. They are important to understand and their applications range from human health to politics and to become better human being in general.

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